The London School of Economic and Political Science

Poverty, cash transfers and adolescents' lives: exploring the unintended consequences of Nepal's social pension

A mixed-methods study

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Abstract

This thesis contributes new evidence and analyses on the effects of cash transfers on adolescent school attendance, work participation and marital status. The mixed-methods study investigates the effects of Nepal's Old Age Allowance (OAA), an unconditional cash transfer, on adolescents who co-reside with older persons using primary data from a household survey (n=2018) and in-depth interviews (IDI) (n=55) conducted in Rautahat district in the *Terai* region. The quantitative analysis exploits the age criteria for OAA eligibility to isolate its effects on co-resident adolescents. Using a hybrid thematic approach, IDIs are used to elucidate whether and how the OAA was factored into household decision-making and its relation to other factors that influence decisions about adolescents' lives.

The findings show that the OAA supports households to fulfil existing preferences for adolescents, which depend on the socioeconomic status, decision-making dynamics and religion of the household, the type and quality of local schools, the nature of local credit markets, and gendered social norms and expectations attached to transitions to adulthood. For many adolescents, this means increased access to school, whether public, private, or religious. However, some households support adolescents to access private school by taking loans in anticipation of OAA eligibility but fail to sustain the costs in the face of delays in registration and receipt of the first payments. Some out-of-school adolescents are prevented from engaging in paid work. However, other households use the OAA to accelerate transitions to adulthood, supporting economic migration of older boys and expediting the formalisation of marriage of older girls.

This study makes five main contributions to the literature. First, studies on income effects on access to education tend to consider school as a homogenous entity, but the findings show that a UCT can expand school choice with different effects for different types of school. Second, the findings on adolescent marriage are novel for a dowry context and should prompt the research and policy literature to recognise the possibility that UCTs can increase the risk of early marriage. Third, this study provides unique evidence on the role of cash transfers in leveraging loans for human capital investment

and marriage. Fourth, the study examines the dynamics of household decision-making in relation to causal processes and shows that variation in outcomes according to the gender of the cash transfer recipient may stem from differences in bargaining power and economic opportunity as much as from differences in preferences. Finally, most studies on cash transfers often fail to account for the complexity in people's lives which may lead to blunt or erroneous conclusions. This study shows that adopting the tenets of a critical realist perspective and placing decision-making about the outcomes of interest at the centre of the analysis focuses attention on the diverse contextual factors that shape the effects of cash transfers on individual household members, and provides for richer and more nuanced findings.

Acknowledgements

Table of contents

List of tables and figures

Tables

Figures

11

Acronyms, glossary, and translations

Acronyms

BDH	Bono de Desarrollo Humano
CBS	Central Bureau of Statistics
CCT	Conditional cash transfer
CTALS	Cash Transfer and Adolescent Life–course Survey
DDC	District Development Committee
DOCR	Department of Civil Registration
FSSP	Female Secondary-school Stipend Programme
HDI	Human Development Index
HPI	Human Poverty Index
HSNP	Hunger Safety-net Programme
IDI	In-depth interview
IEG	Independent Evaluation Group
ILO	International Labour Organisation
ITT	Intent to treat
MDE	Minimum detectable effect
NAHS	Nepal Annual Household Survey
NAR	Net attendance ratio
NDHS	Nepal Demographic and Health Survey
NEPAN	Nepal Participatory Action Network
NLSS	Nepal Living Standards Survey
NMICS	Nepal Multiple Indicator Cluster Survey
PI	Principal investigator
RA	Research assistant
RDD	Regression discontinuity design
RQ	Research question
SCTS	Social Cash Transfer Scheme
SEE	Secondary Education Examination
SLC	School Leavers Certificate
TSE	Total survey error
UCT	Unconditional cash transfer
VDC	Village Development Committee
WSW	Widow or single woman
WSWA	Widow and Single Women's Allowance

Glossary and translations

Boarding	Private school including both day- and residential-schools
Village Development Committee	Prior to federalisation, the smallest administrative unit in Nepal with a formal government office
Young	Used locally in southern Nepal to mean mature or of marriageable age

Bandha	Holiday, but commonly means closure or (general) strike
Bataiya	Crop share
Dashain	The major Hindu festival in Nepal which occurs in September or October
Gauna	In North Indian societies including parts of Nepal, the *Gauna* ceremony formalises a marital union and leads to consummation and cohabitation. The ceremony can occur up to several years after the marriage ceremony (*Shadi* or *Nikah*) once the bride is considered to have come 'of-age'.
Maulavi	A Muslim religious scholar or teacher
Nikah	Urdu term for marriage ceremony or contract
Shadi	Hindi / Nepali term for marriage ceremony or contract
Terai	The lowland region of Nepal and northern India, south of the Himalayas

Chapter 1

Introduction

Background

Adolescence represents a critical period of life-course transitions and junctures, the nature of which can determine the quality of life-long opportunities and well-being (Lloyd, Behrman, and Stromquist 2006; Morrow 2012). Research on developing countries often overlooks the particular needs of adolescents, either focusing on the early years or grouping all school age children together (Bundy et al. 2017). However, adolescence – commonly understood to mean the second decade of life but argued by some to extend into the early twenties – involves unique periods of biological, psychological, social, and economic change that demand specific attention (Banati and Lansford 2018; Sawyer et al. 2018).

Transitions to adulthood typically involve decisions about education, work, and marriage; decisions that are often connected and that are shaped by the cultural, social and economic context. Poverty can limit opportunities and put pressure on adolescents to adopt adult roles and responsibilities at a young age. This can be detrimental to their physical, cognitive and emotional development, put them at risk of harm, and lead to negative outcomes over the life-course. Limited access to education is associated with fewer economic opportunities, lower earnings and, for girls and women, earlier marriage and lower levels of empowerment (UNICEF 2011). Participation in work can form an important part of adolescent development (Morrow 2012). However, adolescents who are engaged in employment for a significant amount of time often lose out on schooling and other important aspects of childhood such as play, and occupations that are hazardous can harm their "health, safety, or morals" (ILO 2017b, 21). Earlier age-at-marriage for girls is associated with early child-bearing and the associated health risks, higher fertility, lower levels of empowerment, and greater exposure to domestic violence (Lee-Rife et al. 2012; Pandey 2017).

Globally, gains have been made in improving adolescents' lives but there is still some distance to go. The proportion of adolescents who are out of school declined in the first decade of the century (UNESCO 2019). However, progress has stagnated and the most recent estimates indicate that 16% (61 million) of lower secondary age children and 35% (138 million) of upper secondary age children remain out of school (UNESCO 2020a). The proportion of children in employment has also reduced, but in 2016 around 11% (79 million) of 12-17 year olds were considered to be in child labour, of which 7.5% (54 million) are in hazardous work (ILO 2017b). In addition, while some amount of domestic work is commonplace, approximately 9% of 12-17 year olds are engaged in household chores for an excessive amount of time.[1] Early marriage has also declined globally and the most recent estimates suggest that 21% of women aged 20-24 were married before age 18 and 5% before age 15 (UNICEF 2018; 2019). There is no global estimate for men, however, among the least developed countries, 6% of men aged 20-24 were married before age 18 compared to 39% of women (UNICEF 2019).

While there are multiple reasons for being out of school, in work, or for marrying early, income poverty is known to be an important driver (Verma 2018). The child development literature shows that households with higher levels of income tend to invest more in the goods, services, and time that children require to grow, develop, and learn (Gennetian, Castells, and Morris 2010; Cooper and Stewart 2013). In the same vein, there is a growing body of literature that investigates income effects on households, children, and adolescents in low- and middle-income countries, largely focused on the impacts of conditional and unconditional cash transfers. Conditional cash transfers (CCT) provide cash payments on the condition of certain behaviours, typically requiring children's attendance at school or utilisation of health services by mothers and young children. Evaluations of the impacts of CCTs are generally unable to disentangle income effects from the behavioural requirements. In contrast, the effects of unconditional cash transfers (UCT) depend entirely on how recipient households consume, invest, or save the additional income. Given the interest of this study in income effects on adolescents, the review of the literature in Chapter 2 focuses mostly on UCTs. This review shows that UCTs tend to have positive impacts on access to

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[1] Figures are based on author's calculations using data from ILO (2017b). 'Excessive' is defined as 14 hours or more domestic work per week.

school and can be helpful in reducing the supply of adolescent paid labour, although impacts on other kinds of work and on marriage timing are more varied. The review identifies several gaps in knowledge about how cash transfers alter investment decisions made by parental or caregiver households in relation to their adolescent children, which provide the primary areas of inquiry for this study.

First, there is some consensus that UCTs tend to increase access to education through an income effect, allowing households to invest in the costs of school, especially among adolescents as they transition to more costly secondary education (Sabates et al. 2019; Kilburn et al. 2017; Baird et al. 2014). However, theoretical discussions about the effects of income on access to education largely ignore the question of school choice. Schools can vary by cost, quality, and even purpose, but most of the relevant studies only measure binary indicators of school attendance or enrolment. Little is known about how additional investments in education interact with a heterogenous supply of education. This is particularly pertinent for developing country contexts where full-time religious education is common, particularly among Muslim communities (Park and Niyozov 2008), and low-fee private schools (LFPS) are mushrooming to meet demand among even the poorest communities (Tooley and Dixon 2007). Understanding income effects on school choice can be revealing about (perceptions of) school quality and inclusivity and help policy makers to find the right balance between demand and supply side interventions for improving educational outcomes.

Second, economic theory about the relationship between cash transfers and labour supply described in Dammert et al. (2018) and Porreca and Rosati (2018), indicate that effects are ambiguous and can be different for children and adults. The relevant literatures tend to focus on adults over the age of eighteen, or younger children up to mid-adolescence, and with limited differentiation by narrower age groups. However, adolescence represents a period of transition from childhood to adulthood, during which social and economic incentives to work and the trade-offs with education are likely to change. Moreover, very few studies incorporate analysis of both economic and unpaid domestic work, meaning that the full potential range of effects on adolescent time-use are not accounted for, especially among girls (Bastagli et al. 2016). A better understanding of income effects on the full range of work activities among adolescents, the thresholds at which effects occur, and how these may differ by socioeconomic

status, can inform design and targeting of cash transfers and other policies that aim to reduce detrimental work or promote access to better employment opportunities.

Third, higher rates of early marriage tend to be associated with poverty (Bajracharya and Amin 2012) and current theory about income effects on marriage timing point to a positive association between income and age at marriage. Dake et al. (2018) and Handa et al. (2015) suggest that higher incomes allow households to delay the marriage of their daughters, either through a consumption effect by maintaining her upkeep for longer, or through prolonged investment in her education. However, while evidence on the effects of UCTs on early marriage is thin, it points to both decreases and increases in marriage rates among adolescents. Moreover, there are apparently no studies that examine the effects of UCTs on marriage timing in a dowry culture, where there are strong economic and social incentives for girls to marry early, but high costs, borne by the brides household, for the dowry and ceremony. In this context, a "social investment" pathway may exist, whereby an increase in income helps the household to overcome the financial barriers to marriage. This has important implications for social policies that aim to raise incomes if, among certain groups, they inadvertently lead to an increase in early marriage rates.

Fourth, adolescents may independently out-migrate for the purpose of education, work, or marriage. Hagen-Zanker and Himmelstine (2013) show that cash transfers can affect decisions to migrate; however, most studies that examine cash transfer effects on migration focus on adult populations. At the same time, the studies reviewed in Chapter 2 that are concerned with adolescent outcomes, tend to measure income effects on static populations. Consequently, adolescents who have out-migrated due to the cash transfer are either invisible or the true nature of the effects on their lives are not identified. Cash transfers may allow certain sub-groups of adolescents to access higher quality education or better work opportunities, but others may be more vulnerable to exploitation and harm after leaving the parental home. To gain a fuller understanding of income effects on education, work, and marriage, requires deliberate incorporation of migrant adolescents into the analysis.

The thread that connects these issues is the nature of investment decisions about the common set of life-course options for adolescents in developing countries. The

literature on household decision-making shows that the preferences and interests, resources, and opportunities of household members are influenced by household- and community-level factors (Yoong, Rabinovich, and Diepeveen 2012; Doss 2013). In turn, these shape how additional income interacts with decisions about adolescents' lives. However, studies on cash transfers and adolescent outcomes often ignore, or have insufficient data to analyse, the dynamics of the household economy and wider contextual factors. This is especially the case for studies relying solely on econometric methods and which take a narrow positivist stance that decontextualizes outcomes and the processes through which they occur, essentially ignoring much of the complexity of people's lives (Adato 2008; Mahendru and Tasker 2020). To overcome some of these shortcomings, this study adopts an analytical framework that puts decision-making about the outcomes of interest at the centre of the analysis as a locus to consider the multiple contextual factors, both within and outside the household that shape the effects of cash transfers on individual household members.

This thesis contributes new evidence and analyses on the effects of an unconditional state cash transfer on multiple dimensions of adolescent school attendance, work participation and marital status. The mixed-methods study investigates the effects of Nepal's Old Age Allowance (OAA) on adolescents who co-reside with older persons using primary data from a household survey (n=2018) and in-depth interviews (IDI) (n=55) conducted in Rautahat district in Province 2 in the *Terai* region. The study focuses on a sub-set of adolescents aged 10 to 17 years because of the typically early social and economic transitions to adulthood in Nepal, the structure of the education system, and the legal age of marriage.[2] The quantitative analysis exploits the age criteria for OAA eligibility to isolate its effects on adolescents and the household economy. Using a hybrid thematic approach, IDIs are used to deepen understandings of whether and how the OAA was factored into household decision-making and its relation to other factors that influence decisions about adolescents' lives. The rest of this chapter introduces the study context and the status of adolescents' life-course circumstances,

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[2] Adolescents are commonly defined as persons aged 10-19 years although some argue that the period extends into the early twenties (Sawyer et al. 2018). This study focuses on a sub-set of adolescents for several reasons: (i) the majority of 18-19 year olds in the study area, especially girls, are expected to have passed through transitions to adulthood; (ii) secondary education is officially provided up to the age of 16; (iii) the legal age of marriage (with parental consent) is 18 years; (iv) limiting the age range provides greater internal validity of the research findings.

describes the rationale for using the OAA as an instrument for the proposed investigation, and introduces the research questions and the thesis outline.

Adolescent life-course circumstances in Nepal and Province 2

Nepal's population of 28 million exhibits significant ethnic and linguistic diversity. The country is landlocked between India and China with three distinctive eco-geographic zones: the Himalayan mountain region, the middle hills, and the *Terai* or plains bordering northern India. Although geographically and culturally rich, Nepal is one of the poorest countries in the world. Despite slow growth and low GDP, Nepal has gradually increased investment in the social sectors and achieved significant gains in several areas (Cosic, Dahal, and Kitzmuller 2017). The poverty rate reduced from 31% in 2003 to 25% in 2011 and youth literacy rates increased from 70% in 2001 to 92% in 2018 (Central Bureau of Statistics 2011c; UNESCO 2020b). Moreover, Nepal is ahead of the global trend in terms of education access, with an estimated 3% (0.05 million) of lower secondary age children and 19% (0.49 million) of upper secondary age children out of school (UNESCO 2020a).

However, certain parts of the country lag in economic and social development. This study focuses on Rautahat, one of the most underdeveloped districts in Nepal, with household consumption and human development indicators among the lowest in the country (Central Bureau of Statistics 2013; Sharma, Guha-Khasnobis, and Raj Khanal 2014). Rautahat is situated in Province 2 in Nepal's *Terai* belt and borders the northern Indian state of Bihar with which it has close cultural, social and economic ties. The population is largely Hindu with many caste-based sub-divisions, but also includes the largest minority of Muslims in the country.

In Nepal, and even more so in Province 2, adolescents often face rapid transitions to adulthood. Figure 1 shows the secondary school net attendance ratio (NAR) with estimates from 2016. Nationally just over 65% of secondary age children are in secondary school with near parity between girls and boys. The NAR drops to just 45% in Province 2 and with girls more disadvantaged than boys.[3] Low attendance rates relate

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[3] The NAR only considers school attendance at the expected grade level for a given age group. Because some secondary school age children attend primary school the NAR does not represent the percentage of secondary age children who are attending school.

to both supply and demand for education. Public schools suffer from a lack of quality manifest in poor exam performance and high dropout rates (Parajuli and Das 2013; A. Thapa 2015). To fill this gap, Nepal relies heavily on private schools which tend to be of higher quality but are beyond the financial means of many. The private sector provides approximately 18% of schools, rising to nearly 30% at secondary level (Ministry of Education 2018). Survey estimates suggest that 27% of school goers attend private school, rising to 60% among the richest wealth quintile (Central Bureau of Statistics 2011b). There is very limited data available on religious school attendance in Nepal, however, the Ministry of Education (2018) recognises 1,121 religious schools, of which 907 are madrassas, representing approximately 12% of all schools in the country.

There are also deficits in demand due to the direct and indirect costs of school. Direct costs include school fees, textbooks, uniforms and other school materials, and transport or living costs where schools are far from home (UNICEF 2011). Indirect costs include the forgone income from adolescent labour as well as other, often gendered, cultural barriers. In Nepal, girls and women are often constrained by limited mobility, have lower employment prospects and thus lower expected returns to education, and face rising social and economic pressures to marry (Ghimire and Samuels 2014).

Figure 1 Secondary school net attendance ratio (NAR)
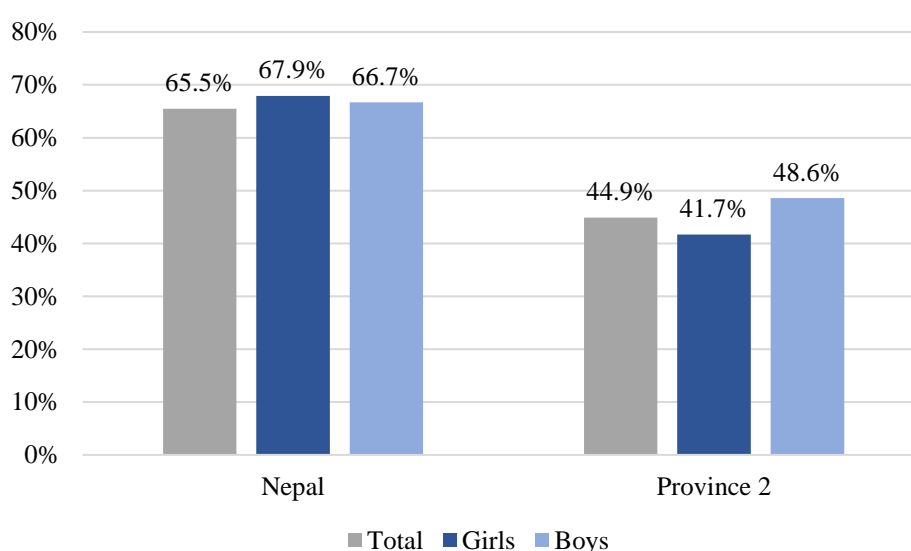
Data source: NDHS 2016. n = 5825 for Nepal and n = 992 for Province 2. The secondary school NAR is the proportion of 11-15 year olds attending secondary school (Ministry of Health, New ERA, and ICF International Inc. 2017).

Figure 2 shows the percentage of adolescents aged 12-17 years who are involved in economic and domestic work. Approximately 61% participated in at least one hour of economic work during the reference week and 9% did so for an excessive number of hours. At the same time, 90% of adolescents undertook domestic chores, of whom 5% did so for an excessive number of hours.[4] There is a substantial overlap between those involved in economic work and those involved in domestic work. The burden of work on some adolescents is even higher. Notably, girls are more likely to work and to work longer hours than boys. Adolescents in the central *Terai* region where Province 2 is located are less likely to work and less likely to work excessive hours than the national average.

Figure 2 Percentage of 12-17 year olds involved in economic and domestic work by level of hours
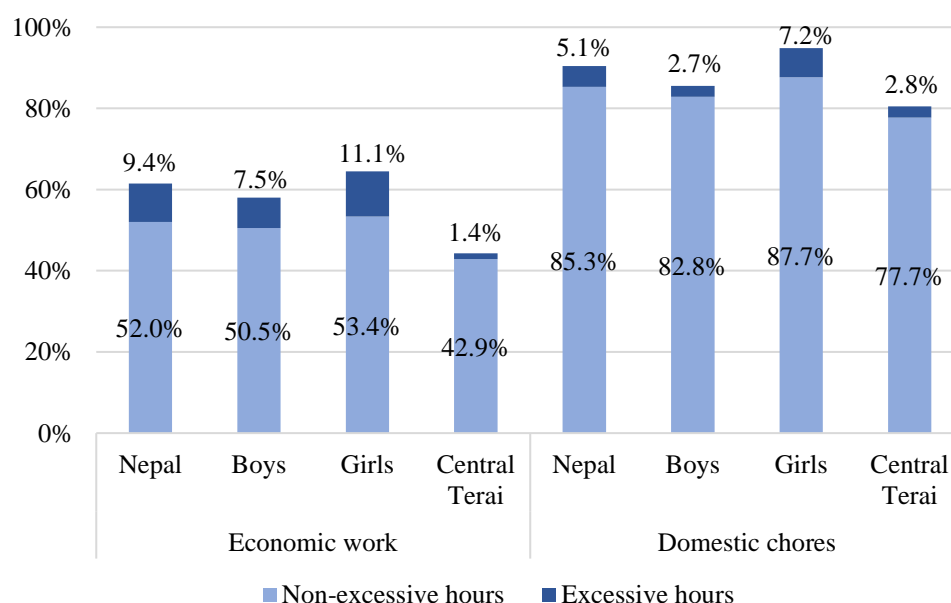
Data source: Adapted from NMICS 2014. n = 8296 for Nepal and n = 1394 for the Central *Terai*. Reference period is the week prior to the survey. Excessive work refers to age and sector specific thresholds in the number of hours worked (see Central Bureau of Statistics 2015; ILO 2017b).

Demand for adolescent labour outside the household occurs where employment opportunities are suited to the physical attributes and abilities of adolescents; where employers value more docile and pliable workers who are willing to work for less; and

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[4] Excessive hours are based on ILO definitions of child labour, which combine age-specific thresholds for the number of hours spent in economic work (any time if less than 12 years and 14 hours or more if 12-14 years) with any amount of time in work activities considered to be hazardous including for 15-17 year olds. There is not yet consensus on the definition of excessive time spent in domestic chores but these figures are based on 14 hours or more per week (see ILO 2017b for a detailed description).

where employment legislation is absent or weakly enforced and cultural norms are accepting of the practice (ILO 2007). Demand comes from within the household where children and adolescents contribute towards the family business or domestic chores. Households tend to supply adolescent labour (externally or internally) when they are otherwise unable to meet their basic consumption needs or when there is a reduction in adult labour supply, for example through illness (Nepal and Nepal 2012). Estimates from 2008 show that median monthly income from working children aged 5-17 is NRs 2,167 (US$ 19) per month, notably more than the monthly per capita poverty line of NRs 1,605 (US$ 14) (ILO, IPEC, and Central Bureau of Statistics 2011; Central Bureau of Statistics 2011c).

Figure 3 shows the percentage of 20-24 year olds who were first married by specific ages. Early marriage disproportionately affects girls. Nationally, 40% of women aged 20-24 years were married by age 18 and 7% were married by age 15. In Province 2, the rates of early marriage are substantially higher, with 65% of young women married before age 18 and 13% before age 15. The risk of early marriage is much lower among men. Nevertheless, in Province 2, 16% of men aged 20-24 years are estimated to have married by age 18. Early marriage persists due to a complex interaction of cultural, social and economic factors (Sundaram, Travers, and Branson 2018). Traditionally, girls and women in Nepal are expected to adopt domestic and caring roles within the family and to be subservient to men, whereas boys and men are expected to be earners and decision-makers (Karki 1988; Black, Haeri, and Moodie 2001). Girls' education tends to be valued less because sons will earn income and provide economic security to their parents in old age. Moreover, high value is placed on preserving girls' virginity and preventing them from engaging in pre-marital sexual relationships. Many men prefer younger and less well educated wives who are assumed to be more obedient and can maximise their reproductive years (Jensen and Thornton 2003; Sah 2008).

Figure 3 Percentage of 20-24 year olds first married by exact age
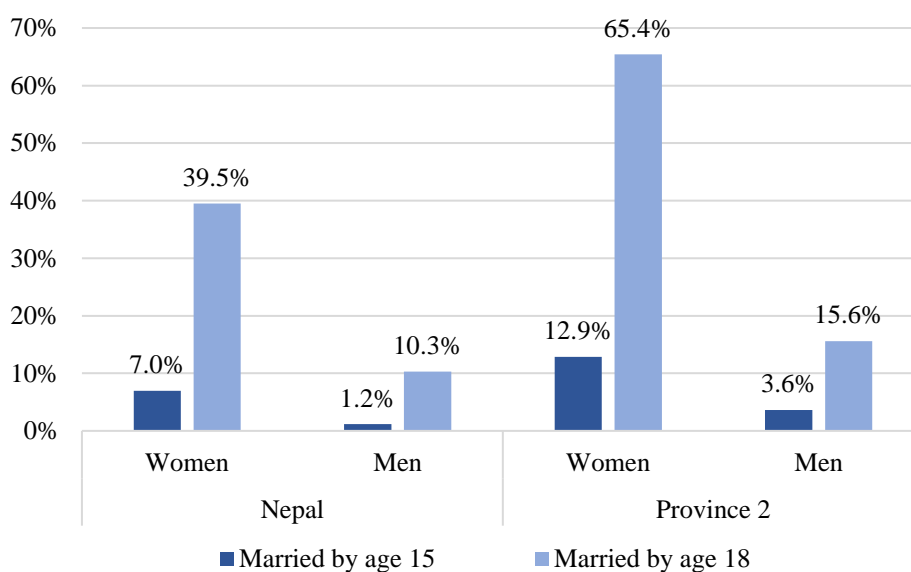
Data source: NDHS 2016 and authors calculations from NDHS 2016. n = 2306 for women and n = 633 for men in Nepal; n = 360 for women and n = 97 for men in Province 2.

Cultural and social preferences interact with economic incentives related to dowry practices and the pressures of poverty. Parents faced with the continued cost of caring for a daughter, and where opportunities for education and employment are costly, low quality or culturally inappropriate, may view marriage as the best alternative to ensure her protection and economic security (Morrow 2012). Added to this, the dowry system reflects preferences for younger brides. Dowry demands rise with age, putting further pressure on parents to secure the early marriage of their daughters (Sah 2012).

Adolescents sometimes leave the home to access education or employment opportunities. For girls in Nepal, marriage inevitably means moving into her husband's household. This could be within the local area but often means moving further afield. Data on adolescent out-migration is scarce. The Nepal Demographic and Health Survey (NDHS) 2016 recorded the reason for migration of individuals who left the household within the past 10 years. More than two-thirds migrated when they were younger than 25 years and 44% of women did so when they were aged 15-19 years (Ministry of Health, New ERA, and ICF International Inc. 2017). In most cases, women migrated due to marriage and men migrated for employment. However, around 11% of women and 14% of men did so for the purpose of education. Poverty may drive out-migration when it reduces the burden of care on the family or brings an increase in income,

however, low incomes may also prevent beneficial out-migration when local education and employment opportunities are poor (Hagen-Zanker and Himmelstine 2013).

Social protection in Nepal and the Old Age Allowance (OAA) as a household income transfer

Social protection is one means by which governments aim to raise the incomes of poor households and to support investment in human capital. Nepal's wide range of social protection programmes make it unusual among lower-income countries. While social insurance and public sector pensions are available to only a small proportion of the population, Nepal has several non-contributory cash transfers that are universal in nature and reach across the country. Khatiwada and Koehler (2014) propose that at the turn of the Century, Nepal had emerged as a "*nascent welfare state*" (p. 132), with social protection at the heart of national development frameworks and plans. This grew out of legislation introduced in the 1980s and early 1990s on the rights of persons with disabilities, retirees, and children, and on social welfare in general.

The first major non-contributory cash transfer was the Old Age Allowance (OAA), introduced by the Marxist-Leninist faction of the Communist Party of Nepal (CPN-ML) under Prime Minister Manmohan Adhikari. The OAA started as a government led pilot in fiscal year 1994/5 but was scaled-up in 1995/6 to include all persons over the age of 75 nationally (National Planning Commission 2012). Subsequent governments led by different parties not only maintained the OAA but expanded it by increasing benefit levels and lowering the eligibility age. Moreover, social security was extended to other vulnerable groups starting with allowances for widows and single women and people with disabilities. Social security was further expanded in fiscal year 2009/10 to include allowances for ethnic groups at risk of disappearing and the child nutrition grant for families from the Dalit caste and in the geographically excluded *Karnali* region. At the time of writing, this collection of cash transfer schemes were the responsibility of the Department of Civil Registration (DOCR) under the Ministry of Federal Affairs and Local Development (MOFALD), implemented at the local level by the District, Municipal, and Village Development Committees (D/M/VDC). In addition, the Ministry of Education introduced state scholarships in fiscal year 2011/12 for girls and children of Dalit families, indigenous ethnicities, and very poor households, to support their education up to Grade 12.

While little has been documented about government thinking at the time, one of the objectives for introducing the social security schemes, and their expansion in the post-conflict period in the late-2000s, is thought to have been "*as a policy tool for nation building and political healing*" (Koehler and Mathers 2017, 348). This is reflected in the combination of egalitarian universalist approaches and identity-based and geographic targeting to address historical disadvantage. Moreover, since their inception, the recurrent budget for the social security schemes has been entirely allocated though government general revenue (Khadka 2017; Koehler and Mathers 2017). A universal social pension went against the grain of mainstream economic development thinking at the time, which was dominated by the IMF and World Bank, for whom social protection constituted short-term, poverty-targeted, safety-nets intended to mitigate the negative consequences of structural adjustment policies (Paitoonpong, Abe, and Puopongsakorn 2008). Nevertheless, Nepal's social security schemes have not gone entirely without donor assistance. There have been a number of major projects co-funded by donor countries to support capacity building of central and local governance structures and systems including those responsible for delivery of the cash transfer programmes.[5] Moreover, in 2016, Nepal accepted a major World Bank grant for strengthening civil registration and social security systems.[6] Nevertheless, the role of foreign aid appears to have had limited influence on the decisions to introduce the social security schemes, and on their main design parameters.

Despite the range of social protection programmes in Nepal, there is limited economic support for the specific needs of families with adolescents. The child grant is moving towards national coverage but remains targeted to children under five years of age (Garde, Mathers, and Dhakal 2017). The scholarships for girls and disadvantaged children are small, poorly implemented, and have limited impacts despite the minimal direct costs of public education (Educational Resource and Development Centre 2011; Datt and Uhe 2019). With no effective social transfers specifically for adolescents,

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[5] See for example, Ministry of Federal Affairs and General Administration (MoFAGA), Local Governance and Community Development Programme (LGCDP) - II, http://lgcdp.gov.np/, accessed: 10th February 2021.

[6] The World Bank, Strengthening Systems for Social Protection and Civil Registration Project, 2021, https://projects.worldbank.org/en/projects-operations/project-detail/P154548, accessed: 10th February 2021.

examining income effects on this age-group is problematic. The solution comes from a number of studies, mostly from South Africa but also Mexico and Brazil, that show the efficacy of using an old age pension to determine the effects of unconditional cash transfers on young people (Duflo 2003; Case 2004; Edmonds, Mammen, and Miller 2005; Edmonds 2006; Ndlovu, Mohapatra, and Luckert 2017; Gutierrez, Juarez, and Rubli 2017). Nepal's Old Age Allowance (OAA) presents a similar opportunity to investigate income effects on co-resident adolescents.

The OAA is the most generous of Nepal's non-contributory social security schemes and, at the time of this study, provides NRs 24,000 (US$212) annually to all citizens from the age of 70 years, equivalent to 137% of the regional per capita poverty line (Central Bureau of Statistics 2011c). In addition, members of the Dalit caste receive NRs 12,000 annually from the age of 60 years until reaching full pension age. Take-up has been estimated at approximately 80% using national budget and census data (Samson 2012), but this varies between administrative areas. Beyond its potential effect on household income, the OAA is a useful policy to investigate the effects of a UCT on adolescents for three main reasons. First, eligibility is determined exogenously, by age of the elder, and is not influenced by other household members. This makes the OAA amenable to discontinuity approaches to causal inference, discussed in detail in Chapter 3. Second, multi-generational households in Nepal are common, with approximately half of children co-residing with an over-fifty year old.[7] Thus, while adolescents who co-reside with elders are a sub-set of the population, they are not uncommon and findings can plausibly be generalised to the wider adolescent population. Third, as most households engage in some level of economic cooperation and risk sharing (Doss 2013), the OAA is akin to a family income transfer. Given certain assumptions, discussed in detail in relation to the analytical framework in Chapter 2, the OAA can theoretically affect the life-course circumstances of co-resident adolescents.

Despite its prominence in Nepal's social policy sphere, there is relatively little evidence on the impacts and efficacy of the OAA. Uprety's (2010) analysis of spending patterns using survey data from 13 districts indicates a significant degree of resource sharing

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[7] Based on author's analysis of data from the Nepal Demographic and Health Survey (DHS) conducted in 2016 by the Ministry of Health, New ERA and ICF.

including direct expenditure on children's education. Using micro-simulation, Samson (2012) estimates that the OAA reduced Nepal's poverty gap by 1% when it was introduced but suggests its impact has likely increased with later reforms of the OAA. Li and Mora (2014) apply a difference-in-difference approach to historical cross-sectional data from just before and after the introduction of the OAA and find that it led to improvements in survival rates of co-resident infants. At the same time, several studies reveal challenges in management and implementation of Nepal's social security schemes including the OAA which may limit its effectiveness (Uprety 2010; Upreti et al. 2012; KC et al. 2014; Drucza 2015).

Research aims and questions

The main purpose of this study is to examine the effects of additional household income on adolescents' life-course circumstances and the related decision-making processes, with the aim of generating new evidence and theory in several specific areas. Primarily, the analyses and findings are relevant for the literature concerned with income effects on child and adolescent development and for social policies that aim to increase household incomes and to improve adolescent outcomes related to education, work, and marriage timing. By examining the dynamics of, and impacts on, the household economy to better understand effect pathways, the study also aims to contribute to the literature on household decision-making. In this regard, the use of a social pension for determining income effects on co-resident adolescents is instrumental. It is not intended for this study to caste judgement on the efficacy of the OAA as a policy to support the economic security of elders. However, there will be secondary implications from the findings related to the design and implementation of cash transfers in general, and for the role that social pensions play in household, not just elder, economic security.

More specifically, the thesis has four main aims that determine the research questions and approach. First, the research aims to fill an evidence gap of policy relevance to Nepal and similar contexts by measuring and explaining the effects of a UCT on adolescent life-course circumstances. Second, decisions about the common set of adolescent life-course options are interrelated, complex, and often more diverse than is accounted for in the existing literature. The research aims to analyse the effects of a cash transfer on education, work, and marriage together, distinguishing between different types of school and work, and marital status and cohabitation, and including

analysis of adolescents who recently left the home. Third, taking the household decision-making process as the starting point for a new analytical framework, the research aims to provide a detailed understanding of the pathways through which cash transfers affect adolescents and to contextualise the role of the cash within the numerous and potentially competing social, economic and cultural incentives and disincentives for each life-course option. Fourth, the research aims to contribute knowledge to the application of mixed-methods approaches in research about the effects of cash transfers on individuals.

To fulfil these broad aims, the overarching question of the study asks: *How does Nepal's Old Age Allowance (OAA) change decision-making about adolescents' life-course circumstances in multi-generational households?*

Situated within a critical realist perspective, the question emphasises *how* the effects occur and focuses on the process of decision-making to highlight the importance of understanding the underlying pathways and other influencing factors. Life-course circumstances refer to the typical set of options facing adolescents through their transition to adulthood including education, work and marriage. The overarching question is broken down into three interrelated sub-questions which aim to reveal different aspects of the problem.

Research question one (RQ1) asks: *what are the gendered effects of OAA income on adolescents' education, work, and timing of marriage?* RQ1 focuses on quantitative methods and aims to draw causal inferences about realised outcomes. The analysis is multi-layered with respect to each life-course outcome and differentiates by gender of both the adolescent and the elder (the UCT recipient) to reveal insights into the gendered nature of household preferences and decision-making.

Research question two (RQ2) asks: *what are the pathways through which the OAA affects adolescents' life-course circumstances?* RQ2 draws on both quantitative and qualitative data, to explore and test the pathways through which effects occur and the underlying assumptions. The analysis focuses on the impacts of the OAA on the household economy, specifically income, expenditure and credit, as well as examining

the nature of resource sharing between the parental and elder generations, and control of OAA income, and how these may influence adolescents' lives.

Research question three (RQ3) asks: *how is OAA income factored into households' decision-making about adolescent life-course options?* RQ3 is primarily qualitative and draws on the experiences of adolescents, parents and elders in selected households that receive the OAA. The analysis situates the role and relative importance of the OAA within the context of the multiple factors, constraints and enablers, that influence household decisions about adolescent life-course options.

Thesis outline

This thesis is structured as a continuous and cumulative analysis of the research topic. Chapter 2 provides a critical review of the literature on the impacts of UCTs, and CCTs where relevant, on adolescent school attendance, work and marriage, and the theories and evidence relating to the pathways that lead to the observed changes. Building on the review, it then presents an analytical framework for understanding the gendered effects of a UCT on adolescent life-course circumstances that centres on household decision-making and that is situated in the local socioeconomic context.

Chapter 3 provides a detailed description of the quantitative and qualitative methods including the research design, tools, planning, data collection and quality, analytical approach, and research ethics. Chapter 4 then lays the foundation for subsequent analyses by describing the household population and the state of schooling, work and marriage among adolescents in the survey population.

Chapters 5 to 7 broadly respond to the three research questions in turn although with some overlap. Chapter 5 analyses the quantitative effects of the OAA on adolescents' life-course circumstances. The analysis exploits the age eligibility criteria of the OAA to make causal inferences about its effects on the school attendance, work participation, and marriage status of co-resident adolescents. Additional analysis explores how the observed effects vary by certain individual and socioeconomic characteristics.

Chapter 6 integrates quantitative and qualitative data to explore how the OAA interacts with the household economy to better understand the pathways through which the OAA

affects adolescent life-course circumstances. The analysis also examines resource sharing and decision-making to reveal insights into observed variations in the effects of the OAA. Chapter 7 uses qualitative data, complemented by survey data, to situate the role of the OAA within the multiple cultural, social and economic factors that affect decision-making about adolescents' life-course options. The findings are triangulated with results from previous chapters and further explain why certain effects occur, or do not occur, for adolescents in different circumstances.

Chapter 8 draws together the different strands of the analysis into a final discussion. The chapter summarises the findings in relation to the research questions, discusses the contributions of the study in relation to the literature, critically reviews the research methods, and presents conclusions about the implications of the findings for policy and further research.

Chapter 2

Cash transfers, adolescent life-course circumstances, and the role of household decision-making

Introduction

This study investigates the effects that additional income has on adolescents' life-course circumstances in a low-income context. The literature on the relationship between household income and children's well-being and development proposes two complementary theories about the effect pathways: the family investment model and the family stress model (Cooper and Stewart 2013; De Walque et al. 2017). In the investment model, families use additional income to invest more in the goods, services, and time required to improve children's outcomes. In the stress model, increased financial security reduces stress among parents or caregivers, thereby improving their psychological well-being and parenting behaviours. Evidence from rich countries suggests that stress pathways better explain behavioural outcomes, while investments better explain differences in children's physical and cognitive outcomes (Yeung, Linver, and Brooks-Gunn 2002; Gennetian, Castells, and Morris 2010). Given the focus of this study on life-course circumstances that are associated with significant direct and indirect financial costs and benefits, the overarching assumption is one of an investment model, whereby parental or caregiver households use additional income to secure the desired outcomes for their adolescent children. With the notable exception of Kilburn et al.'s (2017) study on the effects of a cash transfer on education outcomes in Malawi (discussed shortly), the literature reviewed in this chapter assumes the investment model to be the primary driver behind changes in the outcomes of interest.

In rich countries, the literature on income effects on low-income children and adolescents focuses on a range of state interventions including direct cash transfers, tax credits and minimum wage policies. In low- and middle-income countries, the literature is dominated by studies of cash transfer programmes which have proliferated in the past 20 years. The literature includes several systematic, or systematic-like, reviews focused

on child and adolescent education, work and marriage (see for example IEG 2011b; Lee-Rife et al. 2012; IEG 2014; de Hoop and Rosati 2014; Baird et al. 2014; Bastagli et al. 2016; Kalamar, Lee-Rife, and Hindin 2016; Dammert et al. 2018).

While the body of literature is large it exhibits certain biases, initially towards conditional cash transfers (CCT) in Latin America and more recently, unconditional cash transfers (UCT) in sub-Saharan Africa. These mostly donor-supported schemes have benefited from rigorous, often experimental, impact evaluation. The existence of high-quality survey data led to a multiplier effect, with further quantitative studies on a range of issues beyond the primary objectives of the programmes. There is much less evidence from Asia, and South Asia in particular, where cash transfer programmes are more likely to have been initiated and funded by the state, as in the case of Nepal. This has implications for our understanding of how cash transfers affect households and individuals in cultural, social, and economic contexts that may be substantially different to those in much of literature.

Focusing on UCTs in developing countries, but also CCTs where relevant, the first part of this chapter summarises current knowledge about how and why cash transfers affect adolescents' life-course circumstances and which other proximate factors may mediate these impacts. While the focus of this study is on adolescents, the review refers to both children and adolescents due to the variety of age groups across the literature.[8] Importantly, specific gaps are identified in the understanding of how cash transfers affect adolescent school attendance, work and marriage, especially as they pertain to Nepal and similar contexts. These gaps constitute the primary areas of investigation in the study.

A recurrent criticism of the literature is that many studies, especially those relying solely on econometric methods, decontextualize outcomes and the processes through which they occur, essentially ignoring the complexities of people's lives (Adato 2008; Devereux et al. 2013; White 2015; Mahendru and Tasker 2020). Taking a critical realistic perspective, the final part of the chapter presents an analytical framework that

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[8] In most cases, 'children' is used when the population of interest in a study crosses the boundary between middle childhood (5-9) and early adolescence (10-15). Specific ages are stated where this is relevant to interpretation of the findings.

puts decision-making at the centre of the analysis. In so doing, this provides a locus to consider the multiple contextual factors, both within and outside the household, that shape the effects of cash transfers on adolescents.

The next section presents the review of existing empirical evidence on the impacts of cash transfers on adolescents' life-course circumstances, as well as current theories and evidence of the pathways that lead to the observed changes. The second section summarises evidence on how individual characteristics and household- and community-level factors moderate the impacts of cash transfers on adolescents. Building on the literature review and models of household bargaining, the third section presents the framework for analyses in the remainder of the study. The final section summarises and concludes.

The effects of cash transfers on adolescent life-course circumstances

Cash transfers and adolescent school attendance

Around the world, cash transfer programmes are found to have positive and sometimes large average effects on school attendance. Baird et al.'s (2014) systematic review of cash transfers in 25 low- and middle-income countries finds that UCTs increase the odds of enrolment on average by 23% and attendance by 42% among children and young people ranging from five to 22 years old.[9] A smaller sub-group of studies allows for analysis by gender, with average impacts moderately higher for girls. Of direct relevance to this study is evidence from South Africa, Brazil and Mexico showing that old age pensions can have substantial positive impacts on enrolment and attendance rates of co-resident adolescents. Enrolment rates are higher by as much as 20-33pp in the case of Mexico (Gutierrez, Juarez, and Rubli 2017). Moreover, in Brazil and South Africa, effects are shown to vary by gender of both the adolescent and the recipient, with some indication of same-gender favouritism between the generations (Edmonds 2006; de Carvalho Filho 2012). These findings imply the existence of heterogeneous preferences or bargaining power within the household, discussed later in the chapter.

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[9] This compares to 36% and 65%, respectively, in the case of CCTs, which have the specific objective of improving enrolment and attendance and with the additional inducement of conditions.

Despite these findings, impacts on school attendance are not guaranteed. Among the 20 studies identified in Bastagli et al.'s (2016) systematic review that report on overall school attendance, seven find no significant effects. Reasons posited for the lack of impact, although with limited evidence, include lack of compliance with conditions in the case of CCTs, high base-line attendance rates, and low transfer size. However, effects could also be diminished by low preferences for education, whereby gender norms, school quality and other factors that modify the expected future returns to schooling (Eyal and Woolard 2014).

Theoretically, UCTs affect school attendance through an income effect, allowing households to invest in the direct and indirect costs of school, the latter typically constituting forgone income from labour. Several studies on UCTs find increases in education-related expenditure concurrent with school attendance (Edmonds 2006; Miller and Tsoka 2012; Handa, Natali, et al. 2015; Kilburn et al. 2017). Kilburn et al. (2017) provide a rare example of a study that tests both the investment and stress pathways between income and children's outcomes. They find that increases in school enrolment and decreases in drop-out associated with an income transfer in Malawi are explained entirely by increased education-related expenditures. At the same time, Sabates et al. (2019) show that increased investment in education as a result of a UCT does not necessarily lead to wider access to school, highlighting the need to understand the wider contextual factors that shape outcomes.

Around the world, the education fabric of most countries is diverse. Education supply can vary by regulatory status, funding model, cost, and even purpose. In contexts such as Nepal, costs can differ substantially between public schools and the relatively large private school sector (Ministry of Education, UNICEF, and UNESCO 2016) with implications for the potential effect of additional income on schooling. Tooley and Dixon (2007) show that low-fee private schools (LFPS), which cater to low-income households, are mushrooming in developing countries. In many parts of the world, including much of South Asia, religious schools offer an alternative to mainstream education, especially among Muslim communities (Park and Niyozov 2008). Despite this variation in the supply of education, studies on income effects on access to school rarely distinguish between public, private, and other types of school. One exception is the World Bank Independent Evaluation Group's (IEG) (2011a) evaluation of

Pakistan's Female Secondary School Stipend Programme (FSSP), a CCT. The authors find that as well as improving girls' school attendance as intended, the additional income allows co-resident boys to shift from state school into private school. This raises an important aspect of the relationship between income transfers and education that is largely overlooked in the literature; cash transfers may impact on school choice, supporting access to better quality education including schools which require out-migration from the parental home. In a qualitative study, Deshingkar, Godfrey-Wood and Bene (2013) found that some recipients of Malawi's Social Cash Transfer Scheme (SCTS) use the money to support their children to access education away from home. UCTs may even expand school choice beyond their direct value by facilitating access to credit. However, investigation of the effects of cash transfers on access to credit tends to focus on subsistence consumption smoothing and economic activity and not on human capital investment.

Schooling may also increase if cash transfers are of sufficient value to supplement forgone income from child or adolescent labour. Several studies find that UCTs result in decreased work participation concurrent with increased school attendance (de Carvalho Filho 2012; Handa, Natali, et al. 2015; Gutierrez, Juarez, and Rubli 2017). However, it is questionable that an increase in household income alone, even of equivalent value to forgone income, would induce families to shift children from full time work into school considering the many potential barriers to late enrolment (Ministry of Education, UNICEF, and UNESCO 2016; Singh and Mukherjee 2018). Indeed, Edmonds and Schady (2012) find that the declines in paid labour among 11-16 year olds associated with Ecuador's *Bono de Desarrollo Humano* (BDH), a de facto UCT, are concentrated among school goers. There is also evidence that UCTs prevent children from dropping out of school (Baird, McIntosh, and Özler 2011; Kilburn et al. 2017) which, in part, may be linked to a reduction in household reliance on child work as a response to income shocks (de Hoop and Rosati 2014).

Finally, by increasing household consumption in general, UCTs may also improve children's nutrition which consequently increases willingness to attend and attentiveness at school (Bastagli et al. 2016). Evidence for this pathway is thin. However, Miller and Tsoka (2012) identify an increase in household food expenditure alongside the increase in school enrolment associated with Malawi's SCTS. They

provide a rare example of a mixed-methods study with complementary qualitative evidence. Children and their parents clearly articulate that the additional food means children do not feel hungry and find it easier to attend school and to learn.

Cash transfers and participation in economic and domestic work
Cash transfers can lead to changes in child and adolescent work, in many cases with reductions in participation rates and the hours engaged in both economic and domestic work (IEG 2011b; de Hoop and Rosati 2014; Bastagli et al. 2016; Dammert et al. 2018). However, effects are highly variable across studies, with some finding increases in participation rates and shifts between types of work. Moreover, Bastagli et al. (2016) find that more than half of the studies in their systematic review that measure child work participation identify no significant effects. Beyond low transfer levels, few explanations are provided for the absence of effects on work. In some cases, this may be due to the coarse specification of the units of analysis, for example not differentiating by gender or age-group, the limited measures of work such as focusing only on paid employment, and the fact that some amount of home-based work is often beneficial, and even necessary, for children and adolescents' socialisation and development (Morrow 2012).

Effects on remunerated employment are most common, with UCTs in Malawi, South Africa, Ecuador, Zambia, and Lesotho all reducing child participation in paid work outside the home (Covarrubias, Davis, and Winters 2012; DSD, SASSA, and UNICEF 2012; Edmonds and Schady 2012; Handa, Natali, et al. 2015; Porreca and Rosati 2018). Brazil's social pension reduced overall participation in economic work for 10-14 year old boys. However, while girls' participation in market work reduced if the pension recipient was female, it increased if the recipient was male (de Carvalho Filho 2012). Pakistan's FSSP also resulted in small but statistically significant increases in paid work for older girls (Alam and Baez 2011) which may reflect that social and economic incentives to work increase with age. Evidence on adolescent economic migration is thin. However, Mexico's *Oportunidades*, a CCT, reduced the likelihood of 9-15 year old boys migrating out of the household, with stronger effects for older boys, which the authors speculate represents a reduction in migration for work (Behrman, Parker, and Todd 2008). Overall, the evidence suggests that most households are averse to children's participation in market work. However, some increases in paid work are

identified, which suggests that circumstance matters. In particular, as children pass through adolescence towards adulthood, incentives to work will change, especially where education offers a poor (or costly) alternative (Lloyd, Behrman, and Stromquist 2006). Yet, little is known about the factors that will change incentives to invest additional income in developmental outcomes or labour market access.

It is less common to find impacts of cash transfers on unpaid work for the family business and domestic chores. In part, this may be due to a scarcity of relevant data, with particular implications for understanding the effects on girls who are more likely to engage in unpaid work (Bastagli et al. 2016). Households may also have expectations that children and adolescents contribute a certain amount of time to the domestic workload and to the family business. Nonetheless, Ecuador's BDH reduced both paid and unpaid economic work among 11-16 year olds and Nepal's state scholarship programme, a CCT, decreased unpaid economic work for 8–16 year old girls (Edmonds and Schady 2012; Datt and Uhe 2019). Malawi's SCTS demonstrates shifts between types of work, with reductions in external paid work but increases in family farm work for boys and domestic chores for girls (Miller and Tsoka 2012). This highlights the importance of measuring the full range of work that young people may engage in to properly understand income effects on time allocation.

Some studies examine the effects of cash transfers on hours worked. IEG's (2011b) review of programmes supported by the World Bank suggests that both CCTs and UCTs reduce the hours spent working more consistently than participation rates. However, Bastagli et al. (2016) show that effects on work hours are generally not large relative to school hours, with a maximum reduction of 2.5 hours per week among the five studies reported. Exceptionally, South Africa's pension, which has a particularly large transfer value relative to household consumption, brought about a reduction of around one hour per day, mostly in market work for boys and domestic work for girls; and with no difference in participation rates (Edmonds 2006).

There are three main pathways through which cash transfers can affect adolescent labour in poor households; by increasing or smoothing household consumption, through a school effect, and by altering the returns to labour through investment (de Hoop and Rosati 2014; Bastagli et al. 2016; Dammert et al. 2018). Looking first at the

consumption effect, if an adolescent is engaged in paid work to contribute to household subsistence and the transfer is enough to compensate the foregone income, then work should reduce. This assumes that the household is averse to child paid work and that the effect represents an investment in children's well-being. Households in receipt of cash transfers generally see increases in consumption (Hagen-Zanker, McCord, and Holmes 2011) and are better able to meet subsistence needs in the face of chronic poverty and following income shocks (de Hoop and Rosati 2014). However, the balance of positive and zero effects cited above suggest that this is not always the case. Paid work hours tend to be rigid which may be why there are reductions in participation rates but not substantially in hours (Edmonds and Schady 2012); and the value of the transfer relative to foregone income must be enough to tip-the-balance between a fixed amount of paid work and no paid work. Moreover, for older adolescents, paid work may be a positive opportunity rather than an undesirable necessity, and additional income could be invested in accessing the labour market (discussed shortly).

Second, if the cash transfer prevents an adolescent from dropping out of school by meeting the direct costs, as well as any foregone income from paid work, then the adolescent may also be exempted from unpaid economic and domestic work at home. This implies that the school going adolescent's labour can be substituted with other household or paid labour (Bastagli et al. 2016). However, the reality for many adolescents is that work continues concurrent with schooling and often has positive benefits, and the evidence suggests that reductions in unpaid work are less common. Moreover, the Malawi case shows that if paid work is reduced then some of the gains in time may be spent on more home-based economic or domestic work as well as increased schooling (Miller and Tsoka 2012).

Third, returns to adolescent labour may change if cash transfers lead to more or better productive opportunities. A UCT can be invested in the household business or used to meet the financial costs of entering the labour market including for economic migration, possibly by facilitating access to credit (Hagen-Zanker and Himmelstine 2013). If there is no surplus adult labour in the household then adolescent work will increase, either by engaging directly in the new economic activity or by taking on the unpaid responsibilities of an adult who has an increase in economic work. Malawi's SCTS demonstrates this effect, with increases in work on the household farm concurrent with

higher expenditures on agricultural inputs (Covarrubias, Davis, and Winters 2012; Miller and Tsoka 2012; de Hoop and Rosati 2014). Moreover, there is evidence that cash transfers can facilitate access to loans for productive purposes (Mathers and Slater 2014). In Malawi and Kenya, Deshingkar et al. (2013) find qualitative evidence that UCTs facilitate economic migration of young people because of limited opportunities at home. The South African pension has also led to increases in economic migration by relaxing liquidity constraints (Sienaert 2007). While the findings are for adults, they could plausibly be generalised to older adolescents, which again highlights the need to measure income effects on more specific age groups to understand thresholds at which incentives to work change.

Cash transfers and adolescent marital status

Compared to education and work, evidence of the effects of UCTs on adolescent marriage status is thinner and almost all from sub-Saharan Africa (Lee-Rife et al. 2012; Kalamar, Lee-Rife, and Hindin 2016; Bastagli et al. 2016). Moreover, there is considerable variation in the findings, with most studies identifying no effect but some identifying negative and others positive effects on marriage status.

Marriage rates of girls and young women were found to be unaffected by Kenya's cash transfer for orphans and vulnerable children (CT-OVC), Malawi's SCTS and Zambia's Multiple Categorical Targeting Grant (MCTG) (Handa, Peterman, et al. 2015; Dake et al. 2018). The UCT arm of Malawi's Zomba cash transfer reduced marriage rates among out-of-school girls during programme implementation, however, rates increased slightly among girls 15 years or older and effects were not sustained two years later (Baird, McIntosh, and Özler 2011; 2019). Siaplay (2012) finds that South Africa's pension, one of few studies to look at both female and male marriage rates, reduced rates among boys but not girls. However, when differentiating results by gender of the recipient, female elders were found to reduce marriage rates for both girls and boys while male elders increased rates for both.

The literature identifies two pathways through which UCTs can affect adolescent marriage, a school effect and a consumption effect. First, Dake et al. (2018) propose that, for as long as a UCT allows an adolescent to continue at school, then marriage will be delayed. However, their own findings indicate no effect on marriage rates and there

is little other evidence of UCTs reducing marriage rates through a school effect. In contrast to UCTs, several CCTs have been shown to delay marriage by inducing school attendance including Mexico's *Oportunidades*, Pakistan's FSSP and, in the longer term, the CCT arm of Malawi's Zomba programme (Gulemetova-Swan 2009; Alam and Baez 2011; Baird, McIntosh, and Özler 2019). This difference in marriage outcomes may occur because cash transfers by themselves do not change inherent preferences (Amin et al. 2017b). UCTs will support school attendance for those households that already prefer schooling over marriage but are financially constrained. The conditions of CCTs, on the other hand, may incentivise school attendance even for those households that have a stronger preference for marriage over schooling. Indeed, some CCTs and other marriage disincentive schemes that transfer cash or material benefits at a certain age, have been shown to delay marriage only for as long as the benefits are provided (Lee-Rife et al. 2012; Amin et al. 2017b). While UCTs can have large positive effects on school attendance, it is uncertain that they will reduce marriage rates.

Second, in addition to the school effect, Handa et al. (2015) suggest that, where traditional marriage practices involve a transfer of social and economic responsibility for the daughter to her husband's household, additional income allows poor households to support the upkeep of their daughters for longer. While the authors find no evidence to support this in their own study on Kenya's OVC programme, lower marriage rates were found among out-of-school girls in Malawi's Zomba programme (Baird, McIntosh, and Özler 2011). However, as with the school effect, there is an underlying assumption that households prefer later marriage. Societies with traditional dowry practices tend to value earlier marriage for both social and economic reasons (Anderson 2007). Thus, an additional pathway exists whereby a UCT could facilitate earlier marriage by covering the costs associated with dowry and the ceremony. Moreover, as with private education, it is possible that a UCT could facilitate access to loans large enough to cover the costs of marriage, which can be a significant financial burden on the bride's household in contexts such as Nepal (Anderson 2007).

The role of individual characteristics and other moderating factors

The literature reveals that the effects of UCTs vary depending on the individual characteristics of the adolescent and various moderating factors, constraints and enablers, at the level of the household and the community, as well as the design of the

cash transfer and the effectiveness of implementation.[10] This section briefly reviews some the most common factors that are relevant to this study.

Evidence shows that the likelihood and magnitude of income effects vary along three main individual characteristics of the adolescent; gender, age and pre-treatment status. First, differences in effects by gender of the adolescent typically stem from the role of social and gender norms. These are discussed shortly in relation to the community context. However, it is worth noting that, despite the likelihood of gendered income effects, many studies do not differentiate analyses by gender. This is the case for approximately half of the studies related to education cited in Bastagli et al.'s (2016) systematic review.

Second, transitions to adult roles become more likely with age. Several studies showed that cash transfers are associated with increases in economic work participation and marriage rates among older children. Moreover, cash transfers often have larger impacts on school attendance at specific junctures. Brazil's social pension had a greater effect among 13-14 year olds in line with the local grade structure (de Carvalho Filho 2012). Third, pre-treatment status also matters. Whether an adolescent is already in school, married, or working before additional income is received by the household has implications for the potential impact on their life-course options. For example, it was shown earlier that UCTs are more likely to prevent school drop-out than to support (re)enrolment and adolescents who are already out of school may be more at risk of marriage or economic migration.

At the household level, the effects of UCTs on adolescents are likely to vary by economic status, existing levels of human capital, household size and composition, ethnicity and caste, and the dynamics of intra-household decision-making and resource sharing. First, cash transfers are consistently shown to have greater effects on school participation and child work among the poorest households because they face liquidity and credit constraints (de Hoop and Rosati 2014). Ecuador's BDH reduced adolescent labour participation but only among the poorest 25% of the target population (Edmonds

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[10] Less proximate factors such as the wider political, legal, institutional and economic context are also important but are beyond the scope of this study.

and Schady 2012). However, it may be that the very poorest households are too poor to experience higher level benefits. Evidence from Nepal suggests that in the poorest households, OAA income is more likely to contribute to communal household needs such as food rather than children's education (Uprety 2010).

Second, better educated adult household members may place greater value on education and be better able to navigate access to services. While Pakistan's FSSP had greater effects on delaying marriage and reducing work participation among the poorest, significant effects on school enrolment were more likely among adolescents with more highly educated parents (IEG 2011b). Better educated adults may also invest more in children's development when they are young, providing a stronger foundation from which to benefit from a cash transfer during adolescence (Kilburn et al. 2017). Third, household size will affect the per capita value of the transfer and the dependency ratio in the household has been shown to moderate how a UCT affects adolescent work when the transfer is invested.

Fourth, ethnicity and caste suffuse everything in Nepali society and are strong determinants of economic and social opportunities (Aasland and Haug 2011; Wagle 2017). For example, in Nepal, Muslim households have strong religious obligations to educate their children in the Madrassa rather than the mainstream education system (Hafiz, Prakash, and Rajbhandari 2008). Employment opportunities are also strongly determined along caste lines. Despite receiving economic support, Dalits in India have been shown to withdraw young people from secondary schools due to their exclusion from employment opportunities in sectors requiring higher levels of education (Jeffrey, Jeffery, and Jeffery 2004).

Fifth, the dynamics of intra-household decision making can be affected by a cash transfer and may determine how it affects household members. There are two important dimensions to this: who makes decisions about adolescents' lives and who controls the resources. Cash transfers may have greater beneficial effects on children when received by women (Yoong, Rabinovich, and Diepeveen 2012). This suggests there are heterogeneous gendered preferences within the household. Studies on the effects of pensions cited previously all show that effects vary depending on the gender of the recipient, implying differences in preferences but also that resources are shared between

the generations. Case (2004) shows that effects of the South African pension on children are stronger in households that are reported to pool resources. It will be argued shortly that intra-household decision making is of central importance to analysing and understanding the effects of cash transfers on adolescents' lives.

The nature and magnitude of the effects of UCTs also depend on the local community context including livelihood risks and opportunities, the availability and quality of services and markets, and social and gender norms. First, evidence from Malawi showed that home-based work increases among agricultural households if the transfer is invested in productive inputs. India's Mahatma Gandhi National Rural Employment Guarantee Scheme resulted in a shift from distress migration in response to local shocks to more planned migration, but without changing overall migration levels (Pryia Deshingkar et al. 2010).

Second, Mexico's *Oportunidades* led to increases in migration to attend school where schools were not locally available (Rubalcava and Teruel 2006) and to increases in the number of years of schooling where there was access to better quality schools (Behrman, Parker, and Todd 2008). Pakistan's FSSP had greater effects on school enrolment among girls in urban areas with better access to secondary schools (IEG 2011b). Third, social and gendered norms and expectations about the roles of women and men in society will moderate the effects of UCTs (Lundgren et al. 2013). In Nepal, for example, the norms surrounding education, work and marriage make it more likely that additional income is prioritised towards boys' education and potentially towards girls' marriage. Prevailing social norms and expectations intersect with several other dimensions including the gender and age of the adolescent, intra-household resource sharing and decision-making.

Both the design and effectiveness of implementation also determine how a cash transfer affects households and individuals. The literature points to several programme characteristics that are important including transfer size, frequency and reliability, duration of programme exposure, and targeting in terms of eligibility criteria and coverage (Bastagli et al. 2016). First, there is generally a positive association between transfer size and the range and size of impacts, but with some evidence of diminishing returns (Schady and Filmer 2009; Saavedra and Garcia 2012; Ferrarini, Nelson, and

Palme 2016; Datt and Uhe 2019). Davis and Handa's (2015) analysis of 12 cash transfer programmes in sub-Saharan Africa suggests that a transfer size of 20% of household consumption is the threshold between seeing selected, shorter-term impacts and achieving more widespread and transformative impacts.

Second, independent of transfer size, the frequency and reliability of transfers can determine how they are used. Smaller more frequent transfers tend to be prioritised towards basic consumption whereas larger less frequent transfers are more likely to be invested or used to purchase assets. At the same time, unpredictable transfers make it difficult for households to invest and commit to time-sensitive expenditures such as school costs (Slater, McCord, and Mathers 2014).

Third, duration of programme exposure is important, especially for longer-term cumulative outcomes. South Africa's Child Grant had greater effects on grade progression the longer children were enrolled in the programme (Eyal and Woolard 2014) and reduced the chances of 15-17 year olds working outside the home if they had received the grant from an early age (DSD, SASSA, and UNICEF 2012). Nonetheless, cash transfers that have been evaluated after just one year of implementation still demonstrate significant short-term effects (Edmonds and Shrestha 2009; Miller and Tsoka 2012). Finally, programme targeting has two main dimensions: who is eligible and how effectively are the eligible reached. As already discussed, the gender of the recipient and their relationship to the rest of the household can influence outcomes. It is also essential to understand the extent of exclusion from the programme, and who is excluded, to properly interpret results, especially when take-up is low.

Cash transfers and household decision-making: an analytical framework
This section presents a framework for understanding the gendered effects of a UCT on adolescent life-course circumstances that centres on household decision-making and that is situated in the local cultural, social, economic and physical context.

Many studies in the existing literature, especially those relying solely on econometric methods, take a narrow positivist stance that decontextualizes outcomes and the processes through which they occur, essentially ignoring much of the complexity of people's lives (Adato 2008; Mahendru and Tasker 2020). The common assumption is

that a cash transfer, T, leads to an outcome, O, in a linear fashion via different pathways relating to consumption or investment decisions, E. Thus, T $\rightarrow$ E $\rightarrow$ O. At the point of expenditure or investment decisions, the household is assumed to act either as a unitary entity or as a collective unit whereby effects can vary according to who receives the transfer. Some studies that tend more towards a post-positivist stance (B. Johnson and Gray 2015) recognise that contextual factors at the level of the household and community, C, may moderate the effects of the cash transfer on the outcome of interest. Thus, T $\rightarrow$ (C)E $\rightarrow$ O (see for example Yoong, Rabinovich, and Diepeveen 2012; Bastagli et al. 2016).

While these contextual factors are occasionally incorporated into the analysis, typically they are presented as speculative explanations for the observed results. For example, Bastagli et al.'s (2016) systematic review of the impacts of cash transfers in developing countries considers variation in outcomes by gender and major design and implementation features of the transfer. While the authors' conceptual framework recognises that impacts can vary according to contextual constraints and enablers, they are not systematically discussed in the review – a reflection of their secondary (or even tertiary) status in much of the literature. This appears to stem from a thin conceptualisation of people's lives that has consequences for the research design and leads to potential misinterpretation of results and limited generalizability. Especially where no statistically significant results are found, explanatory capability is left wanting. In contrast, development anthropologists have long recognised that the subjects of policies and projects have their own agendas and interests and, from an outsider's perspective, can behave in unexpected ways (Long 1990; Mosse 2004). To properly understand the effects of a cash transfer requires (re-)imagining it from the perspective of the household, and the individuals within it, as a resource that is incorporated into the on-going and complex reality of their lives. This study aims to incorporate some of this diversity and complexity.

Philosophically, this study is perhaps most closely aligned with a critical realist perspective, integrating a realist ontology with a form of constructivist epistemology (Archer et al. 1998). The critical realist perspective has informed formation of the research questions and the analytical framework, and the choice and application of methods to address the research problem. In particular, the analytical framework,

depicted in Figure 4, draws on three central tenets of critical realism: an emphasis on thick causal description in addition to causal explanation; an understanding that values and beliefs form a part of reality and inform people's actions; and a recognition of diversity as a real phenomenon (Maxwell and Mittapalli 2015). As such, the analytical framework recognises that 'contextual' factors are central to the analysis because, even more than the cash transfer, they determine decisions made about the outcomes of interest. The cash transfer is just one other element that enters the existing complexity of people's lives, thus: C(+T) → E → O. Whether and to what extent the cash transfer affects the outcome of interest is determined by these factors and how they interact.

Figure 4 Framework for analysing the effects of a cash transfer
on adolescent life-course circumstances
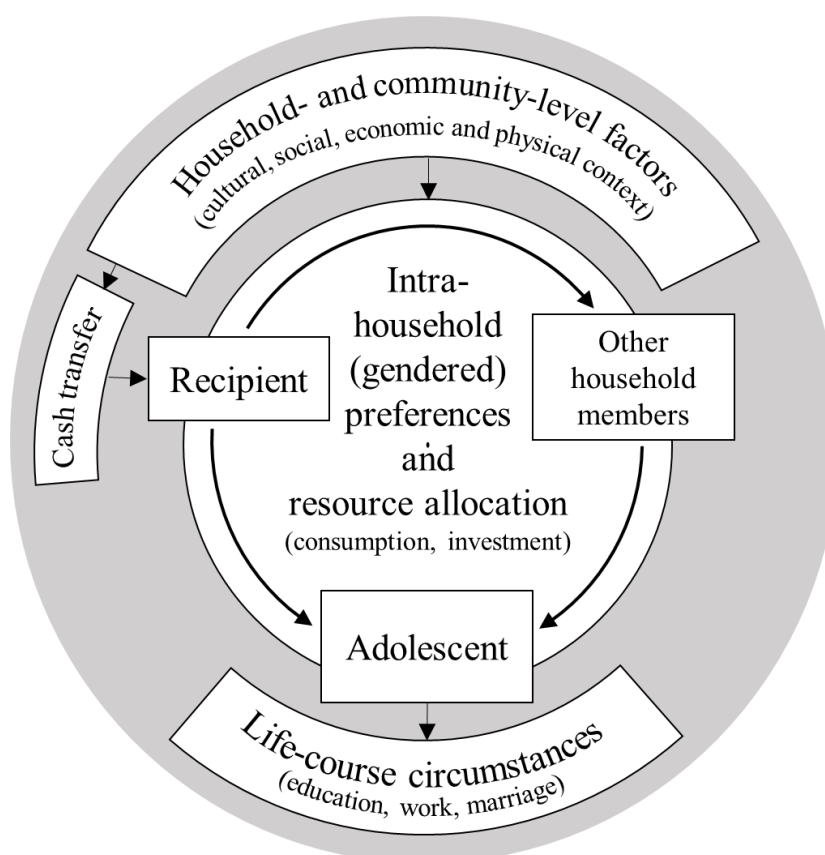
Source: Author

At the centre of the framework are decisions about adolescent life-course options which depend on the gendered preferences or interests and available resources of household members including parents or guardians, elders, and adolescents. Primary decision makers in this study are assumed to be parents but, in some cases, may be non-parental

caregivers. It is also recognised that elders, typically grandparents, can also influence decisions. In Nepal, elders have a particularly strong voice within the household especially if they are the household head. Gram et al. (2018) show that, among communities in the Terai, households tend to have a financial guardian who receives most income and is responsible for day to day expenditures, but that the household head may have the final say over major expenditures. In some cases, the elder may be the primary guardian of the adolescent, although analysis in Chapter 4 suggests that these households constitute only a small minority of the study population. Most adolescents are unlikely to control significant financial resources but are nevertheless able to influence decisions about their own lives to some extent, and increasingly so as they grow older. The effects of a cash transfer on their lives is contingent on their cooperation and thus their perspectives are also important.

In the context of this study, the UCT enters the household via the elder recipient and becomes part of the decision-making process. For the UCT to affect adolescent outcomes it should lead to an increase in resource allocation towards the adolescent, towards household consumption in general, or towards the productive activity of the household. Whether and how this occurs is dependent on the dynamics of resource sharing within the household. In the economics literature, collective bargaining models recognise that households have multiple actors with different and often conflicting preferences or interests and with variable ability to fulfil them (Agarwal 1997; Thomas 1990).[11] Collective models tend to fall into two categories, cooperative and non-cooperative. In cooperative models, incomes are assumed to be pooled; however, there is substantial literature to suggest that households in developing countries often only partially pool resources (Alderman et al. 1995).[12] In contrast, non-cooperative models recognise that both preferences and consumption decisions can be made individually based on non-pooled incomes (Doss 1996). Individual household members control their own income and bargain over how much to contribute to shared household goods and for other purposes.

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[11] Alderman et al. (1995) argued more than twenty years ago that collective models should be the standard approach rather than the unitary model that assumes a single set of preferences for the household.

[12] In cooperative bargaining models, household resources are assumed to be pooled and consumption decisions are determined by each individual household member's dissolution threshold, typically in relation to a husband and wife (Emerson and Souza 2002; Doss 2013).

Thus, while they may not be the primary decision-maker in relation to adolescents' life-course circumstances, the recipient of a UCT, in this case the elder, may influence expenditure or investment decisions in a way that affects co-resident adolescents. Even if the UCT is spent on the needs of the recipient this may result in a reduction in other household resources allocated towards the recipient (Alderman et al. 1995). In other words, the transfer expands the total household budget and other incomes may be allocated towards the adolescent. It is also possible that the recipient relinquishes control or is dispossessed of the transfer income, in which case it could still affect adolescents but would reduce the recipient's influence in decision-making processes. The pathways through which the OAA affects adolescent outcomes, including its impact on the household economy and processes of resource sharing and decision-making, are the focus of RQ2 and are analysed primarily in Chapters 6 and 7. While the study is unable to incorporate characteristics of parental decision-makers into the quantitative analysis (for reasons explained in Chapter 3), several approaches are taken to understand the dynamics of the decision-making process. These include describing household structures (Chapter 4), analysing heterogeneity in causal estimates by household structure (Chapter 5), investigating the role and influence of OAA recipients in household bargaining (Chapter 6), understanding parental or primary caregiver expectations about school completion and marriage timing, and drawing on the perspectives of adolescents, parents and elders in relation to the multiple factors that influence decision about adolescents life-course circumstances (Chapter 7).

Adolescent life-course circumstances, shown in the lower part of Figure 4, are the result of this dynamic decision-making process. Focusing on decision-making requires consideration of the potential alternative outcomes and how they interact. This study is interested in adolescent transitions to adulthood. Thus, the framework incorporates the common, and often competing, set of life-course options together. The literature review identified the theoretical effects of UCTs on school attendance, work and marital status, depending on how additional income is allocated. School access may increase when a cash transfer helps to meet the direct costs of school, compensates opportunity costs, or enhances nutrition, but a cash transfer may also expand school choice, for example from public to low-fee private school. Average effects on work participation are ambiguous but can be specified by type of work. Paid economic work may decrease if the

additional income compensates lost income; but may increase if the income is used to meet labour market entry costs. Home economic and domestic work may decrease via the school effect; but may increase if the income is used for investment that increases labour demand at home or takes adults away from home. Marriage rates may decrease via the school effect or by meeting the adolescent's basic cost of living but may increase if there is a preference for earlier marriage and the additional income contributes to the associated costs. Measurable changes in adolescent outcomes resulting from the OAA, and how they relate to each other, are the focus of RQ1 and are analysed primarily in Chapter 5.

The upper part of Figure 4 shows that both the preferences and interests of households (parents, elders and adolescents) in relation to adolescents' life-course circumstances, and the resources and opportunities available to them, are dependent on the cultural, social, economic and physical context in which they live. The literature review identified proximate moderating factors at the level of the household and the community, as well as the design of the UCT and effectiveness of implementation. These moderating factors are the focus of RQ3 and are analysed in Chapter 5, which incorporates more refined variable analysis related to individual and household characteristics, and Chapter 7, which provides a richer account of causal processes, embedding the role of the OAA within the cultural, social and economic diversity of the study community.

Summary and conclusions

This chapter has reviewed the existing literature on the effects of cash transfers on adolescent schooling, work and marriage, summarised current understandings of the theoretical pathways through which effects occur and identified common moderating factors at the household- and community-level. It has also introduced an analytical framework that guides the approach taken in the rest of the study.

While some clear patterns have emerged in the literature over the last two decades, especially in relation to education, there is still considerable variation in the magnitude and sometimes direction of the impact of cash transfers on adolescents and, in some cases, an absence of effects. Most studies provide insufficient explanation for the variation in effects and largely overlook the complexity of people's lives. In part, this

may be due to data limitations related to the units of analysis and measures of the phenomena of interest. However, it has also been shown that there are shortcomings in the analytical approach in many evaluative studies, especially those that rely solely on econometric methods.

Drawing on a critical realist perspective, the analytical framework describes the contextualised processes and underlying assumptions that determine the nature of the effects of the OAA on adolescent life-course circumstances. At the heart of the framework is the process of household-decision making which draws on the non-cooperative household bargaining model. This recognises that the nature of gendered preferences, resources and bargaining power within the household will determine expenditure decisions, and that additional resources may increase the bargaining power of the recipient. The effects of additional income on the adolescent depend on how it interacts with the household economy and how resource allocation decisions are influenced by the various moderating factors at the level of the household and the local community. It has been argued that a deeper understanding of these causal processes and greater recognition of social diversity are necessary for proper interpretation of marginal changes in average outcomes.

Several key gaps in the literature have also been identified that are of relevance to Nepal and similar contexts and form the key areas of inquiry for this study. First, education provision is often assumed to be homogenous but can consist of state, private, and religious institutions. Understanding how cash transfers impact on school choice, not only school attendance, can reveal important insights into cost barriers, quality, and culturally determined preferences for education. Second, some studies propose, although with limited evidence, that cash transfers impact school attendance due to the relaxing of credit constraints. However, no studies have been identified to date that include investigation of the effects of cash transfers on loan taking for investment in human capital.

Third, theoretical models indicate potentially different effects of cash transfers on child and adult paid work, but few studies focus on the period of adolescence during which incentives to work may change. Little is known about the thresholds at which households may choose to invest in adolescent work opportunities rather than in further

education. Fourth, the theoretical possibility that cash transfers may hasten marriage decisions is largely overlooked in the literature. This is particularly relevant for societies that favour early marriage and where dowry practices create economic incentives for earlier marriage. Fifth, cash transfers may induce adolescent out-migration, whether for education, work, or marriage. However, adolescents who have left the home are invisible in most studies that examine the effects of cash transfers on adolescents' life-course circumstances. Sampling of the population of interest should be inclusive of recent out-migrants.

The next chapter provides a detailed account of the quantitative and qualitative methods used to investigate the research questions and how these are integrated.

Chapter 3

Methodology and methods

Introduction

This study makes use of integrated mixed-methods for data collection and analysis, an approach that is increasingly advocated for in the evaluation of economic and social development policies and projects in developing countries (Adato 2008; Devereux et al. 2013; Bamberger 2015; Mahendru and Tasker 2020). The practice of mixed-methods in international development has primarily focused on integration of qualitative approaches into quantitative evaluative research (White 2008). Informed by the critical realist perspective, this study places equal emphasis on quantitative and qualitative methods. Maxwell and Mittapalli (2015) argue that critical realism is compatible with some of the important assumptions of both quantitative and qualitative paradigms. It provides a perspective in which to situate quantitative and qualitative approaches and specific methodological strategies to study the social phenomena of interest.

The combination of methods can strengthen understanding of causal mechanisms by providing a balance between description and explanation. Moreover, by gaining subjective perspectives, including those of adolescents, qualitative methods can provide more interpretive understandings of the motivations behind the quantitatively revealed decisions that households make and provide insights into why different households may respond to the same UCT in very different ways. The critical realist emphasis on social diversity does not imply a preference for certain methods but has implications for the range of data collected, the need for adequate sample sizes to allow for differentiated analyses, and, in qualitative approaches, to allow for emergent ideas. While critical realism asserts that knowledge of social phenomena can only be subjective, it accepts that claims can be tested empirically. Importantly, it focuses attention on "…the specific plausible threats to the conclusions drawn in a given study, which depend on *the context and purposes* of that study as well on the methods used" (Maxwell and Mittapalli 2015, 17 emphasis added). Collectively, the integration of methods provide a richer

understanding of what is happening, for whom, and why, and allows for more reliable generalisation of the findings (White 2015; Bamberger 2015).

Household survey data is used to answer research question one (RQ1) to identify changes in adolescent life-course circumstances resulting from the Old Age Allowance (OAA); and to explore the assumptions and causal pathways underlying the effects of the OAA on adolescents proposed by research question two (RQ2). The quantitative analysis centres on making causal inferences about first order (income and expenditure) and second order (changes in life-course circumstance) outcomes. The qualitative data provides triangulation points for the quantitative data as well as deeper insights to interpret the findings of RQ1 and RQ2, especially in understanding the causal pathways through which effects occur. Qualitative data is also used to answer research question three (RQ3), to understand whether and how consideration of the OAA was factored into households' decision making; and to situate the OAA within the context of other factors that influence decisions about adolescents' lives. In-depth interviews (IDI) with members of OAA recipient households provide material to understand decision-making processes: who was involved and the range of factors – cultural, social, economic and environmental – that were considered, the weight that was given to economic opportunities and pressures, and whether the OAA was an explicit part of this thinking.

Existing quantitative data was found to be inadequate to answer the research questions. OAA administrative data is of poor quality, difficult to access for researchers, and does not include information relevant to the outcomes of interest. National household surveys either do not include data on the OAA or have significant limitations including missing control variables, thin data on the nature of life-course outcomes, too few data points given the specific sub-population of interest, and the need for strong assumptions about co-residence status and the timing of life events.[13] It was therefore necessary to conduct primary data collection for both the quantitative and qualitative components of the study.

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[13] Surveys examined include: 2014 Nepal Multiple Indicator Cluster Survey (NMICS 2014), conducted by the Central Bureau of Statistics (CBS) with support from UNICEF; 2016 Nepal Demographic and Health Survey (NDHS 2016), conducted by the Ministry of Health and Population (MOHP), New ERA and ICF International; 2011 Nepal Living Standards Survey (NLSS 2011), conducted by CBS with support from the World Bank.

Figure 5 depicts the chronology of the quantitative and qualitative research components. Quantitative data was collected in the form of a household survey, the Cash Transfers and Adolescent Life-Course Survey (CTALS), while qualitative data was collected in the form of in-depth interviews (IDIs). Data collection was structured such that the qualitative component followed and was informed by the CTALS before integrating the findings and analysis.[14] While data collection was necessarily sequential, the theoretical placing and design of the research involved concurrent consideration of the two approaches and analysis was fully integrated in the overall study, reflecting the mixed-method design typology of concurrent transformative (Alavi et al. 2018). More detailed accounts of the iterative and reflexive relationship between the quantitative and qualitative components of the research are provided later in the chapter.

Figure 5 Flow and integration of quantitative and qualitative components

Source: Author

The rest of this chapter provides a detailed description of the quantitative and qualitative methods in turn, including the research design, tools, planning, data collection and quality, and analytical approach, as well as the main challenges encountered. The chapter ends with a consolidated discussion of the approach to research ethics and a reflection on the author's positionality.

Quantitative research methods

This section describes the quantitative research methods including the analytical approach and CTALS design, development of the survey questionnaire, sampling strategy, survey team and training, data collection, and data management, cleaning and quality. Figure 6 depicts the quantitative research process. It shows how each stage of survey design, planning and implementation informed the subsequent stage, how iteration and reflection were built into the process, and the interlinkages with the qualitative component. The following sub-sections can all be related to stages in Figure 6.

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[14] For reasons explained later in this chapter, qualitative data collection could not be done after completion of the quantitative data analysis, but at an interim stage.

Figure 6 Quantitative research process and relation to qualitative component

Quantitative

Qualitative

Survey design, tool development and sampling strategy

- Survey design
- Draft survey questionnaire
- Digitisation, testing and refinement
- Translation and back-translation
- Develop sampling strategy

Training and piloting

- Team recruitment
- Field trip reccy
- Training
- Piloting / field testing

Modify survey questionnaire and sampling strategy

Survey enumeration

- Household identification
- Conduct interviews
- Daily monitoring (data quality and sample size) and feedback
- Data management

Refine survey tool and interview and sampling technique

Data cleaning and quality

- Correction of identified errors
- Logical errors and outliers
- Missing values

Initial analysis

- Background data
- Descriptives for RQ1 and RQ2
- Presentation to survey team

Planning and data collection

Final analysis

Coding, analysis and write-up of RQ3

Integrate qualitative findings into RQ1 and RQ2

Integrate qualitative findings into RQ1 and RQ2

Source: Author

Analytical approach and survey design

Survey design was primarily informed by the main data analysis strategy required to answer RQ1 and aspects of RQ2. The following describes the theory behind the analysis and how this determined the data requirements and the main elements of survey design.

The causal relationship proposed by RQ1 requires a valid counterfactual. The age eligibility criteria for the OAA provides a mechanism to identify such a control group. The approach involves comparing adolescents who live with elders who are eligible for the OAA to those who live with elders just under the age of eligibility. It is informed by several similar studies that make use of the South African old age pension to determine the effects of income on young people (Duflo 2003; Case 2004; Edmonds, Mammen, and Miller 2005; Edmonds 2006; Ndlovu, Mohapatra, and Luckert 2017) but with the primary difference that the data come from a bespoke survey.

The approach comes under the umbrella of regression discontinuity designs (RDD) but is distinct from a standard RDD approach. Standard RDD implies that, given certain assumptions, units close to and either side of a cut-off point for eligibility are similar enough in relevant characteristics as to approximate random assignment (Angrist and Pischke 2009). This idea is valid when exogenously determined rules with a clear cut-off threshold, such as an academic test or poverty score, determine access to the treatment. In such cases, randomisation is not simply an assumption but is the consequence of the individual's "inability to precisely control the assignment variable near the known cut-off" (Lee and Lemieux 2010, 282). However, when age is the assignment variable, as is the case with most old age pensions, the approach is more akin to a "'non-randomised' discontinuity design" (ibid, 345). The implications of this are discussed in detail in Chapter 5 but the main structural requirements for the data are similar to the standard RDD and are depicted in Figure 7.

Data were collected on the life-course circumstances of adolescents who co-reside with at least one OAA eligible elder, the treatment group, and those who co-reside with at least one non-eligible elder (and no eligible elder), the control group. The two groups represent similar households with the same long-term income but that differ in the timing of that income (Edmonds 2006). Data were also collected on a range of factors that may confound the comparison of the two groups, not least the age of the elders.

Adolescents, the primary unit of analysis, are defined as any current, or recently migrated, household member aged 10-17 years.[15] In the majority non-Dalit households, co-residing elders are aged 65-74 years, representing a 10-year bandwidth around the OAA eligibility age of 70 years. Dalits are eligible for the OAA from age 60 as a response to their long-standing political and socioeconomic marginalisation (Gellner 2007).[16] In Dalit households, approximately 12.9% of the sample population and 13.6% nationally (Central Bureau of Statistics 2011a), co-residing elders are therefore aged 55-64 years.

Figure 7 'Non-randomised' discontinuity design for the CTALS
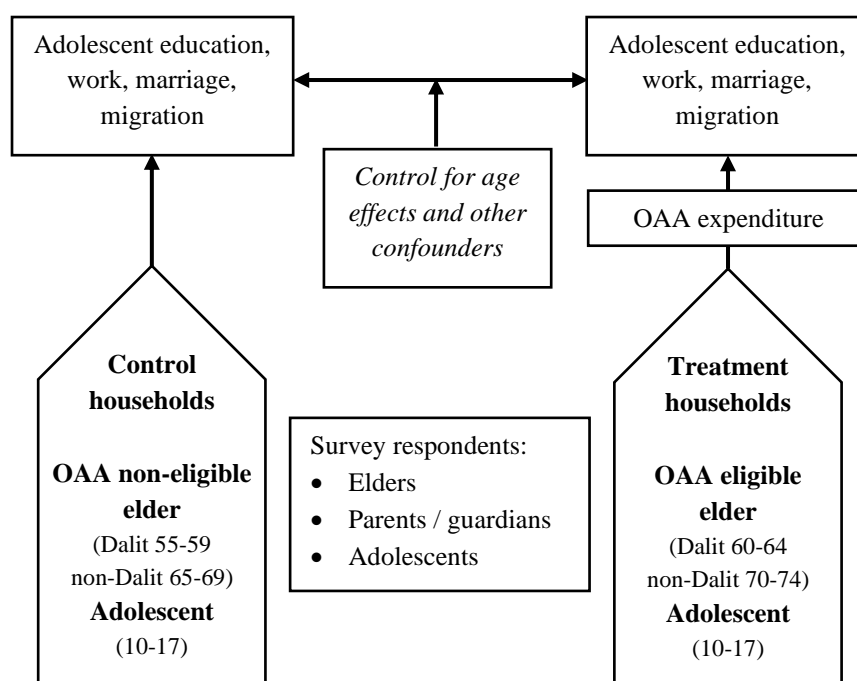
Source: Author

The 10-year bandwidth was chosen to allow for short to medium term exposure to the treatment and to strike a balance between achieving the proposed sample size and maximising the internal validity of the study. Ten years is narrower than the bandwidth used in similar studies including Case (2004) with no limit, Duflo (2003) with a lower

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[15] See the footnote on page 4 for the reasons for focusing on 10-17 year olds. The definition of current and recently migrated household members is provided later in the chapter.

[16] It is commonly stated by development practitioners in Nepal that the lower eligibility age is because of the low life-expectancy among Dalits. While this may have been the case historically, the 2006 Human Development Report (Bishwa Nath et al. 2009) estimates that life-expectancy among Hill Dalits is 60.89 years and among Terai Dalits is 61.26 years, compared to the national average of 63.69 years. The lowest life-expectancy is among Hill Chhetri at 60.61 years.

bound of five years and no upper bound, and Edmonds (2006) with 25 years. While this approach can provide reliable estimates, one of the limitations is that the results are directly generalisable only to adolescents who live with elders of a similar age. Nonetheless, the approach has the advantage of maximising efficiency in data collection by excluding more disparately aged elders and demonstrates the applicability of the approach for research involving primary data collection.

Given the diversity in data requirements relating to adolescents' lives, the socioeconomic characteristics of the household, and OAA income, expenditure and implementation, the survey included questions for three respondent types: the elder, the parent or guardian of the adolescent, and the adolescent. Detailed descriptions of the variables and estimation strategy for causal inference are provided in the relevant chapters.

Developing the CTALS questionnaire

The CTALS questionnaire was designed to provide data to answer the research questions in combination with the qualitative component. The following describes the processes for drafting the survey questions and structure, converting the questionnaire into digital format, logical and technical testing, and translation.

The draft questionnaire was developed in three main steps. First, Table 1 shows how the research questions were elaborated into more specific sub-questions and variable groups considering the analytical framework and the approach to data analysis. The second step was to map the meta structure of the questionnaire as depicted in Figure 8, by grouping questions considering their thematic similarity, the order of the topics covered (e.g., general to specific, innocuous to sensitive), and the most appropriate respondent. Four questionnaires emerged from this process: (i) the household questionnaire for the household head or person most knowledgeable about the economics of the household, in most cases the elder or parent/guardian of the adolescent; (ii) the parent questionnaire for the parent/guardian of all currently resident and recently migrated adolescents; (iii) the adolescent questionnaire for all available adolescents aged 10-17; and (iv) the elder person questionnaire for all available elders within the defined age range.

Parts of the adolescent questionnaire that were considered factual rather than subjective, and knowable by a close relative (e.g. school attendance status and current grade), were incorporated into the parent questionnaire for cases where an adolescent had recently migrated, was temporarily unavailable, or their parent/guardian had refused consent for the adolescent to be interviewed (one case occurred). Within each household, the parent and adolescent questionnaires were repeated for each adolescent that met the criteria and similarly for the elder questionnaire. In the third step, sub-questions and areas of inquiry were translated into specific closed questions with reference to existing standardized national household surveys including the NMICS 2014, NDHS 2016, NLSS 2011, and the 2008 Nepal Labour Force Survey (NLFS 2008) conducted by the CBS and supported by the International Labour Organisation (ILO); and other survey questionnaires relevant to the study including the World Bank's 2016 Household Risk and Vulnerability Survey (HRVS 2016), Hagen-Zanker, Mallet and Ghimire's (2014) Dalit Child Grant Assessment Survey (DCGAS 2014) and Statistic South Africa's 1999 Survey of Activities of Young People (SAYP 1999).

Table 1 Elaboration of research questions into sub-questions and variables of interest

How does Nepal's Old Age Allowance (OAA) change decision-making about adolescents' life-course circumstances in multi-generational households?	
What are the gendered effects of OAA income on adolescents' education, work, marriage timing?	*Dependent variables:* Adolescent life-course outcomes relating to education (school type, attendance, grade, study time), work (types and hours), marriage (status and expected or ideal age) and migration (reasons, timing) *Independent variables:* OAA eligibility, age and gender of elder *Variables for sample verification and assumption testing:* Receipt of OAA income, adolescent characteristics (age, gender), household structure, education level of adults, livelihood types, local administrative area (VDC)
What are the pathways through which the OAA affects adolescents' life-course circumstances?	Household income, expenditure and loans and resource pooling; amount and frequency of OAA income; control of OAA income and spending patterns; reasons for being out-of-school.
H*ow is OAA income factored into households' decision-making about adolescent life-course options?*	Decision making about different aspects of adolescents' lives; decision making about use of household and OAA income; parental and adolescent expectations about education completion and marriage timing

Source: Author

Figure 8 CTALS questionnaire meta structure

A Basic interview information Household I.D. Eligibility (age criteria)	To be filled in and verified prior to starting interview Automatically generated *If no eligible people present, skip to end*
Household questionnaire Informed consent **B Household members** Household characteristics Household member roster Individual member characteristics **C Assets and services** **D Livelihoods, income, debt and expenditure** Closing section	Respondent should be household head or the person most knowledgeable about the household economy *If informed consent is not given, skip to end*
E Parent questionnaire Informed consent – respondent Informed consent – adolescent Adolescent migration/absence Adolescent education Adolescent time allocation Adolescent marriage Closing section	Repeats for each eligible adolescent Informed Consent – only for currently resident adolescents. Migration/absence only for unavailable or recently migrated adolescents or those without informed consent Education for all adolescents Time allocation only for currently resident but unavailable adolescents or those without informed consent Marriage for all adolescents
F Adolescent questionnaire Informed consent Relation to other household members Migration Education Time allocation Marriage Closing section	Repeats for each currently resident adolescent with parental informed consent
G Elder person questionnaire Informed consent Expenditure on adolescent Old age allowance Closing section	Repeats for each eligible elder person Expenditure repeats for each eligible adolescent Most questions limited to those who receive it
No cooperation Not eligible or available **END**	*Confirm that consent was not provided.* *Confirm that no household members met the eligibility criteria.*

Source: Author

Concerns have long been raised regarding definitions of the household in survey design (Kriel et al. 2014). Close attention was therefore paid to defining the household and household members through review of definitions in the reference surveys, consultation with local researchers, and testing and piloting the survey tool. To be considered a household member, the individual must typically sleep under the same roof (at least four days in the week), or an adjacent roof within the same plot, for at least six months of the year. If the individual entered the household within the past six months (due to a new birth or recent in-migration) they were also considered a household member if they were likely to reside within the household for at least six months. Given the interest of the study in the role of resource sharing, and recognising that this may not always occur, the concept of 'eating from the same pot' was deliberately omitted from the definition. The full survey questionnaire is available in its print format in Appendix 1.

Once complete in print format, the questionnaire was digitised for use on tablets using the Open Data Kit (ODK) platform. The digital questionnaire went through several rounds of iterative testing of individual questions and structural integrity. Compared to a paper-based format, the digitised questionnaire had numerous advantages that contributed to better data quality including clarity in data recording, obligatory data fields and automatic skips, logical error testing based on previous responses and numeric calculations, real-time data retrieval, and elimination of a separate data entry process. The digitised format also simplified physical data management and enhanced data security. Several disadvantages became apparent during piloting and survey implementation including the possibility of mistyping especially numeric responses, the difficulty reviewing the household roster and the complex process for adding or deleting a household member once the household roster had been completed (a paper-based household roster tool was used to improve accuracy), the absence of an auto save function, and form save times of up to 30 minutes for very large households. These technical issues remained a challenge but were mitigated through continuous review and training which was made easier by the ability to instantly retrieve and analyse the data.

To ensure accuracy of the translation, the questionnaire was first translated from English into Nepali by the survey team co-supervisor and then back-translated into English and edited by an independent local researcher. Although the predominant local language is Bhojpuri, with a minority of people speaking Maithili and occasionally

Hindi, it is common practice for survey enumerators in Nepal to live-translate from Nepali into the most appropriate language. This approach constituted a significant part of the survey team training which resulted in further improvements to the Nepali translation and agreement on the accuracy of local terms. Translation issues occasionally arose in the early stages of enumeration but were identified and corrected through daily de-briefings and real-time data analysis. The most significant of these resulted in 117 cases of missing data for recent school attendance because the Nepali word *bandha*, meaning strike or closure, also refers locally to school holidays.[17]

Sampling strategy

The CTALS sampled all households with at least one adolescent and one elder of the specified ages within a contiguous sub-region of Rautahat district; effectively a localised census of eligible households. The following explains how the research site was chosen, the rationale for taking a census approach and the sample size calculation.

For practical and budget reasons, it was decided to focus on a single district selected according to relevant socioeconomic indicators and accessibility. At the time of planning, the 75 districts of Nepal fell into one of three eco-regions (the mountains, hills and plains or *Terai*) and one of five development regions (eastern, central, western, mid-western, and far-western) creating 15 sub-regions. The Central *Terai* region was selected as the broad location of interest due to the relatively high rates of poverty, early marriage, and school drop-out (Central Bureau of Statistics 2011c; 2015; Ministry of Health, New ERA, and ICF International Inc. 2017), the flat geography and high population density relative to the hill and mountain regions, and its accessibility from Kathmandu. Much of the Central *Terai* region maps onto the new Province 2, excluding Chitwan district at the western boundary and including two districts of what was the Eastern *Terai*.

Table 2 shows the district selection criteria. Rautahat was selected primarily because of the high poverty rate (33.4) and food poverty rate (24.0), low Human Development

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[17] Questions about school attendance were in reference to either the last week or the last week of term if the interview occurred during school holidays. In cases where *bandha* was recorded as the response to the 'reason for not attending school in the past week', subsequent questions regarding the extent of school attendance were automatically skipped.

Index (HDI) (0.386), and high Human Poverty Index (HPI) (46.43). Household size is large (6.4) and population density is also high (610) which makes survey work more efficient. The Department of Civil Registration (DOCR) efficiency score (6) is low which indicates relatively poor implementation of civil registration and social security.[18] Despite the challenges this might create, Rautahat was considered the most appropriate district.

Table 2 District selection criteria for research site

District	National	Central *Terai* districts					
		Bara	Parsa	Rautahat	Sarlahi	Mahottari	Dhanusa
Municipality/VDC[a]	-	99	83	97	100	77	102
Households ('000s)[a]	5,423	109	96	107	133	111	138
Average households per M/VDC	-	1,097	1,151	1,100	1,328	1,445	1,355
Population (2011) ('000s)[a]	26,495	688	601	687	770	628	755
Gender ratio[a]	94	104	108	105	103	98	101
Average household size	4.9	6.3	6.3	6.4	5.8	5.6	5.5
Population density[a]	180	578	444	610	611	626	640
DOCR work efficiency score[b]	-	7	8	6	7	6	7
Poverty rate[c]	25.2	29.9	29.2	33.4	17.7	16.2	23.1
Food poverty rate[c]	-	21.1	22.2	24.0	21.1	20.3	18.2
HDI[d]	0.509	0.457	0.464	0.386	0.402	0.388	0.431
HPI[d]	35.4	40.09	36.37	46.43	43.86	44.75	41.72
Travel time from Kathmandu (hrs)[e]	-	5	5	5.5	6.5	6.5	6

Data sources: [a] National census (Central Bureau of Statistics 2011a); [b] DOCR (n.d.); [c] Small Area Estimation of Poverty (Central Bureau of Statistics 2013); [d] Nepal Human Development Report (Sharma, Guha-Khasnobis, and Raj Khanal 2014); [e] Google maps (www.google.com/maps)

Representativeness at district level was unnecessary given the case study nature of the research. The CTALS focused on a single cohesive group of Village Development Committees (VDCs), the smallest administrative unit with a government office at the time of data collection, removing the need for cluster sampling. One major challenge was the lack of a sample frame. Census lists were unavailable, voter registers could be obtained locally but were outdated and did not include data on adolescents. This left two options, either to conduct a census prior to the survey to construct a sample frame or to

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[18] Department of Civil Registration, Nepal Ministry of Federal Affairs and Local Government (no date) *Work efficiency level in various districts*. Kathmandu, Nepal.

conduct the survey as a census of eligible households. The latter was more appealing given the simplicity of a single process to identify and interview eligible households and their estimated density within the population. Within the defined cluster of VDCs, all households that met the eligibility criteria were selected for interview.

Using data from the NMICS 2014, it was estimated that households with co-resident adolescents and elders of the required age constitute 8.7% of households in the rural Central *Terai*. Based on an initial sample size of 1,500 households (see below) this meant that a census approach would require an area comprising at least 17,241 households. Official census data suggests that this equates to approximately 16 of 93 VDCs in Rautahat district, providing sufficient area to ensure representation of different caste and religious groups and other geographic variation (Central Bureau of Statistics 2012). VDCs were selected based on small area estimation poverty rates (Central Bureau of Statistics 2013) and such that they formed a contiguous area across both Muslim and Hindu communities and were commutable daily from the district capital of Gaur. Figure 9 shows the VDCs selected for inclusion in the survey within southern Rautahat district and its location within Nepal.

Figure 9 Map of southern Rautahat district and selected VDCs
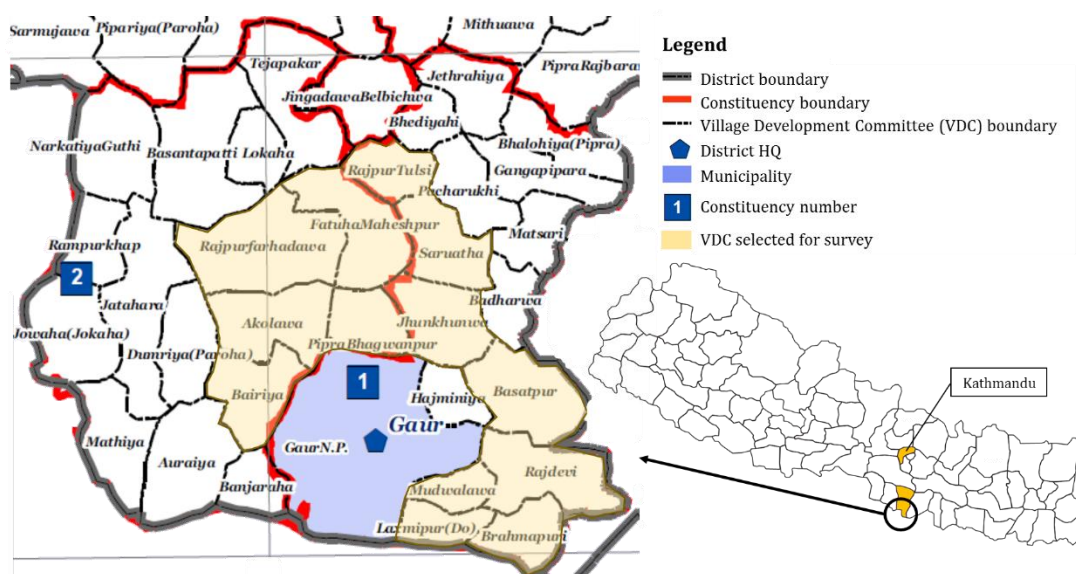
Source: Adapted by the author from the Rautahat District Map published by the Office for the Coordination of Humanitarian Affairs (OCHA), United Nations, Nepal, 3rd Jan 2008.

Power analysis was conducted to determine the minimum detectable effect (MDE) for key outcome variables for a given sample size, which were then benchmarked against existing studies. The literature review in Chapter 2 shows that a wide range of effect sizes are measured under different programme designs and socioeconomic and cultural contexts. The sample size and MDEs were benchmarked against studies that employ either a similar approach to causal inference or that use data from Nepal. The most relevant of these is Edmonds' (2006) study of the South African old age pension with a sample of 1,387 13-17 year olds in rural households for the main ITT estimates.[19] The main findings show a statistically significant 17.5pp increase in school attendance for boys (n=710); but the 7.8pp increase for girls (n=677) is not statistically significant. Moreover, there is a statistically significant 7.2pp decrease in any work participation among girls, but the 19.1pp decrease in market work participation is not statistically significant. The study also identifies statistically significant changes in daily hours worked varying between 0.049 and 1.249 hours. Using matching methods with a sample of 3,354 girls aged 8-16 years (of whom 812 are in the treatment group), Datt and Uhe (2019) show that 'high-value' scholarships in Nepal, equivalent to at least 5% of the per capita poverty line (or 4% of the intended value of the OAA), are associated with a statistically significant decrease of 4.1 hours spent doing extended economic work per week; but the decrease of 2.1 hours in economic work and 1.3 hours in chores are not statistically significant. Using an experimental design with 660 10-16 year olds whose families work in the Kathmandu carpet weaving industry, Edmonds and Shrestha (2014) show that those who received both a scholarship covering direct school costs up to a maximum of NRs 3,950 per year, and an in-kind food stipend worth NRs 1,000 per month conditional on at least 80% attendance, saw a statistically significant 4.9pp increase in school attendance; those who received only the scholarship saw a 2.3pp increase which was not statistically significant.[20] There are apparently no studies that use data from Nepal or a similar methodology to estimate the effects of cash transfers on marriage rates.

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[19] Others that use a similar methodology with the South African pension include Case (2004) with 517 adults and Duflo (2003) with 1,547 females aged 0-5 years. All these studies use existing households survey data, and none discuss the implications of the sample size on the estimates.

[20] Several factors make this example substantially different from this study including the specific livelihood background of the children's families, the urban context with much higher living costs, and the attachment of behavioural conditions to receipt of the cash transfer.

Given budget availability, the initial upper sample size was set at 1,500 households, yielding an estimated 2,700 adolescents or 1.8 per household.[21] Four outcome variables were selected for the power analysis for which data is available in the NMICS 2014; school attendance in the past year, participation in non-agricultural economic work in the past week, hours spent in non-agricultural economic work in the past week, and marital status. Sample population estimates for the variables were produced for the population of adolescents aged 10-17 years from the Eastern, Western and Central *Terai* sub-regions, and separately for females including marital status for 15-17 year olds, which are shown in the first column of Table 3.

The MDE, δ, for a single level trial with binary outcome and covariates is calculated as:

$$(t_1 + t_2)\sqrt{\left(\frac{P(1-P)}{T(1-T)n_{af}}1 - R^2\right)} \qquad (1)$$

where t_1 is the T-value corresponding to the desired significance level of the test (α) and t_2 is the T-value corresponding to the desired power of the design (β), P is the proportion of the study population that would have a value of 1 for the binary outcome in the absence of the program, T is the proportion of study sample that is randomly assigned to the treatment group, $n_{a(f)}$ is the sample size for adolescents (females) and R^2 is the proportion of outcome variance explained by level 1 covariate(s). For a single level trial with a continuous outcome and covariates, δ is calculated as:

$$(t_1 + t_2)\sigma_y\sqrt{\left(\left(\frac{1}{T(1-T)n_{a(f)}}\right)\left(1 - R^2\right)\right)} \qquad (2)$$

where, in addition to the parameters for equation (1), σ_y is the standard deviation of the outcome variable.

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[21] Estimates are based on the author's calculations using data from the NMICS 2014 for adolescent-elder co-resident households in the Central *Terai*.

Table 3 Outcome variables used for power analysis and estimated minimum detectable effects (MDE)

Variables	Population value[a] (1)				MDE					
					Initial sample[b] (2)		Final sample[c] (3)		Without WSW[d] (4)	
	P_a	σ_y	P_{af}	σ_y	n_a	n_{af}	n_a	n_{af}	n_a	n_{af}
Sample size	-	-	-	-	2295	1211	2312	1144	1607	796
Attended school, current year	0.91	-	0.89	-	0.035	0.053	0.035	0.054	0.042	0.065
Participated in non-agri work, past week	0.22	-	0.24	-	0.051	0.072	0.050	0.074	0.060	0.089
Married	-	-	0.12	-	-	0.054	-	0.055	-	0.066
Hours doing non-agri work, past week	8.76	9.24	8.85	8.33	1.13	1.40	1.13	1.44	1.35	1.73

Data source: NMICS 2014. [a] Population estimates are for adolescents aged 10-17 years in the Eastern, Central and Western *Terai*; marriage rates are for 15-17-year-old females. [b] Initial estimates are based on a sample size of 1,500 households with an estimated 1.8 adolescents (0.95 females) per household and an OAA coverage rate of 0.85. [c] Final sample estimates are based on the actual survey sample and OAA coverage rate of 0.663. [d] Final sample but without adolescents who co-reside with a widow or single woman (WSW).

The sample was adjusted to account for under-coverage of the OAA, initially estimated as 85% based on previous literature (Samson 2012). With this adjustment, sample size, n_a and n_{af}, is calculated as 2,295 adolescents and 1,211 female adolescents from 1,500 households, respectively. Sample proportions for binary variables, P, and standard deviation of the continuous variable, σ_y, are given in column 1 of Table 3. One-sided hypotheses were assumed based on evidence in the literature for the main outcome variables (see Chapter 2). Significance was set at 95% and subject to the *Bonferroni* correction to account for the four most critical parameters of interest (Djimeu and Houndolo 2016), education, work, marriage, and migration ($\alpha = 0.05 / 4 = 0.0125$). In line with common practice, statistical power was set at 80% ($\beta = 0.8$). The sampling approach allowed for equal distribution between treatment and control groups (T = 0.5). Several covariates associated with the outcomes, including age of the elders and adolescents, education status of the household head, ethnicity/caste, and locality, were known to be available and conservatively estimated to explain 10% of the variance ($R^2 = 0.1$).

Column 2 of Table 3 shows MDE estimates from equations (1) and (2) for the four outcome variables based on the initial target sample size of 2,295 adolescents (1,211 female). The minimum detectable percentage point increase for school attendance (0.035 full sample; 0.054 females) and market work participation (0.05 full sample; 0.074 females) are similar or smaller than most statistically significant estimates in comparable studies. The MDEs for work hours in the past week (1.13 full sample; 1.44 females) are small enough to detect any meaningful change. Moreover, the estimates are conservative, given the modest adjustment for covariates and the *Bonferroni* correction.

Two complications arose which affected the sample size. First, during data collection, data analysis showed that actual coverage of the OAA was closer to 65%, substantially lower than initially estimated. To maintain the target sample size of 2,295 adolescents it was necessary to increase the number of households by adding additional VDCs to the population area. The final sample included 2,018 households from 13 VDCs, yielding 3,487 adolescents of whom 1,725 are female, and with an OAA take-up rate of 66.3%. Column 3 of Table 3 shows that MDE estimates using the actual sample size adjusted for OAA take-up are close to the initial estimates. Second, during data analysis it

became apparent that a non-trivial number of widows and single women (WSW) were receiving cash transfers prior to OAA eligibility in the form of the widows and single women's allowance (WSWA). When applying a discontinuity approach, this has the potential to attenuate the estimated effects of the OAA. A detailed explanation is given in Chapter 5. As a result, adolescents who co-reside with a widow are removed from the main analysis, reducing the sample size by 30.5%. Column 4 in Table 3 shows MDEs for the final sample excluding WSW.

Data collection

The following describes recruitment, responsibilities, and training of the survey team; piloting and field testing; community access; household identification, interviews, and monitoring; and the consequences of extreme flooding that occurred during survey implementation.

Figure 10 depicts the timeline for survey implementation from recruitment through to completion of data collection. The team was recruited in May and June 2017 through a local research institute, the Nepal Participatory Action Network (NEPAN).[22] The survey team consisted of the Principal Investigator (PI, the candidate), one Nepali co-supervisor (male) and 11 Nepali enumerators (3 male, 8 female). The co-supervisor was required to speak English, Nepali and Bhojpuri and enumerators were required to speak Nepali, Bhojpuri, Maithili and Hindi. The co-supervisor's main responsibilities were to support the PI in planning and executing the survey including preparatory work such as planning, logistics, research site reconnaissance, translation and training; gaining access to selected communities; managing the sampling process; and oversight of the survey team in the field and delivery of the survey outputs. Enumerators' responsibilities were to participate in training; contribute to survey planning and logistics; acquire access to local communities; ensure accurate sampling; identify, engage and interview sampled households; and participate in survey review meetings. Survey team members were provided a contract, insurance for the duration of the field work, and were subject to performance management. Terms of reference are provided in Appendices 2 and 3.

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[22] NEPAN is a member organisation with nearly 300 members across Nepal. Professor Robert Chambers is an honorary associate member. The core team also undertakes primary research and has collaborated with development partners including UNICEF, ODI and HelpAge international (see www.nepan.org.np). The research was fully self-funded and the research team was paid directly by the PI. All support provided by NEPAN was on a voluntary basis.

Figure 10 Timeline for CTALS implementation, May – November 2017
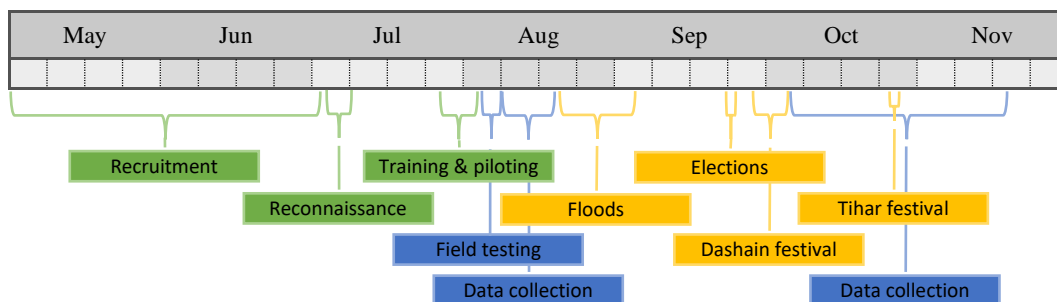
Source: Author

The PI led a six-day training programme for the team at the end of July 2017. The training covered the research background, questions and analytical framework; quantitative analysis approach; survey design and sampling; principles of good enumeration; questionnaire familiarisation and review; strategies for household identification and multi-member interviews; interview practice and piloting; questionnaire review and feedback; research ethics; and logistics and safety in the field. Most training time was dedicated to understanding and using the digitised questionnaire. As part of this, the PI led a pilot exercise in a semi-rural community in Dharmastali in Kathmandu district and the first two days in Rautahat district were dedicated to field testing in a non-sample area. Piloting and field testing resulted in various modifications to the questionnaire, use of the tablets, procedures for household identification, and interview technique, which are discussed where relevant.

Data collection took place between 1st August and 10th November 2017 in two phases interrupted by flooding. To work in the district, a letter of introduction was provided by the Director General of the DOCR (see Appendix 9), and the District Development Committee (DDC) office introduced the VDC Secretary, the most senior local-level official. VDCs are divided into nine wards and enumerators worked ward-wise in pairs to make an initial list of eligible households. Local informants who helped with household identification tended to be male by default which risked overlooking eligible elder females. Where possible, the team engaged female informants, such as female community health volunteers (FCHVs), or requested other female elders to review initial sample lists. Local leaders occasionally accompanied the initial walk around the

community. Despite the potential to undermine the perceived independence of the research team this was deemed necessary to facilitate community access.

The main sample units are adolescents aged 10-17 years who co-reside with at least one elder aged 65-74 years (or 55-64 if Dalit). Adolescents were eligible for the sample if they were currently resident in the household or were previously resident but out-migrated within the past three years. An elder was eligible for the sample only if they were currently resident. Explaining the household identification criteria to local informants was difficult. Instead, a protocol was devised such that households were initially identified based on the presence of an elder of the specified age. Enumerators then visited the household and verified the presence and age of the elder (for consistency, elders' citizenship cards were requested for age verification) before determining the presence of adolescents, and double checking for those who were temporarily absent or had recently migrated.[23] Married female adolescents who had left the household within the past three years were at risk of being overlooked due to no longer being considered part of the (maternal) household and may be underrepresented in the sample despite conscious efforts to identify them.

Once a household was selected, the most appropriate informants were identified. In all cases, the household questionnaire was administered first. Where possible, the questionnaire order followed parent, adolescent(s) and elder(s) but could be reordered depending on availability of the respondents. All efforts were made to interview respondents in private, however, this was not always possible. In such cases, enumerators ensured that others did not interfere directly in the interview unless for clarification of a factual point on request of the respondent. Mitigating strategies were developed to deal with other challenges surrounding the interview, especially dealing with interested on-lookers and crowds. To complete one household typically took between one and 1.5 hours, but up to three hours for the largest households. The target was to achieve an average of four interviews per enumerator per day, but this was balanced with the need to maintain interview quality.

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[23] Some VDCs included residents from VDCs of other districts, for example a cluster of households in Raj Devi which had relocated 12 years previously due to flooding. Such households were excluded from the survey as they still received services, including social security, from their VDC of origin.

The PI and co-supervisor were responsible for monitoring the field work and data quality. In the earlier stages of data collection, the PI spent time every day with each enumerator during interviews. This was later reduced to spot checks every two days while the co-supervisor remained in the field to respond to problems in person or by phone. In addition to the pilot and field tests, the first two interviews of each enumerator were reviewed in detail by the PI and co-supervisor. Subsequently, completed questionnaires were downloaded every two days and data was analysed by the PI to check for logical errors and outliers and to review data structure for non-obvious systematic errors or potential bias. Issues were discussed with the relevant enumerator resulting in either accepting the value, changing to a known value, verifying with the respondent (phone numbers were provided by 72% of households and return visits were made where necessary), or flagging where the correct value was unknown or uncertain. Common issues were then fed-back to the team in a daily de-briefing. This process saw a steady decline in the number of errors during the first week and led to enhanced interview technique and data quality throughout data collection.[24]

One major challenge during data collection was the occurrence of extreme flooding across the region, reportedly the worst in more than 20 years in Rautahat district.[25] The floods caused (relatively few) deaths among the local population, and widespread destruction of and damage to homes, assets, crops, and infrastructure (National Planning Commission 2017). The floods reached southern Rautahat on 12th August, 11 days into data collection. Following safe evacuation of the team and monitoring of the post-flood situation, it was decided to restart data collection on 1st October, after the local elections and *Dashain*, the largest of the Nepali festivals (see Figure 10). In addition to the overall delay and some increase in costs, the floods had several implications which could impact on data quality. The local elections ushered in a new federal era in Nepal with changes to local governance structures and administrative areas. However, this did not cause difficulty to community access or the sampling strategy. While some local roads were damaged and out of use, increasing travel times to certain locations, the

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[24] The monitoring process identified malpractice on the part of one enumerator who was expelled from the team as a result. Out of 40 households interviewed by the enumerator, more than half were found to be ineligible and the remainder were re-interviewed in full. Monitoring and post-interview spot checks of other households did not reveal similar issues with other enumerators.

[25] The Himalayan Times, August 18, 2017. *Rautahat Flood Victims Deprived of Relief Packages*. Kathmandu, Nepal. Available at https://thehimalayantimes.com/nepal/rautahat-flood-victims-deprived-relief-packages/.

selected VDCs remained accessible. All original team members were able to resume work in October, however, three members including the co-supervisor could not remain until the end. The most senior enumerator stepped into the co-supervisor role and three additional enumerators were recruited and provided intensive training and close monitoring by the PI. Despite the impact of the floods, communities and respondents remained cooperative. The team took additional care to explain the purpose of the research and to differentiate it from humanitarian needs assessments which had been conducted in the aftermath of the floods. Special attention was paid to the reference period for certain questions and the reasons for any recent changes to adolescents' life-course circumstances. While the floods and major festivals put considerable financial strain on households, the sampling strategy meant that the effects were distributed evenly between treatment and control groups.

Data management, cleaning and quality

A data management strategy was developed prior to data collection which covered sample unit identification and confidentiality, use of the tablets, and data storage. Households were allocated a unique I.D. consisting of a string of two-digit integers representing the enumerator, the VDC, the ward, and the household, the latter assigned by each enumerator in order of each interview within the ward. This system was used to identify saved questionnaire files and households within the dataset. Individual household members are further differentiated by their line number in the household roster. Individual names are recorded in the completed digital questionnaires and the exported raw data files but were deleted as part of the data cleaning process and do not appear in the master datasets. Prior to initiating the survey, regular checks were made to ensure all enumerators had the most recent version of the digital questionnaire. Protocols were established for managing data within the tablet including password protection, saving, editing and deleting files (the latter only actionable by the PI), managing incomplete forms, and file transfers. Completed forms were transferred to the PI's laptop every two days, immediately backed up to a separate hard disk and cloud storage (both are password protected), and then deleted from the tablet.

A data cleaning strategy was developed prior to data collection which draws on best practice (Ruel, William, and Gillespie 2018a). As described in the previous sub-section, data cleaning started during data collection with the daily monitoring process. A

detailed record was kept of all proposed changes which were applied during post survey data cleaning to ensure consistency. Data cleaning involved consistent formatting and labelling, identifying and investigating individual missing cases, don't know and other-specify responses, cross-tabulating variables based on skip and gateway patterns, and checking for other implausible values including outliers. A small number of missing values were imputed during the data cleaning process for the components of key explanatory variables including total household income (six cases) and expenditure (57 cases). Imputation was done using linear regression in two stages, first using the maximum number of variables available that are plausibly correlated with income and expenditure, and second, estimating a reduced model with only significant predictors. Imputations were verified by examining the correlation between actual and predicted values and the plausibility of the predicted missing values. Data cleaning was done using Stata and all syntax and related notes are recorded.

Total survey error (TSE) is an approach used to measure and enhance data quality in terms of its representation of the target population and measurement of the concepts of interest (Fuchs 2011). Representation considers coverage, sampling, non-response and adjustment error, while measurement considers error resulting from (mis)specification of the concepts, choice of survey mode, the questionnaire, interviewer, respondent, and data processing. The TSE framework was used to develop strategies to minimise each potential source of systematic and random error, many of which have been described earlier in the chapter.[26] The following considers each component of TSE in turn.

The potential for coverage error is effectively zero as the survey took a census approach and the target population was fully accessible. Sampling error may have occurred during the identification process through mis-identification of age or residence status or by simply overlooking eligible households. Although age reporting sometimes varies depending on who is asked (and when), spot checking of sampled households during the survey and qualitative data collection did not reveal any mis-identification of elders or adolescents. Apart from one uncooperative household for which eligibility was suspected but could not be confirmed, it is not possible to know if other eligible

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[26] A formal TSE approach culminates in calculation of the mean square error (MSE). However, this can be prohibitively demanding in terms of data and analysis and was not applied here (Fuchs 2011).

households were overlooked. However, this type of error is thought to be low given the identification process.

Non-response error can occur at household, respondent and question level. Once identified, no sampled households or individual respondents refused to cooperate. However, of 3,015 current adolescent household members, 389 (12.9%) were unavailable for interview due to temporary absence, for example, for work or visiting family. In this case, the full adolescent questionnaire was given to the parent which may have affected respondent error (see below).

Specification error is concerned with whether the questions measure the target concepts. Most questions in the survey aimed to reveal (arguably) objectively verifiable facts such as age, enrolment status, and receipt of OAA income. However, certain questions, or groups of questions, represent more subjective or multifaceted concepts. The most complex of these are the composite measures of economic welfare including household income, consumption, and asset wealth. All three measures made use of short form modules. The asset wealth and consumption modules aimed to produce a relative ranking between households using a representative number of items. Both approaches have been shown to provide rankings that are generally consistent with longer form modules (Morris et al. 2000; Moratti and Natali 2012). The income module estimated total household income from up to four main livelihoods and all forms of transfer income. The methods for each are described in detail in Appendix 4. These variables measure different underlying constructs, however, they are related and should have some degree of concurrence (Ruel, William, and Gillespie 2018b). As shown in Appendix 4, the correlation coefficient is 0.63 for per capita household income and consumption; 0.48 for per capita household income and asset wealth; and 0.53 for per capita consumption and asset wealth. Income and consumption are conceivably more closely related to each other than with asset wealth, as is the case. The degree of correlation in the CTALS is also good by comparison. Using 20 datasets from standardised surveys (LSMS and similar) from developing and transition countries in Asia, Africa, Latin America and Eastern Europe, Carletto, Tiberti and Zezza (*unpublished*) find

the average correlation between per capita income and consumption is 0.41, ranging from 0.19 to 0.64.[27]

Measurement error considers the characteristics of, and interrelation between, the survey mode, questionnaire, interviewer and respondent. The use of face-to-face interview was the only viable survey mode for a population with low levels of literacy, limited access to telephone and internet, and the absence of an existing sample frame. It also enabled interviews with multiple household members including adolescents. Trained interviewers have the advantage of securing higher response rates at the individual and question level thereby reducing non-response error, ensuring questions are correctly understood by the respondent, and minimising recording error. However, interviewer-led data collection may introduce social desirability distortion if respondents' answers reflect what they perceive the interviewer wants to hear (Fuchs 2011). Along with personal bias, this issue formed part of the training process to promote consistency within the survey team. Given the ward-wise distribution of enumerators, any enumerator effects are a combination of individual and ward level effects, both of which are distributed evenly between treatment and control groups.

Regarding respondents, of some concern were adolescents interviewed in the presence of their parents (n=345) and parents interviewed in lieu of adolescents (n=389). Accompanied adolescents may have modified certain responses due to the presence of their parents. Parents of unavailable adolescents were not asked to speculate about the adolescent's subjective expectations about their future level of education and age at marriage, however, they were asked to estimate adolescent time-use allocation for study and work. While these variations in interview approach are likely to have introduced some element of bias, it was considered preferable to obtaining no data. Moreover, any difference between the adolescents could result from an underlying qualitative difference in their circumstance as much as from the interview approach.[28]

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[27] Carletto, Gero, Marco Tiberti, and Alberto Zezza. 2019. "Measure for Measure: Comparing Survey Based Estimates of Income and Consumption for Rural Households." *Unpublished.*

[28] T-tests confirm that available adolescents did 0.61 hours more domestic work (t = 1.80, Pr(T>t) = 0.036) and 1.16 hours less economic work (t=-2.30, Pr(T<t) = 0.011) in the past week than temporarily unavailable adolescents. Of greater note is that adolescents who were interviewed with their parents did 4.91 hours more domestic work (t = 13.59, Pr(T>t) = 0.000) and 2.08 hours more economic work (t = 6.73, Pr(T>t) = 0.000) in the past week than adolescents interviewed independently. Either adolescents interviewed with a parent work more, or the presence of their parent caused them to exaggerate.

Validity and reliability of the questionnaire and use of tablets was discussed in the previous section on data collection. One simple test that captured several aspects of measurement error was to cross-check the name and gender of household members. Assuming the name was recorded correctly, among 18,136 household members nine cases (0.05%) were identified as having the wrong gender (and were subsequently corrected) and five cases (0.03%) were ambiguous. Processing error was minimised due to use of technology which allowed direct importation of the data and the process of real-time and ex-post data cleaning described earlier. This also helped to identify data that was either illogical or implausible due to reporting or recording error. Missing data are found in 86 of 245 variables (35%); however just 27 variables (11%) have missing data for more than 1% of cases. These are clustered in three areas: respondent attentiveness and perceived veracity; hours engaged in work activities; and school attendance in the past week (discussed earlier). In addition, questions identifying the relationship of the adolescent to other household members were ineffective due to confusion over the direction of the relationship (e.g. specifying uncle rather than niece) and cannot be used. This was intended to form an integral part of the quantitative analysis to understand who in the household is primarily responsible for making decisions and to incorporate the characteristics of parents into the quantitative analysis. Nevertheless, some limited analysis has been possible in this area. Any issues related to missing data in the variables used in the analysis are discussed in the relevant chapters.

In summary, while it was not possible to formally quantify TSE, application of the framework to the CTALS has demonstrated the steps taken to minimise error and provided some evidence of the level of bias and undue variation that may exist, especially for more subjective and complex concepts. In terms of the validity of the counterfactual for RQ1, given the structure of the sample around age of the elders, it is likely that survey error is relatively evenly distributed between the treatment and control groups, a hypothesis which is tested in Chapter 5 prior to the analysis.

Qualitative research methods

This section describes the qualitative research methods including the overall approach and how this relates to reflexivity, data quality, credibility and reliability; the planning stage including tool development and piloting and the research team and training; the

sampling strategy; data collection including the interview process, data management, and transcription; and coding and analysis. Figure 11 depicts the qualitative research process, and highlights cycles of iteration, pauses for reflexivity, and linkages with the quantitative component.

Approach

In line with the integrated approach to mixed methods, the qualitative competent is indivisible from, and has equal importance as, the quantitative component. The qualitative aspects of the research questions are primarily answered through the stories of individual cases collected through semi-structured, in-depth interviews (IDI) with individual household members including the adolescent, a parent and the OAA recipient. IDIs were favoured over focus group discussions given the emphasis on intra-household dynamics and the slight sensitivity of the topics. This approach supports the objective of seeking 'deeper' information concerning "…personal matters, such as an individual's self, lived experience, values and decisions…" (J. M. Johnson 2011, 104) about the topics of interest to the study.

Organisation and interpretation of the qualitative data involved a hybrid thematic analysis (Hsieh and Shannon 2005; Fereday and Muir-Cochrane 2006). Following Fereday and Muir-Cochrane's (2006) analysis of their own qualitative research approach, the methods reflect Alfred Schutz's (1899-1959) links between phenomenology and social science through two orders of *verstehen*, or interpretative understanding.

> The first order is the process by which people make sense of or interpret the phenomena of the everyday world. The second order of understanding involves generating "ideal types" through which to interpret and describe the phenomenon under investigation (Fereday and Muir-Cochrane 2006, 81).

The sociology of Schutz is grounded in a realist view of the world but recognises that any interpretation of that must be subjective (Lewis, McLain, and Weiger 1993). This implies the need for a combination, or hybrid, of deductive and inductive inquiry. In practice, this is realised through use of an *a priori* analytical framework and codebook and an iterative process of empathetic investigation (Cornish, Alex, and Zittoun 2014) which permits the emergence of data driven themes.

Figure 11 Qualitative research process and relation to quantitative component

Quantitative	Qualitative
Initial data analysis: RQ1 and RQ2	**Develop topic guides, codebook, interview process, sampling strategy**
	- Supervisor feedback - Train RAs and translator - Pilot interviews (3 stages) - Sampling and household profiles
	Refine topic guides, interview process, sampling strategy
	Conduct interviews
	- Daily field notes and de-briefings - Translate and transcribe selected interviews - Review and amend transcripts
	Refine interview process and sampling strategy
	Reach thematic saturation or time/budget limit
	Translate and transcribe remaining interviews
Complete data analysis: RQ1 and RQ2	**Develop coding and analysis strategy**
	- Update *a priori* codebook - Supervisor feedback - Initial double coding - Review and modify codebook - Second partial coding - Refine and finalise codebook
	Refine and complete coding
	Conduct thematic content analysis
	- Identify common themes and anomolies - Cluster and map themes - Refine analysis using survey data
	Write up analysis for RQ3
Integrate qualitative findings into RQ1 and RQ2	**Integrate qualitative findings into RQ1 and RQ2**

Source: Author

Schutz proposed three core postulates to ground the two levels of understanding in the "subjective meaning of human action" (Fereday and Muir-Cochrane 2006, 81): logical consistency, subjective interpretation, and adequacy. Adherence to these postulates is one basis for demonstrating credibility and reliability of the data. Logical consistency ensures rigour in the research process and is applied through systematic planning, as depicted in Figure 11, consistent application of the analytical framework to the research process, and (this) detailed description of the methods. Logical consistency applies equally to the quantitative methods and the process of integration. Subjective interpretation is demonstrated through use of inductive theme generation and analysis grounded in the data and the local context and direct reference to the raw data (i.e. use of quotations) in the presentation of the findings.

Adequacy refers to the "consistency between the researcher's constructs and typifications and those found in common-sense experience" (Fereday and Muir-Cochrane 2006, 81). The most direct way to promote adequacy is to engage local actors, including respondents, in validating the findings or even in co-constructing meaning from their own data. Due to cost and time limitations, it was not possible to return to the research site during or after the qualitative analysis phase. However, the interviewers regularly summarised the conversation with respondents during the interviews to verify their responses and encourage greater reflection. Moreover, the qualitative component itself serves to validate the adequacy of the quantitative constructs and findings.

Adequacy can also be improved by applying the philosophy of perspectivism, recognising that one's own viewpoint is relative and that the sum of collective perspectives can elevate knowledge to a higher, more synthesised level through a collaborative research process (Cornish, Alex, and Zittoun 2014). Several steps were adopted to draw in multiple perspectives. The PI and the two research assistants (RA) held daily face-to-face debriefings during data collection to allow the data to be internalised, sense checked and to inform subsequent interviews. Codebook development included a process of double-coding with the RAs to improve coherence between the analytical constructs and reality. Points for reflexivity were integrated into the research process and findings have been shared with peers and experts at key stages including between quantitative and qualitative data collection, and during and after analysis. Collaborative analysis also helps limit the risks associated with an important

ethical concern, that "the interpreter has the power to shape what comes to be known about somebody's experience" (Willig 2014, 141). As well as explicit recognition of this fact, incorporation of multiple perspectives, especially those of the research subjects, provide a counterbalance to the inherent bias of the primary researcher. A statement of positionality is provided at the end of this chapter.

Research planning

The following describes development of the research tools, the research team, and the experience of training and piloting. Figure 11 shows how each step fed into an iterative process of review and adjustment throughout planning and data collection; the foundation for promoting logical consistency and credibility in the research.

The planning stage took place between January and April 2018. While the intention was to complete the quantitative analysis prior to initiating the qualitative component, delays in survey implementation meant that only initial quantitative analysis could be completed. As a result, not all aspects of the quantitative findings could be explicitly explored in the IDIs. Nonetheless, the CTALS data informed the qualitative component in multiple ways including development of the topic guide, training the qualitative research team, sampling and generating household profiles, codebook development and qualitative analysis (see Figure 11).

The main data collection tool is the semi-structured topic guide with five to six primary questions, each with a handful of secondary questions or areas of inquiry. For parents and adolescents, the topic guide starts by establishing the adolescent's relevant life events, moves to decision making and influencing factors, and then focuses on economic considerations and the role of the OAA. For the OAA recipient, the topic guide begins with consideration of the OAA in general, moves to spending priorities and control of the income, and then focuses on the recipient's role in the adolescent's life decisions while linking this back to the OAA.[29] The English version of the topic guides are available in Appendix 5.

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[29] In cases where the OAA recipient and parent / guardian were the same person the OAA recipient topic guide was used as the primary tool with additions from the parent / guardian topic guide.

The topic guide was complemented by two other data collection tools. First, using CTALS data, a household profile was created to cross-validate data, suggest lines of inquiry during the interview and aid the interviewer's contextualisation of the responses. The data was not used explicitly with the respondent but was reviewed and internalised by the RAs prior to the interviews. Second, a timeline sketch was used with the respondent to establish key transitions in the adolescent's life. This aided the initial discussion and had the advantage of drawing attention away from sometimes reluctant respondents allowing them to express themselves more readily.

Interviews were conducted by two female RAs who come from the local area and speak the local languages as well as Nepali. Both RAs were members of the survey team and were selected based on their high level of performance, previous experience of qualitative research and English language ability. Female RAs were preferred considering the potential cultural difficulty of pairing unrelated male and female researchers in the local context and the potential sensitivity of discussing early marriage with adolescents. In addition to the RAs, an experienced translator, also from the local area, was engaged to translate the digital voice recordings into English transcripts.[30] The two RAs and the translator received a week-long training from the PI on the research objectives and methods, initial findings from the CTALS, IDI techniques, sampling, transcription, ethics, and field safety. The topic guides were translated as part of the training process. Piloting was done in three stages to thoroughly test the topic guide, interview processes and practical arrangements. During the training, practice interviews were conducted between the RAs and with the translator and other volunteer professionals. On the penultimate day of training the RAs interviewed two households, a total of five individual interviews, observed by the PI and the translator. Prior to starting the interviews proper, the RAs conducted interviews, observed by the PI, with two households from the research site selected from the survey sample.

Sampling strategy

The primary purpose of the qualitative research was to explore how the OAA is factored into decision making about adolescents' lives. Initial findings from the CTALS data

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[30] Ideally, the translator would have formed part of the interview team but she was unable to travel at the time and there were very few people available with the right combination of skills (research and translation experience with a high standard of English) from the local area.

pointed to changes in several areas that were likely to have been influenced by the OAA: school attendance, participation in paid economic work, and out-migration for education and possibly marriage. While it was possible to identify households from the CTALS data with in-school and out-migrant adolescents it was not possible to identify those where the decision was necessarily influenced by the OAA. As such, the sampling approach involved random selection within a predefined sub-pool of survey participant households.

The sample was drawn from two broad types of household of interest: those with adolescents still at home and those where adolescents had departed. Within these two groups an even number of female and male adolescents were selected. For practical reasons, the geographic area of the sample was narrowed to three of 13 VDCs including a Hindu majority community, a Muslim majority community, and one mixed community. The sample pool was further narrowed by excluding households with certain characteristics that preclude them from being of interest: households with no member eligible for the OAA; households with an eligible OAA member but who does not receive the OAA; households in the highest per capita income quintile for whom the OAA is less economically significant; and, consistent with the quantitative analysis, households with adolescents who recently in-migrated to avoid double counting with the out-migrant population.

How many respondents to include in qualitative research is a perennial question. In general terms, the sample size should aim to achieve saturation of the issues of interest within certain initial bounds based on the methodological literature and practical considerations. In a paper by Baker et al. (2012), a purposively selected seasoned group of qualitative researchers provide a wide range of suggestions for lower and upper bounds from one case to more than one hundred, but with most suggestions for publishable studies and PhD theses ranging from 30 to 60 cases.

Ultimately, the common view of Baker et al.'s (2012) respondents on sample size is that 'it depends'. On what it depends includes the nature of the research question and the breadth and depth of the issues of interest, heterogeneity within the population of interest, the likely breadth and depth of the responses, and practical concerns such as availability of respondents, time and money. First, while there are several adolescent

outcomes under examination with a range of wider contextual factors, the essence of the question regarding decision making and the OAA is relatively narrow. Further, the main purpose of the qualitative interviews is to provide data for one of three research sub-questions. This points to a sample size at the smaller end of the spectrum. Second, initial findings from the CTALS data suggested heterogeneity in the population along ethnicity/caste, livelihood, and demographic-lines which has some bearing both on how OAA income is used and on adolescents' outcomes. The sample needed to be large enough to ensure representation of these differences. Third, several factors suggested that respondents would provide information of some breadth and depth, therefore requiring fewer cases; respondents were taken from a well-defined sample pool and should have highly relevant perspectives. Moreover, each case includes interviews with two or three respondents from the same household providing multiple perspectives across generations. The interviewers were also involved in the survey work and have a good understanding of the topic and connection with the local community. Fourth, on the practical side, respondents were drawn from the larger CTALS sample and were therefore not limited in number. However, time and financial constraints were a significant consideration.

In conclusion, it was decided to sample up to 20 households from the pre-defined sub-population including 10 households with an adolescent at home and 10 households with an adolescent who had recently migrated. The 'at-home' sample would yield 30 interviews and the 'recent-migrant' sample would yield 20 interviews, a total of 50 individual interviews. A lower bound of 12 households and 30 individual interviews was set depending on the emerging level of thematic saturation. In practice it was judged necessary to continue the interviews until the upper bound was reached. The final sample resulted in 21 households and 55 individual interviews including the two *in situ* pilot interviews which were deemed of sufficient quality to include in the analysis.

Data collection

The following describes the interview process, procedures for data management and approach to transcription. All interviews were conducted with one RA acting as lead interviewer and the other supporting, exchanging roles in turn. The supporting RA was responsible for operating the voice recorder, taking observational notes, contributing follow up questions, and managing external interruptions. All interviews were initiated

by obtaining verbal informed consent (see the topic guide in Appendix 5) from the respondent and additionally from the parents in the case of adolescents. In line with the perspectivist approach, RAs approached the interviews as a kind of guided conversation (Warren 2011) such that the responses and meanings conveyed by the respondent could shape how the interview unfolded.

One of the main challenges in some interviews was eliciting meaningful and more elaborated responses. Of most concern were shy adolescents who are used to being submissive to adults, especially authority figures. Following Adler and Adler (2011), the team listed the factors that may affect responsiveness and devised strategies to minimise them that focused on status levelling, reassurance, timing and setting. The RAs were trained on the principles of reciprocity in qualitative research and how to engage respondents in a meaningful, two-way interaction, to "build the kind of intimacy that is common for mutual self-disclosure" (J. M. Johnson 2011, 103). At key points during the conversation, the interviewer summarised the discussion to validate and provide opportunities for reflection and questions, allowing respondents' perspectives to shape the process. All efforts were made to interview respondents in private. However, the proximity of family members and neighbours meant that this was sometimes difficult to achieve. Each individual interview lasted between 15 and 45 minutes. No economic incentive was provided to participants.

To avoid unnecessary disruption, the PI was not present during the interviews except for the pilot and four further spot checks. At the end of each day, the PI and RAs reviewed the interviews to discuss any practical concerns and to collaboratively identify common and emerging themes and other points of interest. Over time, the reviews provided the opportunity to observe transitions in the interview cycle from relative ignorance and exploration to verification and finally boredom, at which point saturation was deemed achieved (J. M. Johnson 2011). Interviews were recorded on a digital voice recorder and files were backed up daily to a hard disk and cloud storage, both password-protected. Observational notes were recorded by the RAs in notebooks which were scanned and similarly backed up daily. Only the PI and the translator have access to the digital archives and names and other means of identification have been removed from any data shared externally.

The general approach to transcription was to minimise transcription error, assuming a 'verbatim' written record could be produced (Poland 2011). Transcription was done line-by-line and included all verbal expressions by the interviewer and respondent. Given the added difficulty of concurrent translation and transcription, non-verbal notation was kept to a minimum but included: expressions such as laughter, pauses, emphasis, garbled words or phrases, quotation marks for references to internal thoughts and the words of others, and interruptions. During the two weeks of interviews, the translator transcribed six interviews for review by the PI and RAs jointly. This allowed the team, especially the PI, to gain a deeper understanding of the interview context during the interview process, and an opportunity to provide feedback on the translation and transcription. The remainder of the interviews were transcribed after data collection was complete. These were reviewed by the PI to identify irregularities or text that was unclear and were amended by the translator as necessary.

Coding and analysis

The first step in organising the data was to develop an *a priori* codebook derived from the research questions, the analytical framework, and specific hypotheses posed by the quantitative analysis to ensure logical consistency and enhance credibility through integration. Development of the codes recognised that a:

> …good thematic code is one that captures the qualitative richness of the phenomenon. It is usable in the analysis, interpretation, and presentation of the research (Boyatzis 1998, 31).

The first draft of the codebook was developed at the same time as the topic guides and was then modified following scrutiny by the PI's doctoral supervisors and two rounds of partial coding. The process of coding aimed to fulfil Schutz's postulate of adequacy in the consistency between the research constructs and participants' lived experiences. The first round involved double coding of three transcripts by the PI on the one hand and the RAs on the other. The team then reviewed and discussed the differences and modified the codebook accordingly. In the second round, the PI applied the modified codebook to six other transcripts which were reviewed by the RAs before making final adjustments.

The coding itself involved three steps starting with an initial 'free' reading of the transcript, followed by line-by-line application of codes to the text, and ending with a review of the coded text. Under two main themes, OAA expenditure and life-course

circumstances, several sub-themes are specified, described and further sub-divided into categories in a way to "capture the qualitative richness of the phenomenon" (ibid.). To aid the process of double-coding each sub-theme was exemplified with a few short extracts from the transcripts and explicitly linked to the relevant research question. Ideally, double-coding would have been done for the entire corpus with face-to-face discussion throughout the process; however, this was not possible due to geographic and financial constraints. The initial codebook is presented alongside the final codebook in Appendix 6 to show the changes resulting from the hybrid approach.

The PI analysed the coded text. Analysis involved identification of common themes and anomalies, clustering and mapping the themes, and cross-referencing and refining by the quantitative data (integration). Quantitative data used for the analysis included the interviewees attributes; the relevant elder and adolescent attributes; and household socioeconomic attributes. Close attention was paid to patterning in the data through constant comparison, both within and between transcripts, phrases and linguistic connectors indicating transitions and relationships, exceptions or deviant cases, and potentially missing data (Barbour 2014; Ryan and Bernard 2003). Care was also taken to contextualise the content analysis (code frequencies) in relation to the qualitative sampling strategy and the quantitative findings. Data coding and analysis was done using *dedoose* software, a web-based application for analysing qualitative and mixed methods research (www.dedoose.com). More specific details of the analytical approach are provided in the methods sections of Chapters 6 and 7.

Research ethics

Fujii (2012) argues that ethics in research must move beyond procedural ethics, generally limited to acquiring institutional ethics approval, towards on-going consideration and application of ethical principles throughout and beyond the research process. There are three guiding principles underling ethical research: respect, beneficence and justice (Fujii 2012; Powell et al. 2013). Respect pertains to valuing the research participants and the context of their lives. Beneficence means, in the first place, to do no harm, but also to ensure the benefits of the research reach the participants and potentially others. Justice is concerned with how participants are selected into the study and imbalances in power between stakeholders in the research and in the distribution of benefits. The rest of this section describes the specific steps that were taken to promote

ethical practice throughout the research process including ethics review and national and local permissions; informed consent; specific issues related to interviewing children; risks to the research team; and publication and dissemination. Issues pertaining to participant selection, respondent privacy and data management were addressed in detail in the previous sections. The section ends with a reflection on the positionality of the Principal Investigator.

Ethics review and permissions

The research proposal underwent the LSE ethics review process and received approval prior to commencement of the field work (see Appendices 7 and 8). The review identified three main ethical concerns related to: obtaining meaningful informed consent, the foundation of respect to participants; interviewing children, with concerns about power imbalances and the potential for harm; and the potential sensitivity of certain topics that may result in emotional or relational harm. The specific steps taken to mitigate these issues are discussed in detail shortly.

Research conducted in a third country should seek ethics approval from an appropriate national institution (Cronin-Furman and Lake 2018). However, it was not possible to obtain in-country ethics approval due to the absence of any formal process for non-medical research. The Nepal Health Research Council (NHRC), responsible for ethics review of medical research, declined to review the research on these grounds. The Dean of the Faculty of Humanities and Social Science at Tribhuvan University confirmed there was no national or University ethical review process for social science research at the time.[31] In presenting the research to academics at Tribhuvan University, development practitioners in UNICEF Nepal, local researchers in NEPAN, and government officials at the DOCR, no ethical concerns were raised beyond those already identified.

At the national level, permission to undertake the research was provided in writing by the Joint Secretary and Director General of the DOCR which is also responsible for social security (see Appendix 9). At the local level, permission was obtained from the

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[31] At the time of meeting prior to data collection, the Dean confirmed that the Faculty was working on developing a research ethics policy but that it was incomplete.

Social Development Officer at the DDC and from the VDC Secretaries prior to engaging local communities.

Informed consent

Voluntary, informed consent represents the foundation of respect to the participant (Fujii 2012). For both the CTALS and IDIs, consent was requested by the interviewer by reading out a written statement (see Appendices 1 and 5). For the CTALS, the participant's response was recorded on the questionnaire. For the IDIs consent was requested prior to starting the digital voice recorder and was not recorded in all cases. Verbal consent is standard practice for household surveys in developing countries, including the MICS and DHS, where illiteracy rates are high. In addition to participant consent, parental/guardian consent was obtained for all interviews with anyone under 18 years of age.

A concern prior to data collection was that consent may not be given entirely freely given the power imbalance between interviewers and participants. This imbalance stems from the caste system in Nepal which prescribes a strict social hierarchy as well as differences in levels of education. This issue formed part of the training to ensure all interviewers were conscious of the issue and understood the importance of following the informed consent protocols, especially emphasising the respondent's right not to participate and to decline to answer any question. Research participants were also asked if they had any questions or concerns prior to starting the interview and at the end. No material incentives were provided to research participants. However, they were assured that the information provided would be made available (with anonymity) to inform future government policy. The steps taken in this regard are discussed shortly.

Interviewing children

Both the CTALS and IDIs included participants aged 10-17 years old. In addition to personal and parental/guardian consent, interviewing children raises several concerns primarily related to preventing harm and ensuring dignity and respect. Safeguarding protocols started with reference taking for all team members. Training included topics on good practice for interviewing children including issues related to consent and power imbalances, privacy, and practical protocols. Interviewers had to aim for a certain level of privacy to ensure integrity of the responses; however, they were required to ask

children where they feel most comfortable being interviewed and to ensure they were never alone with a child in a completely closed room. The co-supervisor made daily spot-checks on all interviewers during the survey.

While none of the topics covered are sensitive enough to cause direct distress or harm to the participant, it was recognised that the context of a child's life may make the child feel uncomfortable and possibly lead to repercussions from a family member if the response is overheard. In particular, the research aimed to identify girls and boys who married under the statutory age of 18 years and who are potentially engaged in excessive hours of employment. This required participants to report illegal activity. Interviewers were trained to be alert to any reluctance to respond and signs of emotional distress, and to regularly reassure children about confidentiality and their right not to respond and to terminate the interview. While enumerators and RAs reported that the behaviours of child survey respondents gave no significant cause for concern, several IDI respondents were either reluctant to talk or found it difficult to articulate their thoughts. Interviewers aimed to maintain respect for and the dignity of child respondents by talking at the same level (both physically and verbally) and promoting a sense of reciprocity by stressing the importance of their views, encouraging questions and clearly explaining the potential benefits of the research.

Risks to the research team

Major security concerns identified prior to the field work included civil unrest, seasonal flooding, road safety and personal safety. Following civil unrest in the region of the research site in 2015 and 2016 due to constitutional changes, the security situation was closely monitored. At the time of the survey in 2017 and the IDIs in 2018 the research area was consistently calm. The period around the local elections in September 2018, which proved peaceful, was deliberately avoided. As described in the sub-section on data-collection, unexpectedly severe flooding occurred during the survey field work. The survey team was stranded in the hotel for around 24 hours and in Gaur for approximately 72 hours before safe return to Kathmandu. The team only returned to the research site after local conditions were considered safe. Road transport comes with heightened risks in Nepal due to poor regulation of public transport, poor road conditions, and risks of landslide. While the use of public transport was unavoidable,

night-time travel between Kathmandu and Gaur was avoided. All team members were provided comprehensive accident insurance from a major national insurance company.

Personal safety within the research area was addressed in several ways. Except for the PI, all team members come from within the Central or Eastern *Terai* region with two team members from the specific locality. This aided community access and acceptance. As well as obtaining relevant permissions and consent, the PI and co-supervisor met with the most senior district official, the Community Development Officer, and the Chief Security Officer prior to starting the field work and were assured of assistance if required. All field work was conducted during day light hours. Survey enumerators conducted interviews individually but worked in pairs at the Ward level to ensure there was always someone within proximity. The co-supervisor was always reachable by phone and had motorbike transport to respond promptly in the case of potential security issues. The two female qualitative interviewers worked together at all times. Throughout data collection only one incident was considered of concern when the resident of a potentially eligible household was uncooperative and expressed some verbal aggression towards the interviewer. Nothing further occurred, and the household was omitted from the survey.

Publication and dissemination

While this study is not a commissioned evaluation tied to a specific policy making process, one of the stated aims is to contribute towards knowledge for better evidence-based policy in Nepal. The study was presented to stakeholders at all levels, including research participants, as having this stated goal in mind. There is therefore an ethical responsibility to meet the principle of beneficence not only to the research participants, but to Nepali society more broadly (Barnett and Camfield 2016). As such there is an obligation to seek opportunities to disseminate findings from the research to policy makers and practitioners in Nepal in a way that respects the principle of justice.

Several steps have been or are planned to be taken towards this goal. First, the findings and implications of the research are primarily concerned with national policies and have been generalised to be of relevance to Nepali society. Second, the process of presenting the research proposals to various stakeholders in Nepal and obtaining the necessary permissions from state institutions means that the research already has some level of

acceptance, making dissemination of findings easier. Third, the research was developed in close coordination with several non-governmental development organisations, most notably NEPAN, which provide practical entry points for dissemination. Fourth, findings will be disseminated through networks in Nepal in written form including the thesis and as journal articles (at least two or three are planned). Fifth, opportunities will be sought to present the findings at appropriate fora. Selected findings have already been presented to a policy and research conference in Kathmandu on inclusive social protection in September 2019. Participation in the conference was broad and included government officials, development partners, and national and local NGOs and civil society.

Statement of positionality

For this statement I depart from the third person narrative of the thesis. The motivation for this study grew out of my long-standing concern for improving the lives and opportunities of children and young people. At the time of initiating the research I had spent nearly 15 years in international humanitarian and development work. As well as managing projects and interventions, my work involved research in poor communities in developing countries focused on poverty, vulnerability and issues affecting children. Nepal emerged as the case study for this research for several reasons. Immediately prior to starting my doctoral studies, I had been supporting research on Nepal's Child Grant programme and had worked previously in Pakistan and India, including in the state of Bihar, one of the poorest areas of Northern India, which has close cultural, social and economic ties with the central *Terai* region of Nepal. I was aware of the intensity of the issues of interest, especially girls' education and early marriage, and the Child Grant and Old Age Allowance both provided potential opportunities to investigate income effects on adolescents. Nepal also became practically convenient due to my wife gaining employment in Kathmandu. I believe in the importance of evidence for informing public policy with the purpose of improving people's lives, especially those who are most disadvantaged, and I hope that this thesis will contribute to that.

Prior to data collection, I had opportunities to gain a deeper understanding of Nepali culture and society, the issues affecting children and adolescents, and the role of the state in addressing these. Following the earthquakes in 2015, I interrupted my PhD and worked for UNICEF Nepal for nearly two years. This work focused on expanding social

protection for children and required occasional direct interactions with local communities across the country, including in the *Terai*. However, I recognise that in many ways, my own life experience lies in contrast to the individuals who are the focus of this study. I am male, of white European descent, am an agnostic atheist, and I benefited from quality public services throughout my life and received high levels of education. My views about society developed within this context, some of which differ in fundamental ways from many of the research participants.

Of most relevance, is that I believe everyone has the individual right to choose who and when to marry, or not, and that religion should not play a part in mainstream education. However, from the start, the goal of my study was to examine processes of decision-making, which requires investigation of and accounting for subjective perspectives, values and beliefs. The analytical framework, research questions, and data collection tools all aimed to allow for the emergence of these personal perspectives. Moreover, I draw the reader's attention back to the points of reflexivity in the research process and the steps taken to draw in multiple perspectives described earlier in this chapter.

Due to language barriers and the scale of the study I did not personally conduct interviews. However, I was present in the communities during data collection and in some interviews, especially at the start (see previous sections on data collection). I was very much viewed as an outsider and treated with the respect given to (male) officials from Kathmandu, or 'Sirs'. I considered my presence to be a distraction and aimed to find a balance between adequate oversight of the data collection process and minimising disruption. However, it is my belief, based on feedback from the research team, that my presence did not unduly influence the respondents. I was viewed as 'other' to such an extent that I was simultaneously important (respected by being provided the best chair) and unimportant (ignorable during the interview).

While my personal views have not changed, through the process of analysis I have come to a better understanding of the motivations behind the choices that people make. I have endeavoured to ensure that the conclusions and policy recommendations adequately contextualise the observed outcomes within the subjective perspectives of the research participants. I hope that the approach, methodologies and methods of this

thesis, and my description of them, allows the reader to adequately judge the analysis and findings in relation to my positionality.

Chapter 4

The Status of Adolescent Life-Course Circumstances in Rural Rautahat

Introduction

Adolescents in Nepal have seen important improvements in their lives over recent decades. However, national averages paint only broad strokes and many young people still face early transitions to adulthood. Adolescents from certain geographic areas or communities are disproportionately more likely to be out of school, to engage in full time work, and to marry. These issues are particularly acute in Rautahat district which has some of the worst human development indicators in the country (Central Bureau of Statistics 2013; Sharma, Guha-Khasnobis, and Raj Khanal 2014). While there are many social, economic, cultural and political reasons for this, household income is known to be an important factor in shaping the opportunities available to adolescents. Central to this thesis is the question of how and why an increase in household income affects decisions about adolescents' lives.

This chapter lays the foundation for the forthcoming analyses by describing the household population and the state of schooling, work and marriage among adolescents in the Cash Transfers and Adolescent Life-course Survey (CTALS). The purpose is threefold: first, prior to the main analysis, to provide the reader with a descriptive understanding of the context within which the adolescents live and the status of their main life-course outcomes of interest and how these vary by various individual and household-level socioeconomic characteristics; [32] second, to aid interpretation of the findings on the contextual factors that moderate the effects of the OAA on adolescents' lives that are explored quantitatively in Chapter 5 and (primarily) qualitatively in Chapter 7; and third, to support generalisation and to understand the applicability of the findings within Nepal and in similar contexts globally.

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[32] Due to the sample size and data limitations it is not possible to meaningfully analyse community-level moderating factors with the survey data. However, these form part of the qualitative analysis in Chapter 7.

The next section describes the data and the various measures of adolescent life-course outcomes. This is followed by a descriptive analysis of household structure and the socioeconomic characteristics of the household. Each of the main adolescent life-course circumstances are then described in turn and are analysed in relation to selected individual and household characteristics. The chapter concludes with a summary of the main findings, the relationship between them and their relevance to the research questions.

Data and methods

Data in this chapter comes from the CTALS conducted for this study in 2017 and described in Chapter 3. The survey sampled multi-generational households containing at least one adolescent and one elder five years either side of OAA eligibility age in a rural sub-region of Rautahat district in Province 2 of Nepal. Analysis of national survey data suggests that approximately 50% of adolescents aged 10-17 years live with someone of age 50 or older, while 14% co-reside with an elder of the specified ten-year bandwidth age.[33]

The variables for household characteristics include income, livelihoods, ethnicity/caste, and education level of the household head. The CTALS asked multiple questions about household income which aimed to capture total annual income from all sources including livelihoods, remittances, government and non-governmental transfers, and gifts. Ethnicity/caste group was specified from a standardised list used in the national census and other common household surveys and then categorised into four coherent groups.[34] Education level of the household head is based on the highest-grade level completed and categorised into the major education levels in the Nepali education system.

Variables for education refer to attendance at school in the past 12 months with a distinction made between mainstream government (non-fee paying) and private (fee-

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[33] Based on author's analysis of data from the Nepal DHS conducted in 2016 by the Ministry of Health, New ERA and ICF. See Chapter 4 for an explanation of the ten-year bandwidth age of elders.
[34] While Muslim may be better classified as a religious group and, even within Nepal, are ethnically diverse, *Terai* Muslims in this study are classified as a distinct ethnic group.

paying) schools, and religious (contribution-based) schools which, among the survey population, are all Muslim madrassas. While some government and private school attendees may also attend the madrassa, religious school attendance in this case is exclusive of formal schooling. Marriage rates are based on reported marital status of the individual. While options for separation, divorce and widowhood were available, these did not apply to any of the adolescents in the sample.

Variables for participation in work are separated into unpaid domestic chores, unpaid economic work at home or for the family business, and paid work. Engagement in domestic work is derived from more detailed questions about the hours spent cooking and serving food, cleaning and tidying, doing minor household repairs, shopping, caring for the elderly, sick and young children. Home economic work includes home agriculture, any other family business, milling and food processing, handicrafts and tailoring, home construction and major repairs, and fetching water and fuel. Paid work refers to any level of paid employment in agricultural and non-agricultural work. For work participation and hours spent working, the reference period is the past week. If a respondent reported no engagement in an economic activity in the past week they were further asked if they had done so in the past year.[35]

This research is interested in the common set of adolescent life-course circumstances about which households make decisions including those that result in leaving the parental home. Thus, for education and marriage, the analysis focuses on adolescents who are current household members and those who out-migrated within the past three years the latter representing 13.5% of adolescents in the survey population. Some out-migrants move within their own community. Indeed, 30% of adolescent out-migrants moved within Rautahat district. To avoid double counting, the analysis excludes in-migrants within the past three years; approximately 1.4% of adolescents in the survey population. For adolescents who left the household within the past three years, respondents were asked what the primary purpose was, including for education, work, and marriage.

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[35] The same was not asked of domestic chores which are more ubiquitous and less prone to seasonal variation.

For comparison between the CTALS, provincial, and national populations, data is used from the 2014 Nepal Multiple Indicator Cluster Survey (NMICS) and the 2016 Nepal Demographic and Health Survey (NDHS), both referred to in Chapter 1, and from the 2016/17 Nepal Annual Household Survey (NAHS).

Household structure and socioeconomic status

This section first provides a description of household structures within the CTALS population to verify the sampling approach, to identify who may be responsible for decision-making about adolescents' lives within multi-generational households, and to highlight how household structure may moderate the effects of the OAA on adolescents. It then describes the household population in terms of several socioeconomic characteristics and their relationship with household income to identify sub-groups within the population that may experience different opportunities and constraints that shape their response to the OAA.

Household structure

According to the 2011 census, national average household size is 4.8, while Rautahat district has the largest average household size across the country with 6.4 members (Central Bureau of Statistics 2011a). In the CTALS sample, households are even larger with an average of 8.0 members. There are several possible reasons for this: the CTALS population is exclusively rural, only multi-generational household were sampled, and the definition of a household member is more inclusive than in the census.[36]

To verify the sampling approach and to aid analysis and interpretation of the effects of the OAA on household decisions about adolescents, it is helpful to analyse household structures within the population.

Table 4 shows the percentage of households in the CTALS according to the number of current household members for specific age groups. The number of recent out-migrants for specific age groups are shown separately in the last row. In addition to adolescents

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[36] Both the national census and this survey counted individuals as household members if they had been living or intend to live in the household for at least six months. Temporary short-term absences were not counted as living elsewhere in both surveys; however, the census excluded household members if the reason for their absence, regardless of duration, was for employment or study.

and elders, household members are categorised as children under 10 years, and working-age adults aged 18 to 64 (or 54 years if Dalit).[37]

As described in Chapter 3, the sampling approach required that households contain at least one elder within the specified age bandwidth.[38] The data confirm that all households contain an elder, with one elder in 69% of households and two or more elders in 31% of households. Very few elders have recently out-migrated. As discussed in Chapter 2, the effects of a UCT may vary depending on who is the recipient due to gendered and generational differences in preferences, bargaining power, and economic opportunity. The gender and number of elders in the household form an integral part of the analysis for causal inference in Chapters 5 and 6.

Table 4 Percentage of households according to the number of current household members for specific age groups

	Child (< 10 years)		Adolescent (10-17 years)		Working age adult (18-64 years)[†]		Elder (> 64 years)[††]	
	n	%	n	%	n	%	n	%
Zero members	411	20.4	165	8.2	98	4.9	0	0.0
One member	348	17.2	1021	50.6	308	15.3	1382	68.5
Two members	444	22.0	588	29.1	651	32.3	623	30.9
Three or more members	815	40.4	244	12.1	961	47.5	13	0.6
Total households	2018	100.0	2018	100.0	2018	100.0	2018	100.0
Recent out-migrants	93	4.6	362	17.9	574	28.4	13	0.6

Data source: CTALS 2017. [†]Age 18-54 years for Dalits [††]>54 years for Dalits

Adolescents are the primary unit of analysis, and the sampling approach required that households contain at least one adolescent aged 10-17 who is a current household member or who had out-migrated within the past three years. This is reflected in the household structure. While 8% of households have no adolescent at home, 18% of households have at least one adolescent who recently out-migrated. The analysis in Chapter 5 includes estimates of the OAA's effects on recent out-migrant adolescents. Just over half of households have one adolescent at home and the remaining 41% have two or more adolescents at home. While it is not possible to explore sibling effects in

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[37] The OECD defines the working age populations as those aged 15 to 64 years. In this study, the higher threshold of 18 reflects the specific focus on the adolescent age group. See OECD, Working age population, https://data.oecd.org/pop/working-age-population.htm#indicator-chart. Accessed: 23rd February 2021.

[38] 65-74 years if non-Dalit and 55-64 years if Dalit to account for the policy difference in eligibility age.

the quantitative analysis, IDI respondents reveal insights into the different experiences of adolescents who live in the same household in Chapter 7. Turning to younger children, more than 20% of CTALS households have no children under the age of 10 years. This is unsurprising given the purposive sampling of households with adolescents. Nevertheless, among households with younger children, the majority have three or more, suggesting a tendency for short birth spacing. The presence of younger children in the household may place a greater burden of care on co-resident adolescents but may also correlate with a greater number of working age adults, older siblings of the adolescents.

Just 5% of households have no working age adult, meaning that the adolescent(s), and any younger children, are in the primary care of the elder. A further 15% of households have just one working age adult living at home. Some of these households have support from adults who send remittances. Just under half of households with one or zero adults at home have at least one adult who out-migrated within the past 3 years (data not shown). As explained in Chapter 3, anyone who left the household more than 3 years ago was not enumerated in the survey. Nearly one third of households have two working age adults at home, while nearly half of households have three or more working age adults. In Nepali society, it is common for more than one married son to remain in the parental home (Thornton, Ghimire, and Mitchell 2012).[39] These findings suggest that the majority of adolescents who co-reside with an elder also live with a parental caregiver. However, as discussed earlier, the data do not allow identification of the specific relationship of adult household members to the adolescent.

Beyond acting as a caregiver and decision-maker, the presence of working age adults can have other effects on adolescents' circumstances. Globally, higher income countries are associated with smaller households (UNDESA 2017). However, in poor rural communities in developing countries, larger families can provide a greater degree of economic security, with more productive members of the households able to engage in more diverse livelihoods. These relationships are discussed in more detail in the following section in relation to household income.

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[39] 89% of working age adults are married while 11% either never married or are widowed, separated or divorced. There is at least one case in the IDIs of a woman whose husband lives with his other wife in a separate household.

The socioeconomic status of survey households

Table 5 shows annual household income and the distribution of socioeconomic household characteristics among the CTALS population. The first row of column 2 shows that mean household income is NRs 261,020 (approximately US$ 2,310). The most recent national household income data is from the 2010 NLSS and is considerably out of date (Central Bureau of Statistics 2011b). The 2016/17 NAHS provides more recent estimates of annual household consumption, which is NRs 301,824 (US$ 2,671) in rural households (Central Bureau of Statistics 2018). Given the conceptual and empirical differences between the measures, the comparison provides only a rough benchmark, but suggests that rural Rautahat may be somewhat poorer than average. This supports one of the underlying conditions necessary for cash transfers to have effects on adolescents, that households face financial constraints to fulfilling their consumption and investment preferences.

Understanding the relative size in the population of different caste/ethnic groups and the social and economic inequalities between them is central to interpreting the findings in the following chapters. The distribution of ethnicity/caste in the CTALS reflects the communities in rural Rautahat. Column 1 of Table 5 shows that no single group constitutes a majority. Terai/Madhesi form the largest minority, followed by Muslims, Dalits, Brahmin/Chhetri, and finally Janajati and other caste groups.[40] This differs to the national distribution with Brahmin/Chhetri constituting the largest minority (32%) followed by Janajati (31%), Terai/Madhesi (14%), Dalits (13%), Newar (5%) and Muslims (4%) (Central Bureau of Statistics 2011a). Column 2 shows that household income varies by ethnicity/caste, reflecting each group's relative level of social advantage. Household income is highest among Brahmin/Chhetri, followed by other castes, Terai/Madhesi, Janajati and Muslim.[41] Household income among Dalits, one of the most excluded social groups in Nepali society, lags all other groups. Both caste/ethnicity and household income have implications for where the effects of the OAA might be concentrated within the population. The OAA will have less relative

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[40] There is substantial diversity within each group; the survey noted 43 distinct classifications of ethnicity and caste.

[41] A large proportion of income in Janajati households, the term for the indigenous tribes of Nepal, may come from government transfers provided to these groups. The scheme for 'endangered ethnic groups' provides each individual household member a transfer of NRs 2,000 per month (paid tri-annually) if they belong to one of ten specified sub-groups of Janajati.

value to the most advantaged caste groups, with the highest average incomes, but more relative value to Muslims and Dalits. The poorest households may focus additional expenditure on subsistence, while households with average incomes may be able to prioritise higher level needs and investments. Certain groups may also face different incentives due to other aspects of social exclusion. As discussed in Chapter 2, Dalits may see less value in education because it will not lead to better job prospects, and the Muslim population have cultural incentives to pursue religious, rather than mainstream, education. Perspectives on the value of education are provided by IDI respondents in Chapter 7.

Table 5 Summary statistics, annual household income and other socioeconomic characteristics

| | Distribution | | Household income[†] (NRs '000s) | |
| | (1) | | (2) | |
	%	n	Mean	S.E.
All households	100	2018	261.02	3.94
Ethnicity / caste				
Brahmin / Chhetri	4.4	88	347.01	24.00
Dalit	14.3	288	201.13	8.47
Muslim	36.9	744	250.01	5.90
Terai / Madhesi	42.7	861	281.33	6.34
Janajati / Other caste	1.8	37	271.53	35.53
Education of household head				
None	79.8	1610	242.94	3.92
Incomplete primary	3.3	67	260.67	22.49
Incomplete secondary	9.7	196	306.46	14.30
Completed upper secondary	5.7	114	401.34	22.74
Bachelor or higher	1.5	31	397.60	55.49
Main livelihood				
Agriculture	16.9	342	227.97	10.03
Own business	19.4	392	273.47	8.28
Private sector	39.9	805	206.78	4.89
Public sector / other	4.1	83	411.18	18.05
Remittance	19.5	394	357.34	9.77
None	0.0	2	100.00	0.00
No. of working age adults				
Two or fewer	52.4	1057	225.68	4.46
Three or more	47.6	961	299.89	6.43

Data source: CTALS 2017. [†]Total income has been winsorized at 99% to moderate the effect of several outliers at either end of the income distribution.

As discussed in Chapter 2, existing education levels among older household members can have an important bearing on the propensity of households to increase investment in adolescent education. Education levels among the older generation are extremely low in rural Rautahat with 79.8% of household heads reported to have no formal education and a further 3.3% who did not complete primary school. Just 9.7% of household heads completed primary school and gained some secondary education, 5.7% completed upper secondary, and less than 2% additionally gained a tertiary level qualification. Thus, average effects of the OAA on adolescents that are identified in the following chapters are likely to reflect the poorly educated majority. The figures for elder education are considerably worse than the national average. Estimates from the 2014 NMICS indicate that nationally, 41.9% of household heads have no education, 19.5% completed primary, 19.7% completed secondary, and 18.7% achieved higher level education (Central Bureau of Statistics 2015). Income is strongly associated with the level of education. Column 2 of Table 5 shows that household income increases with each additional level of education and is substantially higher where the household head has completed at least upper secondary. However, education and income may independently moderate the effects of the OAA on adolescents' life-course circumstances. Thus, the causal estimates in Chapter 5 are differentiated by both income and education level of the household head.

Despite agriculture still dominating the rural economy, column 1 of Table 5 shows that in the CTALS, livelihood strategies are quite diverse. Private sector work provides the main source of income for the largest number of households, followed by remittances, non-agricultural home business, agriculture, and public sector work. Moreover, 85% of households reported a second livelihood, approximately half of which is agriculture, and 22% a third livelihood (data not shown). Two households reported no productive livelihood, relying solely on state transfers and gifts. While private sector work is the main occupation for most households, column 2 shows that it is associated with the lowest level of household income. Much of this work is likely to be low-skilled and irregular, undertaken by the poorest, landless households (ILO 2004; Central Bureau of Statistics 2009). This has implication for adolescents in the poorest Dalit households, who may be even more likely to engage in paid, private sector, work. Agriculture appears to pay moderately better, followed by households with their own non-agricultural business. The highest incomes are associated with households relying on

remittances and the small minority with someone employed in the public sector. The high level of out-migration identified in the previous section and the relative wealth that comes with remittances may be an important driver of adolescent economic migration. The effects of the OAA on adolescent out-migration are identified in Chapter 5 with further insights provided into the drivers by IDI respondents in Chapter 7.

Finally, the presence and number of working-age adult household members have implications for adolescent education and work through both income and labour effects. The data in Table 5 confirm that average incomes are higher in households with a greater number of working-age adults. As discussed in Chapter 2, the number of working-age adults may also change demand within the household for adolescent home-based labour. These two factors are likely to be correlated in terms of their relationship with adolescent outcomes. In this low-income context, adolescents in richer households, and those with more adult labour, may be more likely to attend school and less likely to work. However, income and adult labour supply may have opposing influences as moderators of household responses to additional income. For example, the marginal effects of additional income may be larger in poorer households, who are more likely to see adolescents dropping out of school for economic reasons. At the same time, households with fewer working-age adults may be more dependent on adolescents for home-based work that is less responsive than paid work to additional income. To investigate these relationships, the casual estimates in Chapter 5 are differentiated according to the number of adults in the household, as well as by income, and further insights into these relationships are provided by adolescent, parent, and elder IDI respondents in Chapter 7.

The status of adolescent school attendance, work, and marriage status

This section provides descriptive statistics for the main adolescent outcome variables of interest related to education, work and marriage for the CTALS, provincial, and national level populations, and presents analysis of how adolescents' circumstances vary by different individual and household-level socioeconomic characteristics.

School attendance

Table 6 shows summary statistics for various indicators of school attendance, which are the main outcome variables of interest in the analysis of the effects of the OAA on

schooling in Chapter 5. Mainstream schools, both public and private, deliver the national curriculum in Nepali, although many private schools also teach in English. Among the CTALS, 57.5% of adolescents aged 10-17 years attended a mainstream school in the past year. Rates are lower for girls at 53.4% compared to 61.4% for boys. A further 7.7% of adolescents who are not in mainstream school attended a religious school. In the CTALS, religious schools are all Muslim madrassas which principally teach Islamic studies in Urdu. Hafiz, Prakash and Rajbhandari (2008) show that many madrassas in Nepal have committed to integrate mainstream education with support from the state, but teaching of the national curriculum is limited in practice. Moreover, among districts with a high concentration of Muslims, only in Rautahat had none of the madrassas registered to provide the mainstream curriculum (ibid.). No adolescents in the CTALS reported being in any other kind of full-time education.

Table 6 Summary statistics, schooling and study time of adolescents aged 10-17 years

	All adolescents		Girls		Boys	
	Mean	S.E.	Mean	S.E.	Mean	S.E.
CTALS 2017[†]						
Attends mainstream school	0.575	0.011	0.534	0.014	0.614	0.014
Public school	0.390	0.011	0.420	0.014	0.362	0.013
Private school	0.185	0.008	0.114	0.009	0.253	0.012
Migrated for education	0.077	0.006	0.049	0.007	0.105	0.009
Attends religious school	0.074	0.006	0.078	0.008	0.072	0.007
n	*3437*		*1689*		*1748*	
NDHS 2016[††]						
Attends school – rural province 2	0.718	0.029	0.646	0.040	0.806	0.026
n	*841*		*460*		*381*	
Attends school - national	0.870	0.007	0.843	0.010	0.898	0.007
n	*8966*		*4511*		*4415*	

Data sources: CTALS 2017 and NDHS 2016. [†]Robust standard errors are used throughout, clustered at the level of household [††]Estimates account for stratified cluster survey design.

Rautahat is one of eight districts in Province 2 which spans the central belt of the *Terai* region. Data from the 2016 NDHS shows that in rural areas of Province 2, the school attendance rate is higher than in the CTALS, at 71.8% for all adolescents, 64.6% for girls, and 80.6% for boys. Nationally, the attendance rate is 87.0% for all adolescents

and is 84.3% for girls and 89.8% for boys.[42] The low attendance rates in the CTALS reflect Rautahat's status as one of the poorest and most disadvantaged districts in Nepal. While there is less gender disparity in access to education in the CTALS compared to Province 2, the disparity is still more extreme than the national picture.

Mainstream schools can be distinguished between public (non-fee paying) and private (fee paying) schools with implications for the nature of income effects on school access.[43] Table 6 shows that in rural Rautahat, 39.0% of adolescents attend public school while 18.5% attend private school. This implies that the private sector caters to 32.2% of all school going adolescents in the CTALS sample. Nationally, private institutions are estimated to make up approximately 25% of schools at primary and secondary level (Ministry of Education, UNICEF, and UNESCO 2016). The large share of education provision by the private sector is likely a reflection of the weak infrastructure and management, poor quality teaching, and low achievement in public sector schools (A. Thapa 2015).

There is considerably more gender inequality in access to private schools compared to public schools. Table 6 shows that, while slightly more girls (42.0%) attend public school than boys (36.2%), more than twice as many boys (25.3%) attend private school than girls (11.4%). Adolescents who live away from home to attend school generally do so in pursuit of a higher level or better quality of schooling. Overall, 7.7% of adolescents migrated within the past 3 years for the primary purpose of education; boys are more than twice as likely as girls to have migrated for education. While most education migrants are currently attending private school (59.4%), others are in public (21.4%) or religious (12.8%) school or have since left (6.4%) (data not shown).

Figure 12 to Figure 15 show the correlation between mainstream school attendance and several individual and household characteristics that were identified in Chapter 2 as being potentially important moderators of the effects of additional income on adolescent

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[42] The NDHS does not distinguish between types of education institution and the data may include religious schools. Thus, mainstream school attendance rates in rural Rautahat may be slightly closer to the provincial average.

[43] In Nepal, public schools are known as 'community' schools. In most cases these are 'aided' and receive government grants; but can be 'unaided' and are financed by the community and other voluntary contributions. Private schools are unaided institutional schools and are profit-making (A. Thapa 2015).

outcomes.[44] Figure 12 reveals a distinct decline in mainstream school attendance rates as adolescents get older, with approximately 28 percentage points (pp) difference between 10 year olds and 17 year olds. Declining attendance may reflect a combination of increasing direct and opportunity costs. As adolescents get older, fees and other school costs rise and economic and social pressures to work and to marry increase. The decline in attendance is primarily associated with private school while public school attendance remains relatively flat. This suggests that the direct costs of school rather than opportunity costs such as work may be the more significant factor in limiting education access. It may also be that some adolescents drop out of public school while others shift from private into public school; however, this is not discernible from the data.

Figure 13 shows the relationship between school attendance and per capita income. In mirror image to adolescent age, mainstream school attendance rises steadily with income, with approximately 20pp difference between the poorest and the richest quintile. As with age, the difference is driven by higher attendance rates at private school, while public school attendance remains relatively flat. This also suggests that declining school attendance is driven more by direct school costs than the opportunity costs of work and marriage.

Both ethnicity/caste and education level of the household head were shown to correlate with household income in Table 5. However, they may also play their own part in determining access to school. Figure 14 shows that the mainstream school attendance rate is highest for Brahmin/Chhetri adolescents (90.0%), the most privileged social caste group; but is also high for Terai/Madhesi adolescents (80.9%), the dominant cultural and political group in the region. Brahmin/Chhetri and Terai/Madhesi adolescents also have the highest private school attendance rates. Being out of mainstream school is more of a problem among Dalit and Janajati adolescents; and is of drastically greater concern among the Muslim community. Just 23.6% of Muslim adolescents are in mainstream school, with only 12.9%. in public school. In part, this may be due to the poor quality of mainstream public education and the poor economic condition of most

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[44] The data are not shown separately for girls and boys because the relationship between school attendance and the various characteristics is similar.

Muslim households; but may also stem from preferences for religious education and a sense of cultural exclusion from the mainstream public school system (Hafiz, Prakash, and Rajbhandari 2008).

Figure 15 shows that mainstream school attendance rates tend to increase with the level of education of the household head. As with income and age, this is largely driven by changes in private school attendance although public schooling is also lower among those with no education. As shown in the previous section, almost 80% of household heads have no education so those benefiting from the intergenerational effects of higher education are in a minority.

In summary, the initial findings in this section reveal the institutional variety in the education supply in the study area and the gendered nature of school access. This diversity forms an integral part of the investigation in the following chapters about how the OAA affects gendered decisions about both school attendance and school choice. Importantly, the OAA may increase access to public, private and religious schools, but also has the potential to support adolescents to shift from lower-cost to higher-cost schools. In terms of effect pathways, there are indications that both the direct and opportunity costs of school increase with age and that this affects private schooling to a greater extent than public education. Moreover, there is a large deficit in mainstream school attendance among Muslim communities which points to the significance of cultural drivers of school access that will moderate any income effects.

Figure 12 Mainstream school attendance rate by age of adolescent
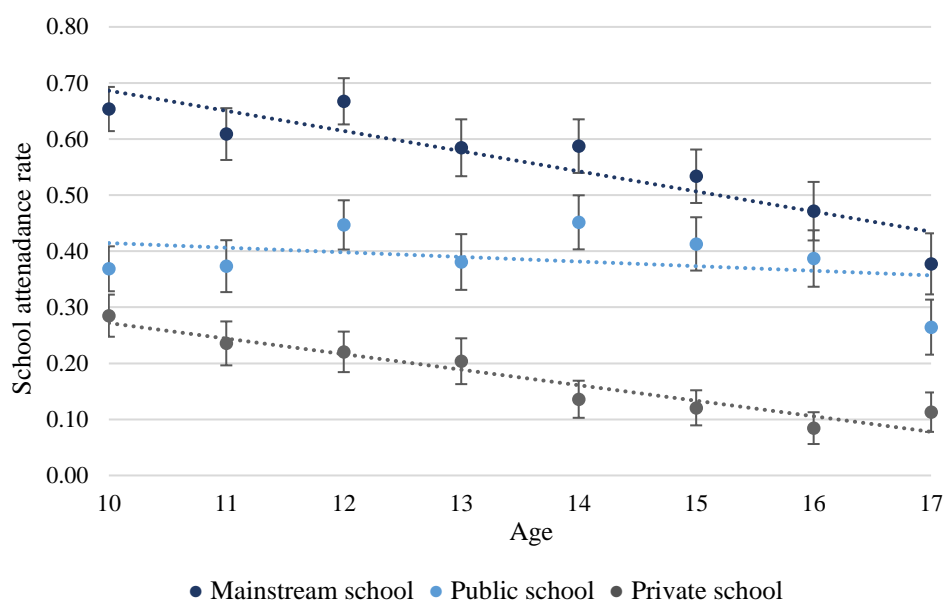
• Mainstream school • Public school • Private school

Data source: CTALS 2017. n = 3437. Figure shows the linear fitted line and error bars (95% C.I.) using robust standard errors clustered at the level of the household.

Figure 13 Mainstream school attendance rate by per capita income quintile
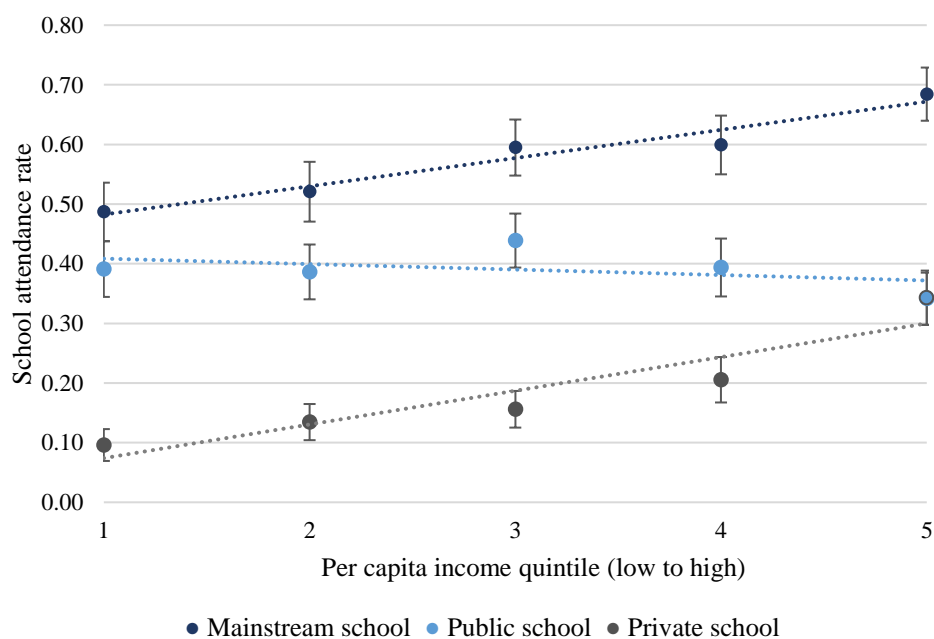
• Mainstream school • Public school • Private school

Data source: CTALS 2017. n = 3437. Figure shows the linear fitted line and error bars (95% C.I.) using robust standard errors clustered at the level of the household.

Figure 14 Mainstream school attendance rate by ethnicity/caste
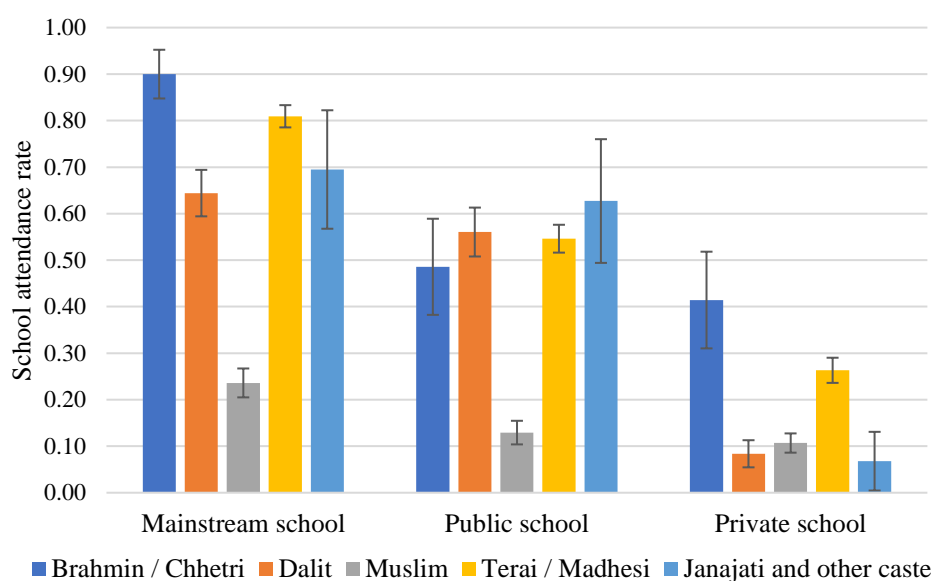
Data source: CTALS 2017. n = 3437. Figure shows error bars (95% C.I.) using robust standard errors clustered at the level of the household.

Figure 15 Mainstream school attendance rate by education level of household head
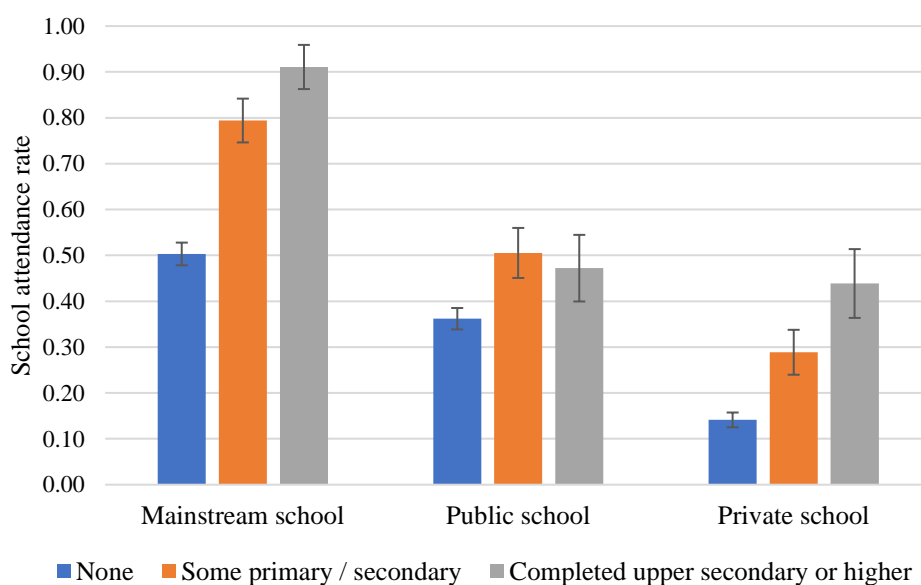
Data source: CTALS 2017. n = 3437. Figure shows error bars (95% C.I.) using robust standard errors clustered at the level of the household.

Economic and domestic work

Table 7 shows summary statistics for different kinds of adolescent work including participation and hours worked in paid employment, unpaid (home-based) economic work, and domestic work in the past week, as well as participation in paid and unpaid economic work in the past year. For reasons discussed in Chapter 5, the causal estimates in that chapter focus only on domestic work in the past week and paid and unpaid economic work in the past year. Nevertheless, it is helpful to have a broader understanding of the working patterns of adolescents as presented here.

The data in Table 7 show that most adolescents (88.5%) engaged in work in the past week. Work activities are not mutually exclusive, and many adolescents engage in more than one kind of work. Indeed, 83.9% engaged in domestic chores, 60.5% engaged in unpaid economic work in the home or for the family business, and 5.3% engaged in paid work. This is also reflected in the hours spent working in the past week. Adolescents who engaged in any kind of work did an average of 10.8 hours in the past week, equivalent to 1.54 hours per day. Those who engaged in domestic work did an average of 6.9 hours, those who engaged in unpaid domestic work did 4.9 hours, and those who engaged in paid work did 15.9 hours. While most adolescents make some contribution to unpaid work at home, the small minority who engage in paid work are the most heavily engaged. Girls are more likely than boys to engage in unpaid work and do slightly longer hours; an average of 2.9 hours more domestic work and 0.7 hours more unpaid economic work in the past week. In contrast, girls and boys are equally likely to engage in paid work, but boys work for substantially longer; an average of 9.8 hours more than girls in the past week.

As economic work can be highly seasonal, the CTALS also asked adolescents who had not participated in an economic activity in the past week, whether they had done so in the past year. Table 7 shows that for both paid and unpaid economic work, participation rates over the past year are higher by approximately 4pp and 9pp, respectively. In the case of paid economic work, the participation rate is 60% higher for girls and 95% higher for boys. As with education, the CTALS asked whether any adolescents who left the home within the past three years had done so for the purpose of employment. Table 7 shows that economic migration occurs exclusively among boys, with 6.1% having left the household within the past three years for the purpose of work. Approximately 70%

of economic migrant boys went to India while most of the remainder went to Kathmandu (data not shown).

Table 7 Summary statistics, work participation, hours and economic migration of adolescents aged 10-17 years

	All adolescents			Girls			Boys		
	n	Mean	S.E.	n	Mean	S.E.	n	Mean	S.E.
CTALS 2017[†]									
Work participation, past week									
All work	2975	0.885	0.006	1531	0.950	0.006	1444	0.817	0.011
Paid	2975	0.053	0.004	1531	0.052	0.006	1444	0.055	0.006
Unpaid economic	2975	0.605	0.011	1531	0.674	0.013	1444	0.531	0.015
Unpaid domestic	2975	0.839	0.008	1531	0.930	0.007	1444	0.742	0.013
Hours worked, past week									
All work	2634	10.8	0.2	1454	12.2	0.2	1180	9.1	0.3
Paid	159	15.9	1.2	80	11.0	1.0	79	20.8	2.0
Unpaid economic	1799	4.9	0.1	1032	5.2	0.1	767	4.5	0.2
Unpaid domestic	2495	6.9	0.1	1424	8.1	0.1	1071	5.2	0.1
Work participation, past year									
Paid	2975	0.094	0.006	1531	0.083	0.008	1444	0.107	0.009
Unpaid economic	2975	0.693	0.010	1531	0.749	0.012	1444	0.634	0.014
Economic migration, past 3 years									
Migrated for work	3437	0.031	0.003	1689	0.000	-	1748	0.061	0.006
NMICS 2014[††]									
Work participation (all types), past week									
National	4639	0.818	0.010	2212	0.878	0.012	2427	0.758	0.014
Rural Province 2	361	0.668	0.037	164	0.770	0.049	197	0.576	0.049
Hours worked (all types), past week									
National	3909	15.5	0.5	1988	17.3	0.6	1921	13.5	0.5
Rural Province 2	251	10.9	0.8	132	13.3	1.1	119	8.1	0.8

Data sources: CTALS 2017 and NMICS 2014. [†]Robust standard errors are used throughout, clustered at the level of household [††]Estimates account for stratified cluster survey design.

Figure 16 to Figure 21 show the correlation between participation in paid and unpaid economic work in the past year and in unpaid domestic work in the past week and several household and individual characteristics that were identified in Chapter 2 as being potentially important moderators of the effects of additional income on adolescent outcomes.[45] In mirror image to the declining rate of school attendance shown earlier,

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[45] The analysis focuses on economic work in the past year rather than the past week because the longer reference period is less prone to seasonal variation and aligns with the reference period for school attendance. Repeating the analysis using data from the past week shows that the patterns are similar for both reference periods. Participation in domestic work was only measured for the past week. Data are not shown separately for girls and boys because the relationship with the various characteristics is similar; any exceptions are highlighted in the text.

Figure 16 shows that the likelihood of participating in work increases steadily with age. This is the case for all types of work but with the largest absolute increase in unpaid economic work at home, which rises by 31pp between 10 and 17 years old. This reflects the largely informal, self-employed nature of the local economy. At the same time, by age 17, almost a quarter of adolescents are engaged in paid work, rising to nearly one third among boys (data not shown). Figure 17 shows only a slight negative correlation between work participation and per capita income. Again, the largest change is seen for unpaid economic work. However, even among the richest households, adolescent participation in work is common. Factors other than income may be more important in determining adolescent work, such as the widespread reliance on own-agriculture as a secondary source of income, and expectations about the role of adolescents in the household.

Figure 18 shows how work participation varies with the ethnic/caste group of the household. Differences between most ethnic/caste groups are small and have substantial overlap between the confidence intervals of the estimates. However, two observations can be made. First, Brahmin/Chhetri adolescents are least likely to engage in unpaid work, possibly a sign of their relative social and economic privilege. Second, Dalit adolescents are most likely to engage in paid work, with the participation rate almost double the average. This may relate to higher rates of landlessness among Dalits and their exclusion from certain types of employment (ILO 2004).[46] Moreover, the difference is particularly pronounced for Dalit girls, 18.3% of whom are engaged in paid work (data not shown).

Figure 19 shows the correlation between adolescent work and the education level of the household head. Only the small minority who live with a household head who has complete upper secondary or higher are slightly less likely to engage in unpaid work. There is a stronger correlation with participation in paid work, which declines with even a limited amount of education. This may have some association with ethnic/caste group, as Brahmin/Chhetri household heads are most likely be educated while Dalit and Muslim heads are least likely to be educated (data not shown).

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[46] CTALS data shows that Dalit households own the lowest amount of agricultural land of any ethnic/caste group, an average of 0.23 bighas compared to the full sample average of 0.81 bighas.

Figure 16 Work participation rate by age of adolescent
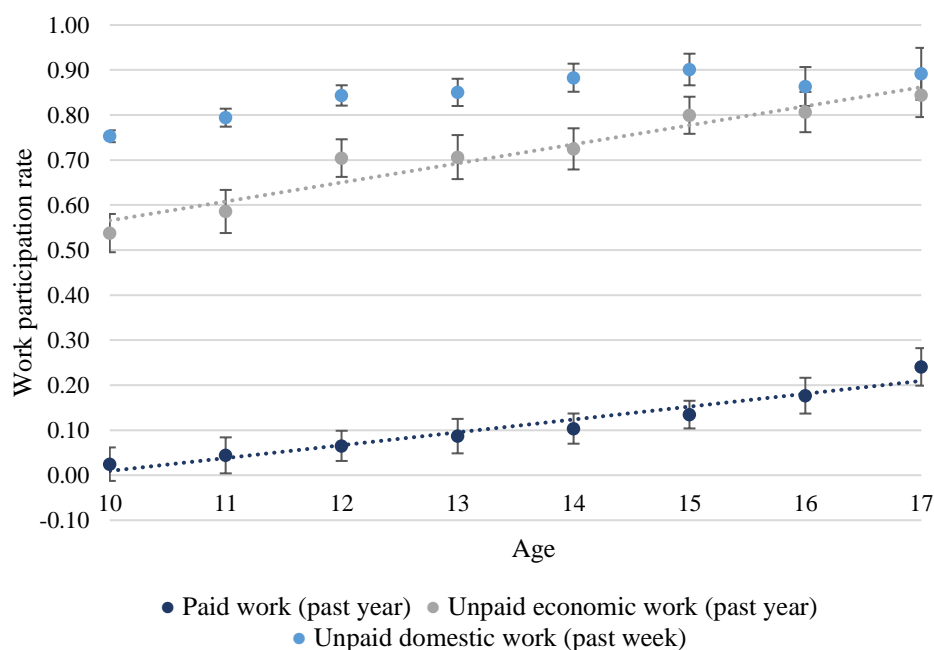
Data source: CTALS 2017. n = 2975. Figure shows the linear fitted line and error bars (95% C.I.) using robust standard errors clustered at the level of the household.

Figure 17 Work participation rate by per capita income quintile
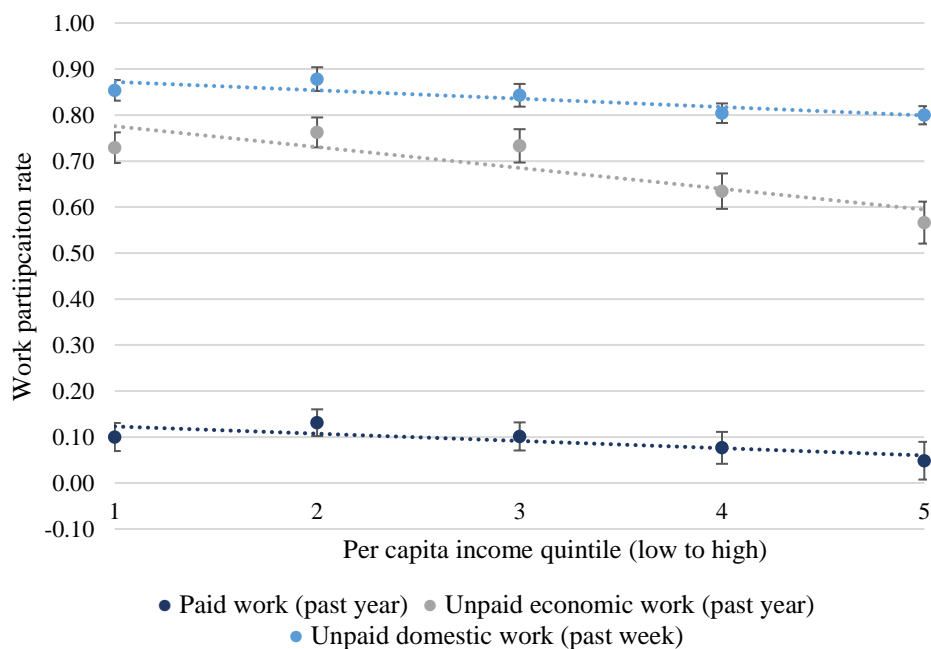
Data source: CTALS 2017. n = 2975. Figure shows the linear fitted line and error bars (95% C.I.) using robust standard errors clustered at the level of the household.

Figure 18 Work participation rate by ethnicity/caste
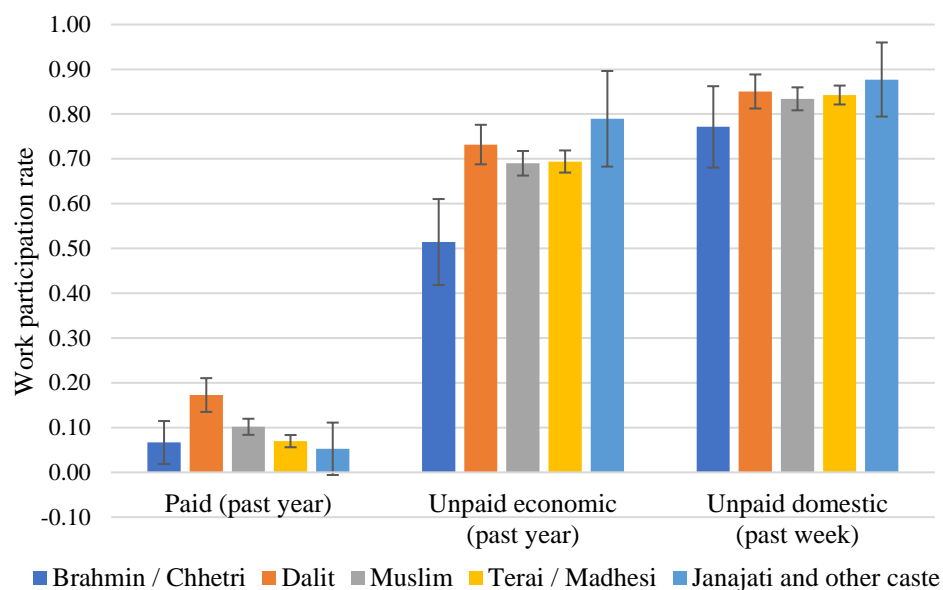
Data source: CTALS 2017. n = 2975. Figure shows error bars (95% C.I.) using robust standard errors clustered at the level of the household.

Figure 19 Work participation rate by education level of household head
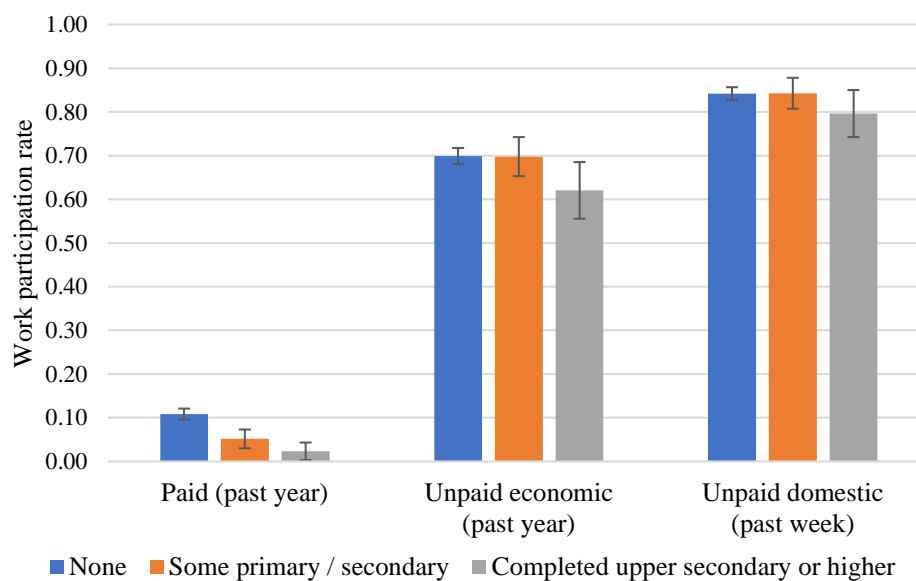
Data source: CTALS 2017. n = 2975. Figure shows error bars (95% C.I.) using robust standard errors clustered at the level of the household.

Figure 20 Work participation rate by main livelihood type
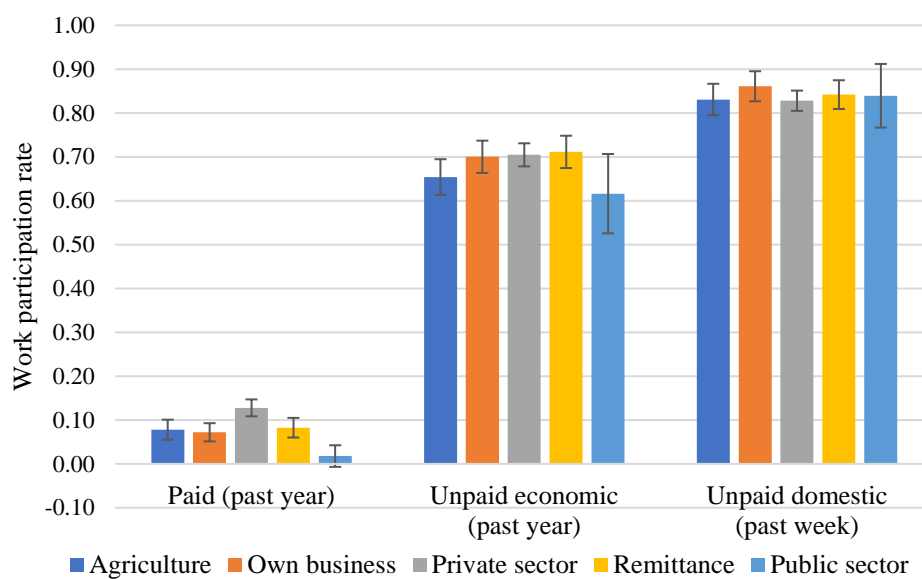
Data source: CTALS 2017. n = 2975. Figure shows error bars (95% C.I.) using robust standard errors clustered at the level of the household.

Figure 21 Work participation rate by mainstream school attendance status
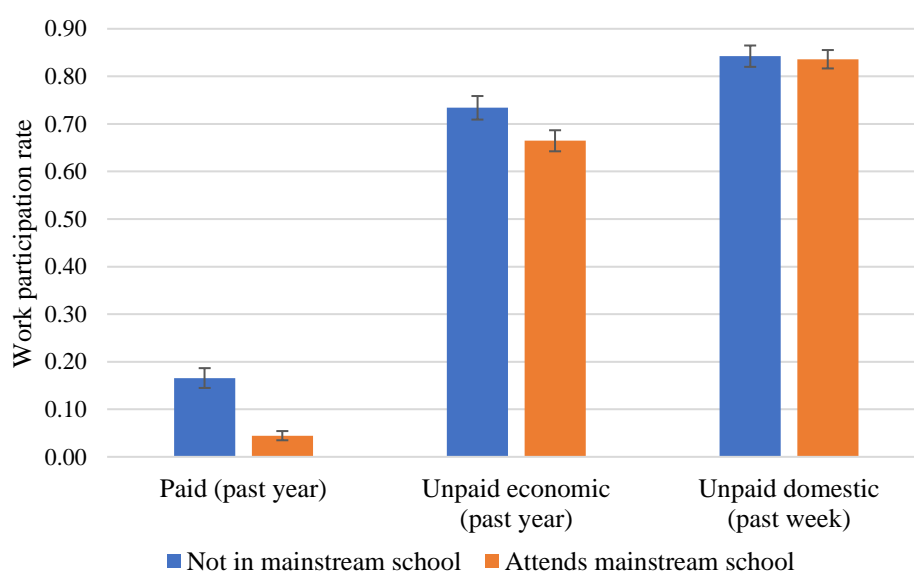
Data source: CTALS 2017. n = 2975. Figure shows error bars (95% C.I.) using robust standard errors clustered at the level of the household.

Figure 20 shows that unpaid work at home does not vary substantially with the main type of livelihood. This may be because many households have multiple income sources from different economic sectors.[47] A more substantial difference is found for paid work, which is higher among adolescents whose household's main income is from private sector work which also correlates with being Dalit who are more likely to be landless. Finally, Figure 21 shows that adolescents who attend school are as likely to participate in unpaid work at home as those who do not attend school. It might be expected that school attendance status affects the average number of hours worked; however, they do not substantially differ (data not shown). In contrast, approximately 12pp more adolescents who are not in school are engaged in paid work compared to those who attend school. In other words, non-school goers are 3.7 times as likely to engage in paid work than school goers. These findings confirm that home-based work is a common and necessary part of adolescents' lives whether in or out of school; however, paid work is much more likely to be undertaken by out-of-school adolescents.

In summary, the findings in this section suggest that unpaid adolescent work in the home is near ubiquitous regardless of ethnicity/caste, livelihood type, or school status, although participation is slightly lower among the highest income and most highly educated households. Given this, and that a cash transfer is not a direct substitute for the outputs of home-based work, it is perhaps less likely that a modest amount of additional income would make a difference in this area. Nevertheless, the theory presented in Chapter 2 shows that a cash transfer may indirectly affect unpaid labour through investment and changes in adult time-use. In contrast, adolescent paid work is much less common, but is concentrated among older, out-of-school adolescents, from poorer, uneducated Dalit households that tend to engage more in low-wage private sector work. This suggests that, while additional income of sufficient value may prevent adolescent paid work, the magnitude of the effect may depend on the age of adolescents and whether they have already been pushed out of or given up on education. It is also possible that the OAA provides the means to seek better employment opportunities for older, out-of-school adolescents.

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[47] Analysis of four main livelihood types among the CTALS population shows that 85% of households have a second livelihood and 22% have a third.

Marital status and marriage migration

Table 8 shows summary statistics for marriage rates of adolescents. Among the CTALS sample, 7.0% of 10-17 year olds are married. The rate is notably higher for girls at 11.1% compared to 3.1% for boys. Other national surveys only ask marital status for those aged 15 years and older. To compare with provincial and national rates, the age range is limited to 15-17 year olds. Within this age range, the CTALS population and Province 2 exhibit relatively similar marriage rates at 16.9% and 18.9%, respectively. Again, rates are substantially higher for girls, with more than one quarter of 15-17 year old girls already married. Early marriage is a greater problem in rural Province 2 compared to the national average, with 10.0% of 15-17 year olds and 15.5% of 15-17 year old girls estimated to be married. As discussed in Chapter 1, there are strong cultural, social and economic incentives for early marriage, especially for girls, and especially in certain parts of Nepal including Province 2.

Table 8 Summary statistics, marriage status of adolescents aged 10-17 and 15-17 years

	All adolescents		Girls		Boys	
	Mean	S.E.	Mean	S.E.	Mean	S.E.
CTALS 2017[†]						
n	*1108*		*531*		*577*	
Married (15-17)	0.169	0.012	0.262	0.019	0.083	0.011
n	*3437*		*1689*		*1748*	
Married (10-17)	0.070	0.005	0.111	0.008	0.031	0.004
Migrated for marriage (10-17)	0.017	0.002	0.033	0.004	0.001	0.001
NDHS 2016[††]						
n	*259*		*148*		*111*	
Married (15-17) – rural province 2	0.189	0.025	0.277	0.036	0.072	0.025
n	*3077*		*1664*		*1413*	
Married (15-17) – national	0.100	0.008	0.155	0.013	0.035	0.006

Data source: CTALS 2017 and NDHS 2016. [†]Robust standard errors are used throughout, clustered at the level of household [††]Estimates account for stratified cluster survey design.

It is common practice in North Indian and Nepali society for a girl and boy to be ritually married, but for the girl to continue to live with her parents for up to several years before cohabiting (Collver 1963; Ghosh 2011). The initial marriage ritual is termed *Shadi* in Hindi and *Nikah* in Urdu, while the ceremony preceding cohabitation and consummation of the marriage is termed *Gauna.* Historically, *Gauna* would have taken

place when the girl reaches puberty. However, today this can occur later, often after the girl has reached the legal age for marriage. Because of this practice, as well as asking the marital status of girls, the CTALS identified adolescents who left the household within the past 3 years for the primary purpose of marriage. Migration for marriage is a less ambiguous indicator of a fully realised marriage.[48]

Table 8 shows that 3.3% of adolescent girls left the home within the past three years for the purpose of marriage. This means that nearly 30% of married adolescent girls are cohabiting while nearly 70% are still living in their parental home.[49] In contrast, less than 1% of married boys left the home because of marriage, the reasons for which remain unclear.

Figure 22 to Figure 26 show the correlation between marriage status and several individual and household characteristics that were identified in Chapter 2 as being potentially important moderators of the effects of additional income on adolescent outcomes. The comparison of marriage rates between 10-17 year olds and 15-17 year olds already shows that the likelihood of marriage increases with age. Figure 22 confirms this and shows that, for both girls and boys, the rate of increase accelerates as they become older. By the time they are 17 years old, 44.3% of girls and 14.0% of boys are married. Moreover, among married 17 year old girls, 53.4% left the home and are cohabiting (data not shown).[50]

Figure 23 suggests there is a weak relationship between marital status and income. Income appears not to be associated at all with the likelihood of marriage among boys. There is a very slight upward trend in marriage rates among girls with higher levels of income, primarily related to differences in the second and third per capita income quintile. However, as indicated by the error bars, standard errors are large and so a firm conclusion cannot be drawn.

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[48] Another consequence of the practice of *Gauna* is that girls who are married and present in the home when surveyed may have already moved into the home of their husband. Thus, adolescents who have resided in the household for less than three years are excluded from the data to avoid potential double counting of the population.

[49] Approximately 1.6% of married adolescent girls who are current members of the household moved in more than 3 years ago and are cohabiting with their spouse.

[50] The youngest reported married adolescent girl is 11 years old while the youngest reported married adolescent girl who left the home is 14 years old.

Figure 22 Marriage rate by age of adolescent
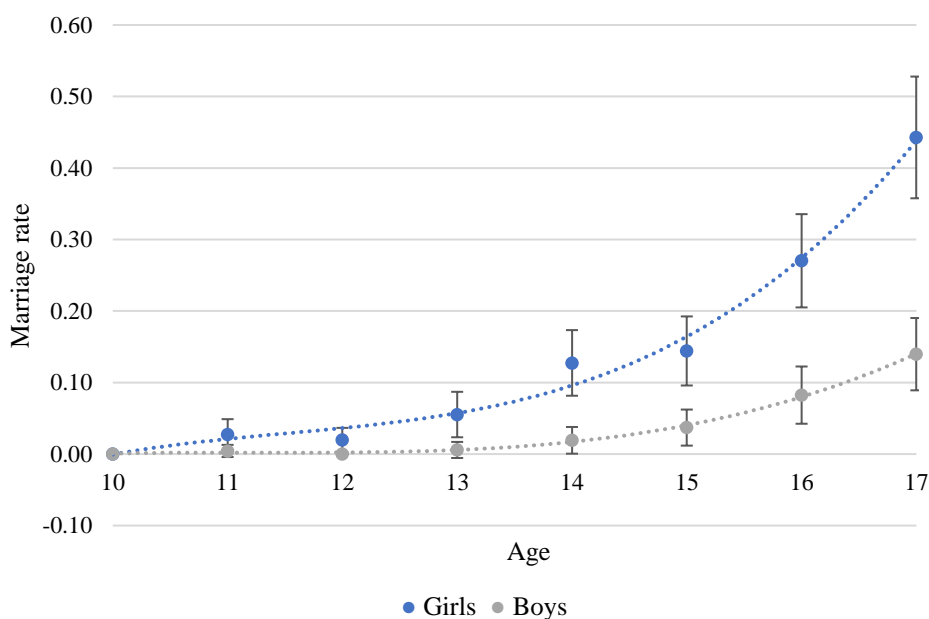
Data source: CTALS 2017. $n_f = 1689$, $n_m = 1748$. Figure shows the cubic fitted line and error bars (95% C.I.) using robust standard errors clustered at the level of the household.

Figure 23 Marriage rate by per capita income quintile
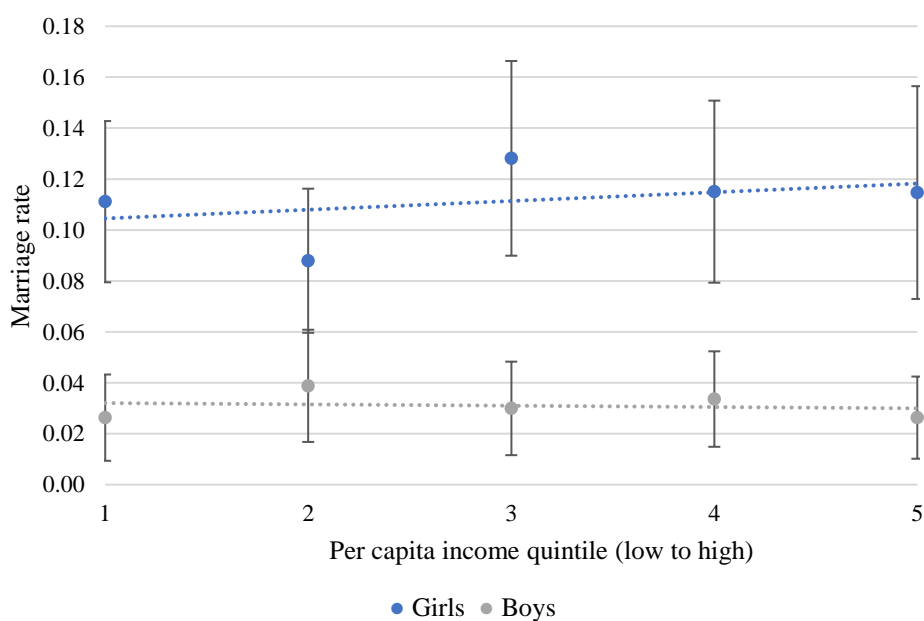
Data source: CTALS 2017. $n_f = 1689$, $n_m = 1748$. Figure shows the linear fitted line and error bars (95% C.I.) using robust standard errors clustered at the level of the household.

Figure 24 Marriage rate by ethnicity/caste
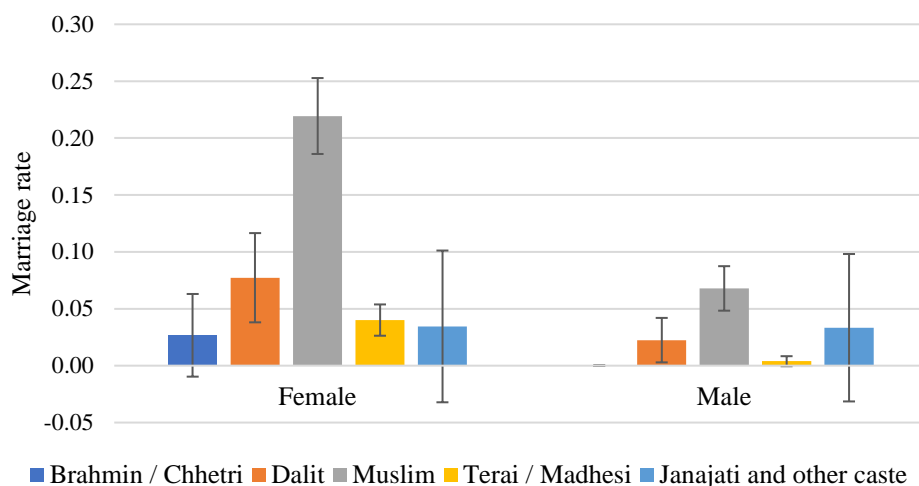
■ Brahmin / Chhetri ■ Dalit ■ Muslim ■ Terai / Madhesi ■ Janajati and other caste

Data source: CTALS 2017. n_f = 1689, n_m = 1748. Figure shows error bars (95% C.I.) using robust standard errors clustered at the level of the household.

Figure 25 Marriage rate by education level of household head
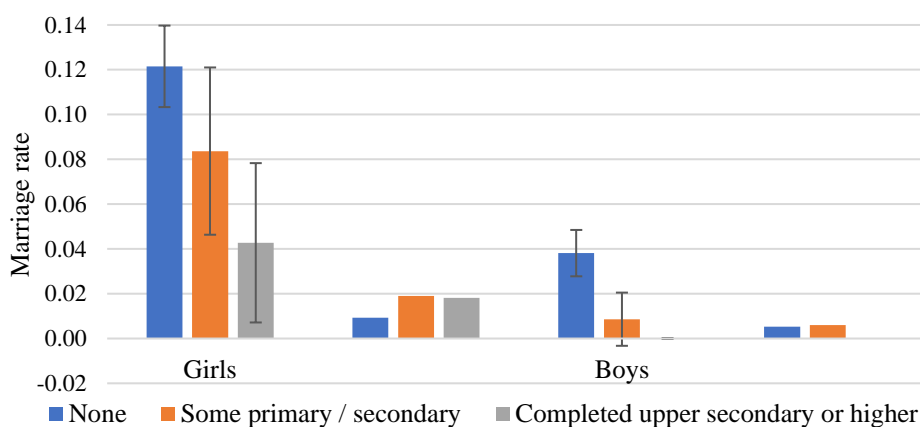
■ None ■ Some primary / secondary ■ Completed upper secondary or higher

Data source: CTALS 2017. n_f = 1689, n_m = 1748. Figure shows error bars (95% C.I.) using robust standard errors clustered at the level of the household.

Figure 26 Marriage rate by mainstream school attendance status
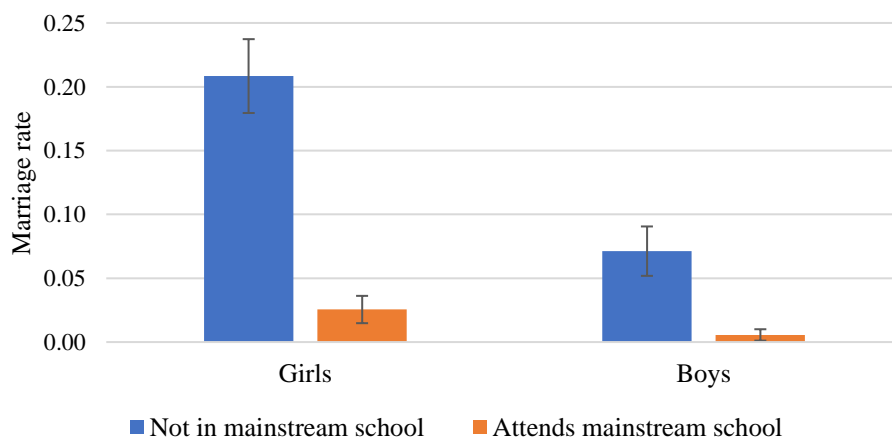
■ Not in mainstream school ■ Attends mainstream school

Data source: CTALS 2017. n_f = 1689, n_m = 1748. Figure shows error bars (95% C.I.) using robust standard errors clustered at the level of the household.

Figure 24 shows marriage rates within each ethnic/caste group and indicates that marriage for both girls and boys is strongly associated with the Muslim community. The marriage rate for Muslim girls is 21.9% and for boys is 6.8%; more than double the average in both cases. Dalit girls may also be more susceptible to early marriage; however again, standard errors are large and so estimates are uncertain. Because Muslim and Dalit households have the lowest incomes, this may mask a stronger positive association between income and marriage in Figure 23. In other words, higher incomes may have a greater role to play in facilitating early marriage than is first apparent.

Figure 25 shows marriage rates by education level of the household head. Both girls and boys are more likely to be married the more poorly educated is the household head. As with work, both higher marriage rates and lower education of the household head are more strongly associated with Muslim and Dalit ethnic/castes groups. Figure 26 shows that there is also a strong correlation between adolescent marriage and school attendance. School attendance and marriage are not entirely mutually exclusive; however, 20.8% of girls and 7.1% of boys who are not in school are married compared to just 2.5% of girls and less than 1% of boys who are in school. Given the reference period of the question on school attendance (past year) it is possible that some of those who are reported as both married and in school have recently left school.

In summary, the findings in this section show that early marriage increases sharply with age from mid-adolescence. While there is no clear relationship between household income and the marriage rate, early marriage is strongly concentrated among Muslim girls who are out of school. Earlier in the chapter it was shown that Muslim adolescents are the most likely to be out of mainstream school. This suggests that there may be certain cultural preferences for early marriage, which supports the possibility that additional income could increase marriage rates where these households face financial barriers to the payment of dowries and other costs. At the same time, adolescent marriage is a minority occurrence across the income spectrum and different social groups, which suggests that most households prefer to wait, at least until later adolescence. In this case, additional income may have the opposite effect if it allows girls to continue in school for longer. It is important to understand the diversity in

preferences, incentives, and barriers for early marriage within the study population to properly interpret any income effects on marriage timing.

Summary and conclusions

Data presented in this chapter has revealed the state of adolescent life-course circumstances in the CTALS sample from rural Rautahat, and their relationship with various individual and household characteristics. This will inform analyses of the effects of additional household income on adolescents in subsequent chapters and helps to contextualise the findings within the local context and more broadly.

Like much of Nepal's Province 2, the CTALS population is dominated by Terai/Madhesi but with large minorities of the most marginalised ethnic/caste groups, Muslims and Dalits. By national standards, households in the CTALS are large and poorly educated with many relying on low paying wage labour and subsistence-level agricultural and non-agricultural family enterprises. CTALS households likely have lower incomes than average, with the poorest households coming from the Dalit and Muslim communities. Adolescents in the CTALS sample are more disadvantaged than the national and provincial average; mainstream school attendance rates are considerably lower and work participation rates are higher. Girls are somewhat behind boys in overall access to school but are substantially disadvantaged in terms of access to private schools, which play a major role in education provision. Nearly nine in 10 adolescents engage in work, mostly unpaid work at home, but on average for less than two hours per day. Girls are more likely to work than boys and spend longer hours working. A small minority of both girls and boys engage in paid work, but boys tend to do substantially longer hours. Marriage rates in the CTALS are similar to Province 2 but are well above the national average. While early marriage is predominantly an issue for girls it also affects a small minority of boys. Most girls have a transition period between the initial marriage ritual and cohabitation with their spouse.

The findings show that adolescents' life-course circumstances are shaped by their socioeconomic circumstances. Transitions to adulthood accelerate rapidly with age. Older adolescents are less likely to attend school, especially private school, and are more likely to work and to be married. Among girls especially, cultural, social and economic pressures to marry appear to build with age, accelerating from age 14 to 17.

Adolescents from poorer households with an uneducated head are less likely to be in school. Variation in school attendance rates are largely associated with private rather than public school, suggesting that direct costs may be a greater barrier to school attendance than the opportunity costs of work and marriage.

Ethnicity and caste determine several aspects of adolescents' lives. Adolescents from the dominant and more privileged ethnic/caste groups are more likely to attend mainstream school and are less likely to engage in work. Muslim adolescents are the most disadvantaged in terms of access to mainstream school. As well as low incomes and the poor quality of public schools, this may be due to preferences for religious education and a sense of cultural exclusion from public schools. Both adolescent girls and boys from Dalit households, which tend to engage more in low paid, private sector work, are most likely to participate in paid work. Early marriage is most common among the Muslim community but is also associated with low levels of education and possibly higher levels of income.

The findings in this chapter show that the relationship between school, work and marriage is complex. Both school going and non-school going adolescents contribute to economic and domestic work at home. However, those who are out of school are much more likely to be engaged in paid work and to be married. The extent to which adolescents who have transitioned into adult roles have done so at the cost of their education or because of limited educational opportunities and other underlying factors will be explored in later chapters. This highlights the importance of analysing the common set of adolescent life-course circumstances together, as they represent trade-offs with each other and can help explain why certain effects may or may not occur and for whom.

Returning to the main purpose of this study, the findings in this chapter suggest that household income has an important role in determining the opportunities available to adolescents and the timing of transitions to adulthood, and that additional income in the form of a cash transfer, may change the available options. The effects of the OAA on the full range of schooling, work, and marriage outcomes are estimated in Chapter 5. For the largest group of adolescents, the OAA may support increased investment in education, especially private school, preventing adolescents from dropping out or even

allowing them to change schools. The poorest, landless households are more likely to rely on adolescent paid labour, thus the OAA may also affect adolescents through increased household consumption. The effects of the OAA on household income and expenditure are explored in detail in Chapter 6.

The findings in this chapter also show that income is just one among a range of influencing factors on adolescent outcomes, many of which may mediate the effects of additional household income. Some of these factors, including adolescent age and household income, education, and adult labour supply, are explored in the quantitative analysis in Chapter 5, while Chapter 7 provides a deeper and more contextualised understanding of the varied cultural, social, economic and environmental dynamics that affect household decisions about adolescents.

The next chapter identifies the extent to which additional household income, in the form of the Old Age Allowance (OAA) received by elders, affects the diverse life course circumstances of co-resident adolescents, and whether effects are concentrated among certain sub-groups of the population.

Chapter 5

The Effects of the OAA on Adolescents' Life-Course Circumstances

Introduction

This thesis explores to what extent and why an increase in household income, in the form of an unconditional cash transfer (UCT), affects adolescents' life-course circumstances. The analysis in this chapter answers part of this question by exploiting the age eligibility criteria of Nepal's Old Age Allowance (OAA) to make causal inferences about its effects on school attendance, work participation, and marriage status, of co-resident adolescents. The OAA is a useful instrument to explore income effects on household members due to its relatively generous benefit value and the prevalence of multi-generational households in the study area. Assuming some degree of resource sharing occurs, the OAA is akin to an unconditional household income transfer. Controlling for several factors including differences in age, the analysis compares outcomes for adolescents who co-reside with an elder who is nearly eligible for the OAA to adolescents who co-reside with an elder of, or just above, eligibility age.

Existing theories and evidence presented in Chapter 2 suggest that UCTs will generally have a positive effect on school attendance for both girls and boys but are more ambiguous about their effects on work and marriage. However, the complexities of adolescents' lives are often oversimplified into binary options that mask the variety of changes that may occur and without accounting for the range of contextual factors that influence their lives. This has implications for our understanding of the true effects of cash transfers. The analysis in this chapter provides for more nuanced analysis of the effects of the OAA on adolescent life-course circumstances in three main ways.

First, outcomes are more precisely specified than is typically the case. School attendance is differentiated by types of school relevant to the context including public, private, and religious, as well as education migration; work is differentiated by paid, unpaid economic, and domestic work, as well as economic migration; marriage

outcomes are differentiated by marital status and marriage migration, the latter synonymous with marital cohabitation for girls. Second, the analytical framework recognises that consumption and investment preferences of household members vary and that control over resources can determine their relative bargaining power in fulfilling those preferences. To this end, the estimation approach allows for identification of differences in the effects of the OAA depending on the gender of the recipient. The dynamics of household bargaining and their relation to decision-making about adolescents' life-course options are discussed in more detail in Chapter 6. Third, as demonstrated in Chapter 4, decisions about adolescent life-course circumstances are influenced by many other factors. Estimates are differentiated by gender of the adolescent and further analysis examines the main results allowing for variation in age and indicators of household socioeconomic status and structure.

The next section presents descriptive statistics that indicate potential differences in outcomes for adolescents who co-reside with OAA eligible elders followed by an explanation of the estimation approach. The main findings are then presented for each outcome area in turn, followed by additional analysis that further refines the findings by narrower age groups and socioeconomic status. The chapter ends with a review of the robustness and applicability of the results, and a summary of the main findings and concluding comments.

Data and descriptive statistics

All data in this chapter comes from the Cash Transfers and Adolescent Life-course survey (CTALS). Variables used in the analysis of school attendance and marital status are the same as those presented in Chapter 4. The analysis of work focuses on participation in paid and unpaid economic work in the past year rather than on the short-term measures of participation and hours worked in the past week. This reflects longer-term decision-making, aligns with the measures of school attendance, and removes potential variation due to seasonality.[51] For domestic work, data is only available for the past week.

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[51] Moreover, results of the estimations for work hours find no substantial differences related to OAA eligibility.

The CTALS was designed to exploit expected discontinuities in outcomes of co-resident adolescents at the age of eligibility for the OAA. This approach supposes that the two populations, differentiated by age of the elders, represent similar households with the same long-term income but that differ in the timing of that income (Edmonds 2006). Table 9 presents descriptive statistics for adolescents living in OAA eligible and non-eligible households. Column 1 shows means for the pooled sample, column 2 for adolescents who co-reside with elders who are not yet eligible for the OAA (control group), and column 3 for those who live with OAA eligible elders (treatment group); column 4 shows the observed difference between columns 2 and 3. An initial observation is that there are no tangible differences in the age and gender of adolescents in the control and treatment group. This is promising for the proposed estimation approach. There are, however, some notable differences in the life-course circumstances of adolescents. Looking first at education, column 4 shows that the mainstream school attendance rate for adolescents living with an OAA eligible elder is 6.2pp (12%) higher than for adolescents living with a non-eligible elder; the difference is larger for girls than for boys.

Before going further, mainstream school attendance can be used to demonstrate the estimation approach. Figure 27 plots sample means of mainstream school attendance against the age of the co-resident elder. Age is indicated as relative to the age of OAA eligibility given the policy difference for Dalits; thus, age zero (OAA eligibility age) is 70 for non-Dalits and 60 for Dalits. The figure also plots the linear trend for each half of the sample. Absent the OAA, the line should be smooth across the ages. The disjuncture or discontinuity in the line represents the effect of the OAA on school attendance. There is a slight upward trend in the data. One might expect the opposite due to the likelihood of a positive correlation between the age of the elder and greater economic and care burden on the household or the presence of older adolescents. The upward trend may reflect households' anticipatory responses to future OAA income or some unknown underlying correlation between school attendance and age of the elder. Figure 28 plots the same data but limited to adolescents who live with elder women as these results emerge more strongly in the subsequent analysis. There is a clear and slightly larger discontinuity in the plotted data and a more horizontal trend. This signals the possibility that the nature of the effects of the OAA are different depending on the gender of the recipient.

Table 9 Descriptive statistics for adolescents in OAA eligible and non-eligible households

| | Elders within +/- 5 years of OAA eligibility | | Elder within -5 years of OAA eligibility | | Elder within +5 years of OAA eligibility | | Difference in means | |
| | (1) | | (2) | | (3) | | (4) | |
	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean diff.	S.E.
All adolescents, 10-17 years								
n	*3437*		*1643*		*1794*		*3437*	
Age	13.131	0.035	13.093	0.051	13.166	0.048	0.073	0.078
Female	0.491	0.008	0.494	0.013	0.489	0.011	-0.004	0.017
Attends mainstream school	0.575	0.011	0.542	0.016	0.605	0.015	***0.062	0.017
Public school	0.390	0.011	0.351	0.014	0.426	0.015	***0.074	0.017
Private school	0.185	0.008	0.191	0.012	0.179	0.011	-0.012	0.013
Migrated for education	0.077	0.006	0.069	0.008	0.085	0.009	*0.017	0.009
Attends religious school	0.074	0.006	0.077	0.008	0.072	0.008	-0.005	0.009
n	*2975*		*1448*		*1527*			
Domestic work (last week)	0.839	0.008	0.829	0.011	0.847	0.010	0.018	0.013
Unpaid economic work (last year)	0.693	0.010	0.696	0.014	0.690	0.015	-0.006	0.017
Paid work (last year)	0.094	0.006	0.103	0.009	0.086	0.008	-0.016	0.011
n	*3437*		*1643*		*1794*			
Migrated for work	0.031	0.003	0.026	0.004	0.036	0.005	*0.010	0.006
Married	0.070	0.005	0.068	0.007	0.072	0.007	0.004	0.009
Migrated for marriage	0.017	0.002	0.013	0.003	0.020	0.003	0.006	0.004
Girls, 10-17 years								
n	*1689*		*811*		*878*			
Age	13.105	0.051	13.088	0.075	13.122	0.070	0.034	0.109
Attends mainstream school	0.534	0.014	0.488	0.021	0.576	0.020	***0.089	0.024
Public school	0.420	0.014	0.382	0.020	0.454	0.020	***0.072	0.024
Private school	0.114	0.009	0.106	0.012	0.122	0.013	0.016	0.015

Table 9 continued

Migrated for education		0.049	0.007		0.042	0.008	0.056	0.010	0.014	0.011
Attends religious school		0.078	0.008		0.076	0.011	0.079	0.010	0.002	0.013
n	*1531*			*745*			*786*			
Domestic work (last week)		0.930	0.007		0.933	0.097	0.927	0.010	-0.005	0.013
Unpaid economic work (last year)		0.749	0.012		0.742	0.018	0.756	0.017	0.013	0.022
Paid work (last year)		0.083	0.008		0.094	0.011	0.073	0.010	-0.021	0.014
n	*1689*			*811*			*878*			
Migrated for work		-	-		-	-	-	-		
Married		0.111	0.008		0.109	0.011	0.113	0.011	0.004	0.015
Migrated for marriage		0.033	0.004		0.027	0.006	0.038	0.006	0.010	0.009
Boys, 10-17 years										
n	*1748*			*832*			*916*			
Age		13.155	0.054		13.097	0.078	13.207	0.073	0.110	0.111
Attends mainstream school		0.614	0.014		0.595	0.020	0.632	0.019	0.037	0.023
Public school		0.362	0.013		0.321	0.018	0.398	0.019	***0.078	0.023
Private school		0.253	0.012		0.274	0.018	0.234	0.016	*-0.040	0.021
Migrated for education		0.105	0.009		0.095	0.012	0.114	0.012	0.019	0.015
Attends religious school		0.072	0.007		0.078	0.011	0.066	0.009	-0.013	0.012
n	*1444*			*703*			*741*			
Domestic work (last week)		0.742	0.013		0.720	0.019	0.762	0.017	*0.043	0.023
Unpaid economic work (last year)		0.634	0.014		0.647	0.020	0.621	0.020	-0.026	0.025
Paid work (last year)		0.107	0.009		0.112	0.013	0.101	0.012	-0.011	0.016
n	*1748*			*832*			*916*			
Migrated for work		0.061	0.006		0.050	0.008	0.070	0.009	*0.019	0.011
Married		0.031	0.004		0.029	0.006	0.033	0.006	0.004	0.008
Migrated for marriage		-	-		-	-	-	-	-	-

Data source: CTALS 2017. Robust standard errors are used in columns (1), (2) and (3), clustered at the level of household. Column (4) indicates the statistical significance of a two-tailed t-test where * = 90%, ** = 95%, *** = 99%.

Figure 27 Mainstream school attendance rate for adolescents living with an elder
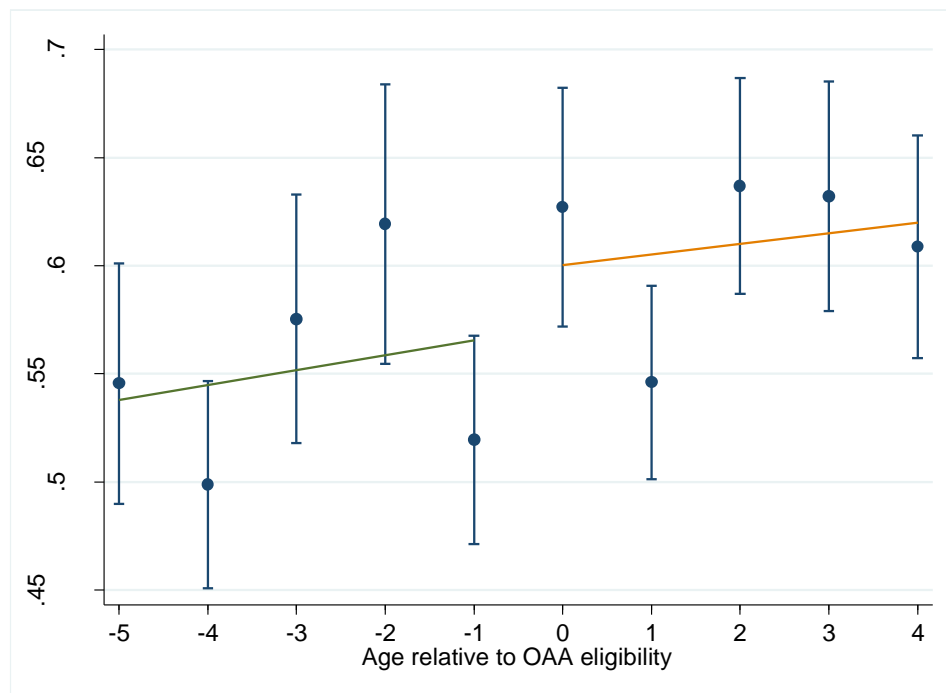
Data source: CTALS 2017, n = 3437.

Figure 28 Mainstream school attendance rate for adolescents living with an elder woman
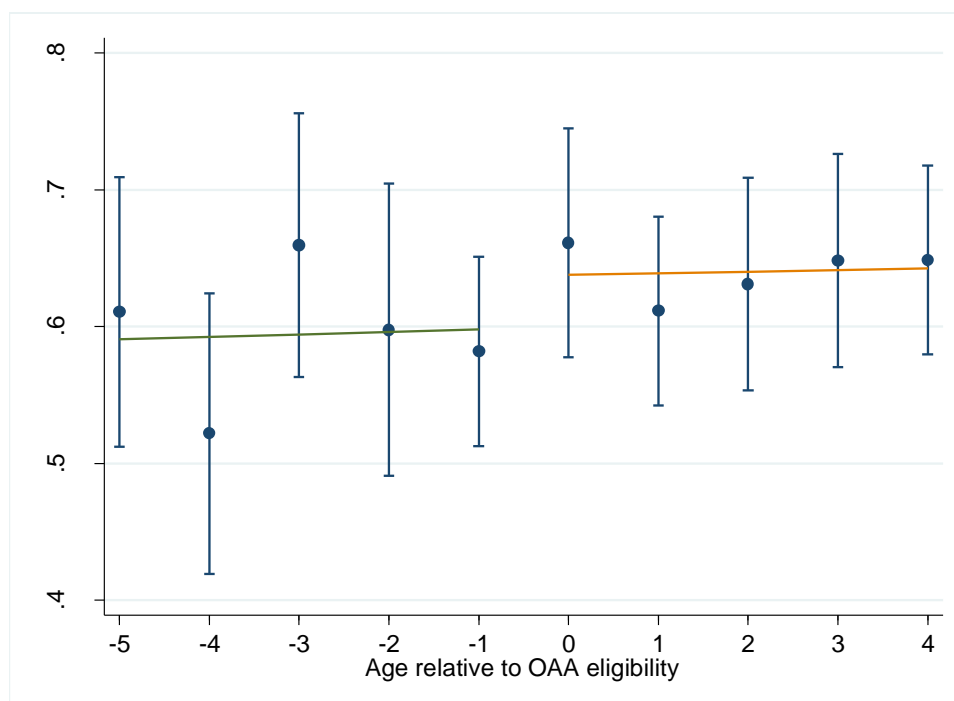
Data source: CTALS 2017, n = 1355.

Looking separately at public and private school attendance rates, column 4 of Table 9 shows that public school attendance is higher for both girls and boys in households with an eligible elder. However, while private school attendance does not change substantially overall, it is unexpectedly lower for boys who live with an eligible elder. Education migration is slightly higher overall and there is no apparent difference in religious school attendance. Turning to work, there is little difference in participation in domestic and economic work overall. However, boys who live with an eligible elder are more likely to be engaged in domestic work and to have out-migrated for the purpose of work. Finally, there is no apparent difference in the marriage rate or marriage migration rate.

These initial results point to the possibility of income effects of the OAA on adolescents' life-course circumstances. However, they do not account for systematic bias stemming from the difference in age of the elders nor allow for differences in the response to additional income between elder women and elder men. The following section describes the estimation strategy to account for these issues.

Estimation strategy

A simple comparison between adolescents who co-reside with non-eligible and eligible elders relies on the assumption that the two groups are similar in all respects except timing of OAA income; as if OAA receipt were randomised among the population. However, as described in Chapter 3, when using age as the assignment variable, the approach differs from a standard Regression Discontinuity Design (RDD) because reaching a certain age is inevitable (barring premature death) and eligibility for the treatment is therefore guaranteed rather than approximately random (Lee and Lemieux 2010). This has two important implications. First, there may be systematic differences between households with eligible and non-eligible elders related to their difference in age. Second, receipt of the additional income can potentially be anticipated which, barring liquidity or credit constraints, may change peoples' behaviour prior to eligibility. Discontinuities in outcomes may not, therefore, be at the cut-off. Potential anticipatory responses need to be understood in relation to prior knowledge of the programme, the nature of local credit markets and other contextual factors. The descriptive statistics in Table 9 provide an indication that anticipatory responses may be occurring in relation to private schooling. This will be returned to later.

Returning to the issue of non-random assignment of the treatment, there are several ways that households with older and younger elders can differ which have implications for adolescents' lives. First, health issues are likely to increase with age, which can put more pressure on household budgets and impose a greater burden of care on other household members (Case 2004). Adolescents may lose out on income that would otherwise have been allocated to education or be required to increase their time commitment to care of the elder or other domestic and economic activities otherwise undertaken by their parents. Moreover, younger elders may be inclined to invest more in their grandchildren because they can expect to live for longer (Duflo 2003). Second, the household is older on average, which may mean there are differences in household structure such as the presence of an additional generation. The average age of adolescents in the household may also differ, although the data in Table 9 suggests this is not the case. Third, differences related to age cohort may exist. For example, younger elders may have benefited from a change in education policy during their youth and be better educated. This can have long-term effects on household income, access to resources, the value placed on education, and so on.

Three main strategies are employed to account for the effects of systematic bias due to age differences of the elders. First, as with a standard RDD, the bandwidth of the assignment variable, in this case age of the elder, is restricted to maximise internal validity while still ensuring adequate sample size and some level of external validity (Ludwig and Miller 2007). However, while in most RDD studies this is done by extracting a sub-sample from a larger dataset, this survey was specifically designed to sample only those households with at least one adolescent who co-resides with at least one elder of age 5 years either side of OAA eligibility. As described in Chapter 3, the ten-year bandwidth was chosen after reviewing previous studies of a similar nature and balancing proximity to the cut-off with the practical constraints of achieving the necessary sample size within a certain geographic area.

Second, following Edmonds (2006) the estimation of differences in adolescent outcomes controls for age-related differences between the groups by including a third-order polynomial expansion of the age of the oldest elder within the bandwidth age.[52] Third, due to the sampling approach, elders within bandwidth age are not necessarily the oldest in the

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[52] Higher orders give more weight to older elders. First and second order terms have been tested and coefficients remain in the same direction and of similar magnitude as with third order terms. Fourth order terms and higher drop out in some cases.

household and any household member above the upper limit is also eligible for the OAA.[53]

Therefore, the estimation controls for the presence of an elder who is 75 years or older in

the case of non-Dalits and 65 years or older for Dalits.

Factors other than OAA eligibility may also change at the age threshold; estimates

represent the combined effect of the OAA and all other changes that occur (Lee and

Lemieux 2010). In this case, there is one programme of concern for the analysis, the

widows and single women's allowance (WSWA). The WSWA transfers NRs 1,000 (US$

9) per month, half the value of the full OAA, through the same delivery mechanism as the

OAA to widows of any age and single women from age 60. Nepal's social security

allowances are mutually exclusive at the level of the individual and so eligibility for the

WSWA effectively ceases on reaching OAA eligibility age. Table 10 shows the proportion

of adolescents who cohabit with a WSW; 29% of adolescents cohabit with at least one

WSW (98% of whom are widows). Adolescents who live with an OAA eligible elder are

3pp (13%) more likely to cohabit with a WSW suggesting that, as expected, widowhood

increases with age.

Table 10 Proportion of adolescents who cohabit with a widow or single woman (WSW)

	Elder within +/- 5 years of OAA eligibility (1)		Elder within - 5 years of OAA eligibility (2)		Elder within + 5 years of OAA eligibility (3)	
	Mean	S.E.	Mean	S.E.	Mean	S.E.
Adolescents, 10-17 years						
n	*3437*		*1643*		*1794*	
WSW > 49/59 years in household[†]	0.29	0.01	0.28	0.02	0.31	0.02

Data source: CTALS 2017. Robust standard errors are used throughout, clustered at the level of household.
[†]WSW are included when >49 years in Dalit households and >59 years in non-Dalit households.

Because WSW stop receiving the WSWA when they become eligible for the OAA, the

presence of a WSW in a household with a non-eligible elder is likely to attenuate the

effects of the OAA. Table 9a in Appendix 10 presents the same descriptive statistics as

shown in Table 9 but excluding adolescents who cohabit with a WSW from the sample. In

most cases, the differences that are ostensibly due to the OAA in Table 9 are accentuated with

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[53] 8.8% of elders within the bandwidth age co-reside with another elder above bandwidth age; the rate is 13.2% among elders eligible for the OAA (treatment group) compared to 4.9% among non-eligible elders (control group).

the removal of WSW from the sample. However, widows may have certain characteristics that make them different to non-widows, such as where they may choose to prioritise additional resources. From this point forward, all estimates exclude adolescents who cohabit with a WSW. This also has implications for sample size and statistical significance as discussed in Chapter 3. Equivalent tables using the full sample are provided in Appendix 10 for comparison and any important differences are discussed in the main text.

A further generally applicable issue is that take up of the treatment is not endogenous. Elders who are eligible for the OAA may be excluded for any number of reasons such as lack of knowledge, discrimination, or administrative failures, or choose not to collect the allowance if they are wealthy. Likewise, ineligible elders may find a way to claim the allowance. Among the survey sample, take-up of the OAA is 65% among those of eligible age and five years above; and less than 1% of non-eligible persons within five years of eligibility claim the OAA. While it is known which elders among the eligible failed to receive the OAA and which elders among the non-eligible wrongly received the OAA, it is not known who among the non-eligible elders will later fail to claim the allowance. Thus, comparing actual recipients to non-eligible elders would result in a biased estimation. This issue is dealt with by estimating average treatment effects (ATE) based on eligibility for the OAA, or intention to treat (ITT). The main shortcoming of ITT is that any effects may be lower than expected because it includes a substantial number of eligible non-recipients.

Similar to Edmonds (2006), the initial regression approach, based on ITT and estimating the ATE, is:

$$D_{ij} = \alpha_0 + \alpha_1 EM_i + \alpha_2 EFM_i + \beta_1 OE_i + \beta_2 OEF_i + \beta_3 OEFM_i + \pi_1 AE_i + \pi_2 U_i + \varepsilon_{ij} \qquad (3)$$

where D is any one of the outcomes of interest (see Table 9) for adolescent j in household i, OE is an indicator of whether there is an OAA eligible elder in the household, OEF is an indicator of whether there is an OAA eligible woman in the household, and $OEFM$ indicates that there is both an OAA eligible woman and man (couple) in the household.[54] The equation includes dummy variables for the presence of an elder man, EM, and for both an elder woman and man, EFM, with elder woman as the baseline category. This captures

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[54] In all cases where there are two elders in the household within bandwidth age, one is a woman and one is a man. Hereafter, they are referred to as an elder or eligible couple.

any pre-treatment effects related to the presence of an elder man (α_1) or an elder couple (α_2). AE represents the third order polynomial expansion of age of the oldest elder in the household and all its interactions to control for any differences in income, domestic and economic labour demand, or any other confounding factor that may vary with age of the elders. U is a dummy variable representing the presence of an elder whose age is above the upper limit of the bandwidth. Thus, β_1 represents the effect on the outcome of interest of moving from an OAA non-eligible to an OAA eligible elder. β_2 is the incremental difference in the change in the outcome from β_1 if the eligible elder is a woman rather than a man; and β_3 is the additional difference in the change in the outcome from $\beta_1 + \beta_2$ if the adolescents' household contains an elder couple.

In this analysis, regression estimates are understood as a timing of income effect (Edmonds 2006). For this interpretation to hold, it must be shown that OAA eligibility is associated with an increase in actual receipt of the OAA. Table 11 presents sample means alongside the coefficients of OE, OEF and $OEFM$ from equation (3) for OAA receipt and various other pre-determined characteristics that are useful for sample verification. The first row of column 1 shows that among the full sample, 33.4% of adolescents live in a household with an elder who has reported receipt of OAA income. Column 2 shows that the presence of an OAA eligible man is associated with a 57.7pp higher rate of OAA receipt compared to a non-eligible elder. Less than 1% of adolescents cohabit with a non-eligible elder who reported receipt of OAA income, so coefficients for income receipt effectively indicate the coverage rate. Having an eligible woman rather than an eligible man in the household is associated with a 10.3pp higher rate of OAA receipt, an approximate coverage rate of 68% ($\beta_1 + \beta_2$) among eligible (married) women. Where there is an eligible couple in the household the rate of OAA receipt is 22.6pp higher, indicating an approximate coverage rate of 90.6% ($\beta_1 + \beta_2 + \beta_3$).[55] Table 11a in Appendix 10 shows that coverage rates are similar when including WSW.

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[55] As take-up among non-eligible elders is close to zero, the coefficients effectively represent the coverage rate. Excluding WSW, 63.5% of adolescents live with an elder man, 22.1% live with an elder woman and 14.3% live with an elder couple. The total coverage rate is therefore: 57.7 x 0.635 + 68.0 x 0.221 + 90.6 x 0.143 = 64.6. In other words, among adolescents who live with an eligible elder, 64.6% live with one who reported receipt of OAA income.

Table 11 Descriptive statistics and regression results from equation (3) for sample verification[†]

	Descriptive statistics (1)		OAA eligible in HH (OE) (2)		OAA eligible is female (OEF) (3)		OAA eligible female and male (OEFM) (4)	
	Mean	S.E.	β_1	S.E.	β_2	S.E.	β_3	S.E.
Elder receives OAA income	0.334	0.014	***0.577	0.029	0.103	0.067	***0.226	0.077
Household attributes								
Household size[††]	10.252	0.193	-0.568	0.426	1.199	0.891	-1.714	1.164
No. of adolescent girls	1.111	0.033	0.028	0.089	-0.110	0.210	-0.063	0.241
No. of adolescent boys	1.122	0.037	0.063	0.080	0.194	0.173	-0.196	0.200
Household head has education	0.207	0.013	*-0.062	0.032	***0.199	0.073	**-0.177	0.083
Ethnicity and caste								
Brahmin / Chhetri	0.034	0.005	-0.013	0.013	0.001	0.024	-0.020	0.028
Dalit	0.144	0.010	***0.337	0.012	***-0.198	0.035	***0.242	0.038
Muslim	0.384	0.015	***-0.178	0.035	0.061	0.077	**-0.200	0.092
Terai/Madhesi	0.424	0.015	***-0.149	0.035	*0.138	0.080	-0.007	0.093
Janajati / other	0.015	0.003	0.004	0.009	-0.002	0.014	-0.013	0.015
Location								
VDC								
Akolawa	0.114	0.010	-0.035	0.025	0.027	0.065	-0.104	0.070
Bairiya	0.065	0.009	-0.017	0.020	-0.071	0.049	-0.021	0.050
Basatpur	0.045	0.006	0.006	0.016	-0.040	0.034	0.044	0.041
Brahmapuri	0.066	0.007	***0.053	0.017	**-0.081	0.040	*0.078	0.044
Fatuha Maheshpur	0.054	0.007	0.054	0.007	0.044	0.049	-0.069	0.053
Jhunkhunwa	0.091	0.008	**0.059	0.024	-0.039	0.032	0.051	0.047
Laxmipur Belbichwa	0.056	0.007	0.021	0.017	0.012	0.046	0.045	0.056

Continued

Table 11 continued

Mudwalawa	0.064	0.007	0.009	0.018	0.042	0.040	-0.032	0.044
Pipra Bagwanpur	0.082	0.008	-0.031	0.021	0.007	0.030	0.027	0.043
Rajdevi	0.081	0.008	0.013	0.019	***0.092	0.036	-0.047	0.045
Rajpur Farhadwa	0.144	0.011	***-0.080	0.027	0.081	0.060	-0.060	0.079
Rajpur Tusli	0.057	0.007	-0.005	0.020	-0.008	0.033	0.015	0.039
Saruatha	0.081	0.008	0.003	0.020	-0.067	0.043	0.073	0.053
Adolescent attributes								
Age	13.127	0.042	***0.316	0.110	**-0.471	0.221	**0.564	0.268
Female	0.495	0.010	0.001	0.026	**-0.108	0.054	0.081	0.065

Data source: CTALS 2017. [†]Excluding households with widows and single women, n=2424. Robust standard errors are used throughout, clustered at the level of household. Statistical significance is indicated by * = 90%, ** = 95%, *** = 99%. All regressions include a third order polynomial of the age of the oldest elder within bandwidth age; and dummy variables for the presence of an elder male and an elder female and male in the household and the presence of an elder above bandwidth age. [††]Household size includes both current household members and recent out-migrants.

While pre-determined attributes should not vary with OAA eligibility, there may be certain characteristics that are subject to a cohort effect or alter the likelihood of an adolescent (the unit of analysis) living with an eligible elder. Looking first at household attributes, Table 11 shows that there is no discernible difference in household structure between adolescents who live with eligible and non-eligible elders. Including both current household members and recent migrants, none of the coefficients for household size or number of adolescents are significant. However, adolescents are 6.2pp (β_1) less likely to have an educated household head when living with an OAA eligible man compared to a non-eligible man; 13.7pp ($\beta_1+\beta_2$) more likely to live with an educated head in the case of eligible women; and 4.0pp ($\beta_1+\beta_2+\beta_3$) less likely with eligible couples. These differences can be explained in two ways. First, in Nepal, the household head tends to be the elder man. A five-year difference in age cohort among the older generation may correlate with a difference in access to education, especially for men. Second, the husbands of eligible women are likely to be older and therefore more likely to have passed household head status to the younger generation.[56] To account for this systematic difference in the sample, a dummy variable for education status of the household head will be included in equation (3).

Table 11 shows that, overall, adolescents who live with any OAA eligible elder are more likely to come from a Dalit household and less likely to come from a Muslim or Terai/Madhesi household. There are two plausible and related explanations for this. First, because of the different OAA eligibility age for Dalits (60 rather than 70 years), elders in the Dalit sub-sample are 10 years younger on average than non-Dalits.[57] Second, this structural difference in the household makes it more likely for there to be a greater number of surviving eligible elders who are Dalit compared to the other major groups. Despite common assumptions (or past realities), Dalits do not have a notably lower life-expectancy than other ethnic/castes groups (Bishwa Nath et al. 2009). As ethnicity/caste is correlated with adolescents' co-residence with eligible elders and is a significant determinant of opportunities and outcomes, dummy variables for the main ethnic/caste groups will be included in the regression.

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[56] 24.5% of household heads are younger than 50 years old.

[57] While the coefficients for Dalit eligible men and couples are positive, the coefficient for Dalit eligible women is negative; most likely because elder women's husbands are likely to be older.

Location may also have some bearing on the likelihood of adolescents living with an OAA eligible elder. For example, a good quality school in the locality, combined with receipt of the OAA, may induce an adolescent to move into the household of an eligible elder relative. It may also be that certain local officials, who administer social security grants for an entire VDC, are more prone to manipulate the age of elders on official documentation to facilitate earlier access, although this is not thought to be a significant problem.[58] Location is also strongly associated with ethnicity/caste as social groups tend to cluster in certain areas. Table 11 shows that adolescent co-residence with an OAA eligible elder has some correlation with four of 13 Village Development Committees (VDC). Both Brahmapuri and Raj Devi, which are more likely to see an adolescent co-reside with an eligible elder, have the highest concentration of Dalits. In contrast, VDCs with negative coefficients have the highest concentration of Muslims. Jhunkhunwa also has a positive association with co-residence with an eligible elder but has an even balance of Dalit and Muslim households. Jhunkhunwa is one of the most developed VDCs and may have better quality schools than other areas. Other unobservable differences related to location may exist. The final regression will therefore include dummy variables for all VDCs.

Turning to adolescents' attributes, Table 11 shows a small positive correlation between OAA eligibility and the average age of adolescents; 0.32 years (β_1) in the case of adolescents who co-reside with elder men and 0.41 years ($\beta_1 + \beta_2 + \beta_3$) for elder couples.[59] Although this difference is small, estimates of equation (3) will also include a third order polynomial expansion in the age of the adolescent. Finally, the proportion of girls to boys appears to be 10.8pp ($\beta_1 + \beta_2 + \beta_3$) lower when moving from non-eligible to eligible women. The difference in gender ratio may relate to the removal of WSW from the sample; the same results are not significant in the full sample in Table 11a in Appendix 10. However, the underlying reasons remain unclear. Rather than control for gender of the adolescent, all findings in the next section are presented separately for female and male adolescents.

Adding additional control variables because they are available is not necessarily helpful. York (2018) shows that this could introduce included variable bias and be detrimental to

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[58] Citizenship cards were used to verify age during data collection. There were a very small number of cases where it appeared the age may have been altered. However, it is not known who may have done it, when and for what purpose.

[59] The result for elder women is statistically significant in terms of the difference compared to elder men but is small (-0.15 years) and not significant by itself.

identifying the true causal relationship between the OAA and the outcomes of interest. The assumption, hereafter, is that with the presence of the given control variables based on both theoretical and empirical grounds, the control and treatment groups are balanced in all other ways, in other words, as close to randomised as possible.

The effects of the OAA on adolescent school attendance, work, and marriage

Table 12 presents regression coefficients from equation (3) for each life-course outcome variable of interest for all adolescents and separately for girls and boys. Changes associated with moving from a non-eligible man to an eligible man (OE) are shown in column 3. For ease of interpretation, the results add the relevant coefficients to show the full effect for OAA eligible women (OE+OEF) in column 4 and eligible couples (OE+OEF+OEFM) in column 5.

Columns 1 and 2 show any 'pre-treatment' differences between non-eligible elder men (EM) and couples (EFM) compared to the reference category of non-eligible elder women. The estimates exclude adolescents who cohabit with widows and single women (WSW) resulting in a substantially reduced sample size, especially for adolescents who live with elder women. Equivalent data tables with estimates for the full sample are provided in Appendix 10 and are referenced where appropriate. On calculating sample size, statistical significance was set at the 95% level. Moreover, results at this level or higher are conservative given the *Bonferroni* correction (see Chapter 3). Significance at the 90% level is also reported for which results can be considered marginally significant. The following describes the findings under the broad categories of school attendance, work, and marriage.

School attendance

The literature presented in Chapter 2 points to consistent positive effects of UCTs on aggregate school attendance. The following analysis aims to understand how a UCT affects marginal decisions about adolescent school attendance while accounting for greater diversity in education supply. The results in Table 12 confirm the initial finding that the OAA is associated with an increase in mainstream school attendance rates, regardless of the recipient type. However, differentiating results by school type and gender of the adolescent paints a more complex picture.

Table 12 Results from equation (3) indicating the effects of a difference in timing of receipt of the OAA on adolescent life-course circumstances[†]

| | Elder male (EM) | | Elder female and male (EFM) | | OAA eligible male (OE) | | OAA eligible female (OE+OEF) | | OAA eligible couple (OE+OEF+OEFM) | | Adj. R² |
| | (1) | | (2) | | (3) | | (4) | | (5) | | |
	α_1	S.E.	α_2	S.E.	β_1	S.E.	$\beta_1+\beta_2$	S.E.	$\beta_1+\beta_2+\beta_3$	S.E.	
All adolescents, 10-17 years											
Attends mainstream school	0.008	0.049	0.018	0.052	0.030	0.033	**0.096	0.042	0.048	0.050	0.368
Public school	-0.015	0.052	-0.059	0.056	**0.088	0.037	0.036	0.052	*0.095	0.057	0.202
Private school	0.023	0.048	0.078	0.051	**-0.057	0.028	0.061	0.043	-0.047	0.049	0.137
Migrated for education	0.015	0.035	0.057	0.040	0.005	0.023	**0.101	0.041	**-0.065	0.031	0.043
Attends religious school	0.014	0.025	0.033	0.029	-0.025	0.021	*0.042	0.025	-0.028	0.032	0.158
Domestic work (last week)	0.014	0.055	0.000	0.058	0.031	0.030	-0.033	0.046	0.045	0.043	0.030
Unpaid economic work (last year)	-0.067	0.064	-0.085	0.069	0.002	0.039	-0.042	0.062	-0.003	0.066	0.051
Paid work (last year)	0.032	0.034	0.017	0.037	**-0.043	0.025	-0.013	0.032	-0.025	0.038	0.085
Migrated for work	**0.016	0.007	0.008	0.011	0.007	0.012	*0.016	0.009	-0.003	0.015	0.047
Married	-0.006	0.026	-0.004	0.028	0.020	0.016	0.018	0.027	0.021	0.027	0.160
Migrated for marriage	-0.004	0.014	-0.005	0.015	**0.017	0.008	0.005	0.008	*0.025	0.015	0.061
Girls, 10-17 years											
Attends mainstream school	-0.016	0.077	0.016	0.081	0.068	0.044	0.077	0.063	0.078	0.066	0.387
Public school	-0.081	0.077	-0.084	0.083	*0.095	0.049	0.025	0.066	**0.156	0.077	0.239
Private school	0.065	0.057	0.100	0.062	-0.027	0.034	0.052	0.051	-0.078	0.050	0.105
Migrated for education	0.044	0.040	*0.085	0.046	-0.012	0.028	0.061	0.049	**-0.078	0.035	0.060
Attends religious school	0.001	0.034	0.022	0.040	-0.038	0.031	0.014	0.034	-0.024	0.044	0.156
Domestic work (last week)	0.048	0.066	0.028	0.069	-0.005	0.032	0.031	0.060	0.008	0.046	0.020
Unpaid economic work (last year)	-0.060	0.085	-0.066	0.090	-0.001	0.050	-0.008	0.082	-0.006	0.078	0.049
Paid work (last year)	0.031	0.051	0.008	0.053	-0.041	0.031	-0.045	0.041	-0.009	0.047	0.056
Migrated for work	-	-	-	-	-	-	-	-	-	-	-

Continued

Table 12 continued

Married	-0.015	0.047	-0.033	0.049	0.029	0.028	0.023	0.042	0.023	0.044	0.235
Migrated for marriage	0.000	0.028	-0.003	0.029	**0.035	0.016	0.009	0.017	0.043	0.027	0.142
Boys, 10-17 years											
Attends mainstream school	0.032	0.057	0.022	0.061	-0.016	0.043	*0.097	0.057	0.013	0.069	0.351
Public school	0.023	0.066	-0.072	0.070	0.077	0.048	0.048	0.074	0.048	0.071	0.182
Private school	0.008	0.066	0.094	0.071	**-0.093	0.041	0.049	0.069	-0.036	0.075	0.176
Migrated for education	0.008	0.051	0.054	0.058	0.025	0.033	**0.124	0.062	-0.057	0.048	0.036
Attends religious school	0.030	0.031	0.051	0.036	-0.004	0.024	**0.072	0.028	-0.032	0.038	0.168
Domestic work (last week)	-0.062	0.077	-0.083	0.084	0.060	0.048	-0.084	0.073	0.077	0.070	0.063
Unpaid economic work (last year)	-0.082	0.079	-0.140	0.089	-0.007	0.056	-0.052	0.084	0.005	0.090	0.048
Paid work (last year)	0.035	0.045	0.034	0.051	-0.044	0.036	0.023	0.051	-0.046	0.054	0.123
Migrated for work	0.023	0.016	0.018	0.022	0.014	0.023	0.025	0.018	0.003	0.031	0.090
Married	0.002	0.023	0.013	0.026	0.009	0.016	0.016	0.027	0.008	0.023	0.101
Migrated for marriage	-	-	-	-	-	-	-	-	-	-	-

Data source: CTALS 2017. [†]Excluding households with widows and single women, n=2424 for all adolescents, n=1200 for girls and n=1224 for boys; for work participation variables, n=2091, 1084 and 1007, respectively. Robust standard errors are used throughout, clustered at the level of household. Statistical significance is indicated by * = 90%, ** = 95%, *** = 99%. All regressions include a third order polynomial of the age of the oldest elder and of the adolescent; and dummy variables for the presence of an elder above bandwidth age, education of household head, ethnicity/caste group, and VDC.

Looking first at adolescents who co-reside with an elder woman (column 4), the results show a consistently positive effect of the OAA on access to education. Mainstream school attendance is higher by 9.6pp and statistically significant when elder women become eligible for the OAA. Individual results for private and public school are not statistically significant, but the larger proportional contribution to higher mainstream school attendance comes from private school. Education migration is also higher by 10.1pp and statistically significant while religious school attendance is higher by 4.2pp but only marginally significant at the 10% level.

Both girls and boys who live with an OAA eligible woman appear to benefit from higher attendance rates, but the differences are larger and more robust for boys. Boys who co-reside with an eligible woman have 9.7pp higher mainstream school attendance, marginally significant at the 10% level, with an equal contribution from public and private school attendance. Boys' education migration is also higher by 12.4pp and statistically significant. This is a particularly large effect considering the pooled sample mean for boys' education migration is 10.5% (see Table 9) and suggests that the OAA not only increases overall attendance rates but allows adolescents to access schools that have higher grade levels or are of better quality. Similarly, boys' attendance at religious school is higher by 7.2pp and statistically significant. This result is concentrated in the Muslim population and, again, is a large effect compared to the pooled mean attendance rate of 7.2% (see Table 9).

Comparison with the results in Table 12a in Appendix 10 shows that differences in the results for school attendance between the sample that excludes WSW (Table 12) and the full sample are consistent with expectations. Households with an elder woman are much more likely to include a WSW than households with an elder man and are where the largest differences are found. Results for adolescents who co-reside with an elder woman are all positive and larger in the smaller sample, confirming that the presence of WSW diminish the effects of the OAA on school attendance.

In households with an elder man or elder couple (columns 3 and 5), the effects of the OAA on mainstream schooling are more diverse. Overall attendance rates are positive but not substantially so. However, girls' mainstream school attendance is moderately higher ($\beta_1 = 0.068$ and $\beta_1+\beta_2+\beta_3 = 0.078$). While the coefficients are not statistically significant, the equivalent result for girls who co-reside with an eligible man in Table 12a in Appendix 10

which includes WSW, is slightly larger and statistically significant. Again, this is consistent with expectations. Households with an elder man or couple are less likely to include a WSW and exhibit only minor differences in the magnitude of coefficients. However, the larger sample size means that certain borderline results become statistically significant. Focusing on public school attendance, results are positive and statistically significant for all adolescents at 8.8pp and 9.5pp, respectively, in households with an eligible man or couple. While public school attendance rates are higher for both girls and boys, they are larger for girls at 9.5pp in households with an eligible man, marginally significant at the 10% level, and 15.6pp in households with an eligible couple, significant at the 5% level.

So far, the observed effects align with existing theory and evidence presented in Chapter 2; UCTs tend to have a positive effect on school attendance. The boost to private schooling suggests a direct income effect, with the OAA supporting the cost of fees and other expenses. Nevertheless, other effect pathways cannot yet be discounted. Intriguingly, the OAA has a negative effect on private school attendance of adolescents who co-reside with an elder man or elder couple. The effect is strongest and statistically significant for boys who co-reside with an eligible man, with 9.3pp lower private school attendance. There is no similar difference in boys' education migration which suggests that the reduction in private school attendance relates to locally available fee-paying schools. The negative effect on private schooling is also relatively large for girls who co-reside with an eligible couple but is not statistically significant. However, in households with an eligible couple, girls' education migration is 7.8pp lower and statistically significant. While education migration can be to either private or public school, it is more likely that the difference relates to private school attendance given the concurrent large positive effect on public school attendance.

These results confirm the initial finding of a negative effect of the OAA on private school attendance identified in Table 9 but are contrary to existing theory and evidence. As overall attendance rates are either positive or unaffected, the results may represent a shift from private into public school. But why would this occur; and why does it affect boys who co-reside with an OAA eligible man but girls who co-reside with an eligible couple? Because OAA eligibility is inevitable, and if credit constraints are not fully binding, the

negative effect may relate to changes in behaviour prior to, and in anticipation of, becoming eligible.

Pre-treatment differences in adolescent outcomes depending on the type of co-resident elder offer some initial insights. The coefficients EM and EFM in columns 1 and 2 of Table 12 represent the difference in outcomes between adolescents who co-reside with an elder man and an elder couple, respectively, compared to those who co-reside with an elder woman, prior to OAA eligibility. In other words, differences in 'pre-treatment' status depending on the type of co-resident elder. While few of the results are statistically significant, coefficients are relatively large. The pattern in the data suggests that, compared to households with an elder woman, adolescents in households with an elder man or couple are more likely to be in private school and to have migrated for education and are less likely to be in public school. Prior to OAA eligibility, elder men and couples are better able than elder women to support co-resident adolescents to attend private school. These households may already be better off financially, but the data also supports the possibility of an anticipatory effect. Nevertheless, pre-treatment differences do not explain the subsequent decline in private school attendance once elder men and couples become eligible for the OAA. This issue is returned to later in the chapter.

In summary, at the level of mainstream education, the findings concur with the bulk of the literature that cash transfers lead to moderate (although sometimes large) positive marginal effects on school attendance. However, the reality is shown to be more complex when accounting for greater diversity in school supply. How the OAA affects decisions about school attendance is shown to depend on a variety of factors. Marginal changes in all school types indicate the importance of understanding (perceptions of) school quality and cultural or religious appropriateness. Differences in outcomes for girls and boys highlight the mediating role of gendered social norms and expectations. These 'contextual' factors are returned to in greater detail in Chapter 7.

Differences in outcomes according to the gender of the OAA recipient suggest that, while parents may be primary decision makers in most cases, elders also have some degree of influence, and it is important to understand gendered differences in preferences, bargaining power, and economic opportunity. Moreover, changes in private school attendance, especially education migration, and the occurrence of a possible anticipatory affect,

suggest that access to credit is an important factor in moderating effect pathways. Along with analysis of education expenditure, the dynamics and role of household bargaining and access to credit are investigated in more detail in Chapter 6.

Participation in economic and domestic work

The literature presented in Chapter 2 shows that the nature of the effects of a UCT on adolescent work are highly dependent on the type of work and other circumstances of the population. The following analysis aims to understand how a UCT affects marginal decisions about adolescent participation in paid and unpaid economic work and domestic work.

The results in Table 12 indicate that the OAA is associated with both positive and negative changes in adolescent work. The most definitive results are for paid work which engaged 9.4% of adolescents in the pooled sample in the past year (see Table 9). For adolescents who live with an OAA eligible man, participation in paid work is lower by 4.3pp and statistically significant. Coefficients are similar for both girls ($\beta_1 = -0.041$) and boys ($\beta_1 = -0.044$) although individually the results are not statistically significant. Results are of a similar direction and magnitude for boys who live with an eligible couple ($\beta_{1+}\beta_{2+}\beta_3 = -0.046$) and girls who live with an eligible woman ($\beta_{1+}\beta_2 = -0.045$) but again are not statistically significant.[60] Data presented in Chapter 4 suggest that the changes in paid work participation are more likely to occur in Dalit households that engage in low paying private sector work, and that girls are affected as much as boys.

If adolescents do not have to engage in paid work, it is plausible that they are more likely to work at home. This may be the case for boys, for whom the domestic work participation rate is higher if they co-reside with an eligible man ($\beta_1 = 0.060$) or eligible couple ($\beta_{1+}\beta_{2+}\beta_3 = 0.077$), although the results are not statistically significant. In contrast, the coefficients for girls' participation in unpaid domestic and economic work are close to zero, suggesting that their contribution in the home is more inelastic.

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[60] MDE estimates confirm that the coefficients are too small to detect among gender differentiated samples. Only in households with elder males are the coefficients of a similar magnitude and direction for both girls and boys, and so the result becomes detectable in the full sample. The variation in results for paid work by type of co-resident elder explains why differences were not apparent in the descriptive statistics in Table 97.

The negative effect of the OAA on participation in paid work is not completely consistent. Boys who co-reside with an eligible woman may be slightly more likely to engage in paid work ($\beta_1 + \beta_2 = 0.025$) although the result is not statistically significant. More definitive is the 1.6pp increase in adolescent economic migration, which is marginally significant at the 10% level. Economic migration occurs exclusively among boys, for whom the difference is slightly larger ($\beta_1 = 0.025$) although not statistically significant by itself. Nonetheless, the increase is relatively large in relation to the pooled sample mean of 6.1% (see Table 9). Moreover, column 1 shows that the economic migration rate is 1.6pp lower and statistically significant in households with an elder woman compared to household with an elder man prior to OAA eligibility. The OAA appears to balance out migrant work opportunities for boys who live with an elder woman. Boys who co-reside with an OAA eligible woman may be less likely to do unpaid economic work ($\beta_1 + \beta_2 = -0.052$) and domestic work ($\beta_1 + \beta_2 = -0.084$). Although the coefficients are not statistically significant a lower rate of home-based work is consistent with higher rates of paid work for some and school attendance for others.[61]

The relationship between the main results that exclude WSW (Table 12) and the full sample (Table 12a) again largely align with expectations. The most substantial differences are in households with an elder woman, where the presence of WSW erodes the increase in boys' paid work and economic migration. WSW may already use their Allowance to finance either the direct or indirect costs of entry into the labour market. Further evidence about the dynamics of economic migration is presented in Chapter 7. WSW also attenuate the reduction in unpaid work at home. This may be inversely related to the attenuating effect of WSW on the increases in economic migration and school attendance, such that adolescents in households with WSW have more time available for work at home.[62]

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[61] Participation in work was not measured for adolescents who have left the household. However, if economic migrants were disproportionately more likely to be working at home prior to leaving, then an increase in economic migration would also lead to a reduction in the rate of participation in home-based work among the remaining household population.

[62] One unexpected difference is that in households with elder men, the presence of WSW erodes the lower rate of boys' participation in paid work but increases the lower rate of girls' participation in paid work. Just 1.3% of adolescents co-reside with both an elder male and a WSW and these households were sampled based on the presence of the elder male within bandwidth age and not the WSW. Thus, rather than an economic effect related to the WSW allowance, these WSW may have higher care needs or some other unknown factor that requires girls to spend more time at home rather than in paid employment.

In summary, the results in this section support the proposition in Chapter 4, and the findings in much of the relevant literature, that the OAA is more likely to affect adolescent participation in paid work than unpaid work. However, the OAA reduces participation in paid work in some circumstances while increasing economic migration in others. This implies different preferences and effect pathways, with increases in basic consumption on the one hand, and increases in productive investment on the other. While the results are associated with the gender of the OAA recipient, the underlying reasons for the different responses to additional income require further investigation. This is returned to later in this chapter, with the same estimates differentiated by adolescent age and household socioeconomic status; in Chapter 6 with analysis of the effects of the OAA on the household economy; and in Chapter 7 with a qualitative assessment of the range of factors driving these outcomes.

Adolescent marriage

The literature on the effects of UCTs on marriage rates is limited and suggests that additional income may reduce the risk of marriage in some circumstances but increase the risk in others. The results in Table 12 show that the effect of the OAA adolescent marriage, if any, is small but positive, and relates largely to girls. While the differences are larger than those in the initial findings presented in Table 9, they are not statistically significant.

The practice of *Gauna* means that adolescent girls who are reported as married may still reside in their parental home. Marriage migration is a better indicator of girls who have undergone the ceremony and are now cohabiting. Columns 3 and 5 of Table 12 show that among girls, the marriage migration rate is 3.5pp higher and statistically significant if they live with an OAA eligible man, and 4.3pp higher if they live with an eligible couple. While the latter result is not statistically significant, the coefficient for all adolescents ($\beta_{1+}\beta_{2+}\beta_3 = 0.025$) is marginally significant. The increase in marriage migration rates are large in comparison to the pooled sample mean of 3.3% shown in Table 9. These findings suggest that households with an elder man or couple are using the OAA to hasten the formal marriage of co-resident adolescent girls. The data in Chapter 4 suggests that this is more likely to be happening among Muslim households than any other ethnic/caste group. Moreover, the costs of marriage, especially the dowry, are typically beyond the value of the OAA. This suggests that the OAA may increase access to credit to finance the costs of

marriage. Further evidence on marriage practices, costs, and the role of loans, are presented in Chapters 6 and 7.

Comparing the results with the full sample including WSW in Table 12a in Appendix 10, show similar findings for marriage migration but reveals interesting differences in the effect of the OAA on marital status. The positive effects on marital status in households with an elder man or elder woman are larger and statistically significant. In households with an elder man, the increase in the size of the coefficient is small and is driven by the effect on girls. This suggests that, in the case of eligible men, the inclusion of WSW sufficiently increases the sample size to detect the effect. In contrast, in households with an eligible woman, the coefficient is substantially larger and statistically significant for boys. In a dowry culture that values girls' earlier marriage, the apparent increase in marriage among boys is puzzling. One possible explanation is that households with a WSW may want an additional female household member to contribute to domestic chores and care work. Thus, WSW may contribute financially to hasten the marriage of their grandsons.

The moderating effects of adolescent age and household socioeconomic status

The previous section focused on RQ1 of this thesis, identifying the effects that the OAA has on a diverse range of adolescent life-course outcomes. This section turns attention to RQ3, with quantitative analysis of some of the factors that may moderate the observed outcomes. The existing literature shows that responses to additional income can vary depending on the characteristics of the individuals and on the socioeconomic circumstances and structure of the household. Gendered social and economic norms shape the expectations of, and opportunities for, young people as they transition to adulthood; and gendered differences in the effects of the OAA have already been revealed in the results. Transitions to adulthood also tend to accelerate through the adolescent years with decreasing incentives to educate and increasing incentives to marry and to work. The OAA may therefore have greater effects at certain times in an adolescent's life. Effects of UCTs also tend to vary depending on the relative social and economic standing of the household and on the availability of adult labour. For example, adults who are better educated may have greater ambition for their children or better access to opportunities. The poorest

households may need to prioritise additional income towards basic subsistence, while wealthier households can invest in education.[63]

This section analyses selected adolescent life-course outcomes for which measurable effects were identified in the main results by more restricted age groups, education level of the household head, and per capita income. Table 13 duplicates results using equation (3) but with the sample restricted to adolescents aged 12-14 years (columns 1-3) and 15-17 years (columns 4-6). A three-year cohort is the smallest age group that can effectively be analysed with the given sample size, thus the youngest age group, 10-11 years, is omitted.[64] Similarly, Table 14 shows results of the analysis separately for adolescents whose household head has no formal education (columns 1-3) and those whose household head has some level of education (columns 4-6).[65] Table 15 presents results for adolescents whose household falls within the bottom two per capita income quintiles (columns 1-3) and those whose household falls within the top three income quintiles (columns 4-6). Table 16 shows the same results but separately for adolescents who co-reside with two or fewer working-age adults in the household and those who co-reside with three or more.[66]

School attendance

Table 13 shows that the effects of the OAA on school attendance vary for adolescents of different ages. Before examining the results, it is helpful to understand the grade structure in Nepal and how this relates to age. Primary includes classes 1 to 5 and is intended for 5-9 year olds and lower secondary includes classes 6-8 for 10-12 year olds. Together, primary and lower secondary are designated as basic education.[67] Secondary level includes classes 9-10 for 13-14 year olds and upper secondary, sometimes known as the plus-two (or +2),

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[63] The analytical framework in Chapter 2 also identifies community level factors that can moderate the effects of a UCT. However, it is not possible to incorporate these into the analysis, given the large number of administrative units and the difficulty in interpreting the underlying reason for any differences. Insights into the issue of school quality and other community level factors are provided in Chapter 7.

[64] The reduced sample requires replacing the third-order polynomial expansion in age of the adolescent with a second-order polynomial. Controls for the age of the elder remain the same.

[65] Education level of the household was shown to have some correlation with the likelihood of an adolescent co-residing with an OAA eligible elder. It was suggested that this may related to cohort effects among elders' past access to education and the passing on of household head status to the younger generation. In this analysis, education level of the household head has been removed as a control variable.

[66] While it is of interest whether there are differences in outcomes for those adolescents who are solely reliant on elders in the absence of parental caregivers, they represent just 5% of the sample which is too small to adequately replicate the analysis. Some qualitative analysis is provided on this question in Chapter 7.

[67] Despite statements of intent by the government, no level of education was compulsory by law at the time of the survey (Ministry of Education, UNICEF, and UNESCO 2016).

includes classes 11-12 for 15-16 year olds. Examinations taken at the end of primary and annually during secondary school are used to determine grade progression. The most important exams are the Secondary Education Examination (SEE) taken at the end class 10 and the School Leavers Certificate (SLC) taken at the end of class 12.[68]

To interpret the results correctly, it is also necessary to identify any lags in age relative to expected grade. In the CTALS, mean grade level among school goers is equivalent to class 6, the first year of lower secondary, for which the expected age is 10 years. Average age among school goers is 12.8 years meaning there is an average lag of 2-3 years between expected grade-level age and actual age. This also reflects that 46.7% of school-going adolescents in the CTALS are still in primary school. Several studies have identified that large numbers of older children are attending lower grades in Nepal (Ministry of Education, UNICEF, and UNESCO 2016; Ministry of Education 2015).

Table 13 shows that for most adolescents, the positive effect of the OAA on public school attendance is concentrated among 12-14 year olds (columns 1 and 2). In households with an eligible woman, although the coefficient is not statistically significant, it is large ($\beta_1+\beta_2 = 11.3$), and overall mainstream school attendance is higher by 17.3pp and statistically significant. Considering the grade-age lag, the OAA may be preventing these younger adolescents from dropping-out of primary school or at the juncture between primary and secondary. Similarly, in households with an OAA eligible man, public school attendance among 12-14 year olds is higher by 14.1pp and statistically significant. At the same time, the negative effect of the OAA on private school attendance is also larger, at -11.1pp, and statistically significant. If, as proposed, the negative coefficient reflects an unsuccessful attempt to shift boys into private school in anticipation of OAA eligibility, the data suggests that these boys shift (back) into public school at around the primary-secondary transition.

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[68] The structure of the education system was modified in the revised 2016 (2072) Education Act. The SLC was previously taken at the end of class 10.

Table 13 Results from equation (3) indicating the effects of a difference in timing of receipt of the OAA on selected adolescent life-course circumstances by restricted age groups[†]

	Adolescents aged 12-14 years							Adolescents aged 15-17 years						
	OAA eligible male (OE)		OAA eligible female (OE+OEF)		OAA eligible couple (OE+OEF+OEFM)		Adj. R^2	OAA eligible male (OE)		OAA eligible female (OE+OEF)		OAA eligible couple (OE+OEF+OEFM)		Adj. R^2
	(1)		(2)		(3)			(4)		(5)		(6)		
	β_1	S.E.	$\beta_1+\beta_2$	S.E.	$\beta_1+\beta_2+\beta_3$	S.E.		β_1	S.E.	$\beta_1+\beta_2$	S.E.	$\beta_1+\beta_2+\beta_3$	S.E.	
Adolescents, 12-17 years														
Mainstream school	0.030	0.047	***0.173	0.062	0.025	0.067	0.406	0.019	0.052	0.106	0.087	0.118	0.085	0.256
Public school	***0.141	0.053	0.113	0.078	0.089	0.084	0.242	0.054	0.055	-0.025	0.088	*0.157	0.089	0.158
Private school	**-0.111	0.044	0.060	0.067	-0.065	0.076	0.109	-0.035	0.035	**0.131	0.066	-0.039	0.058	0.101
Paid work (last year)	*-0.069	0.036	0.040	0.048	-0.045	0.054	0.069	-0.074	0.051	-0.109	0.083	-0.093	0.084	0.069
Migrated for work	-0.007	0.011	-0.001	0.005	-0.008	0.015	-0.003	0.024	0.035	*0.050	0.027	-0.012	0.046	0.020
Migrated for marriage	0.004	0.005	0.001	0.002	-0.010	0.009	0.034	*0.045	0.024	0.006	0.024	**0.089	0.045	0.049

Data source: CTALS 2017. [†]Excluding households with widows and single women. For 12-14 year olds, n=907 except for paid work where n=816; 15-17 year olds, n=783 except for paid work where n=623. Robust standard errors are used throughout, clustered at the level of household. Statistical significance is indicated by * = 90%, ** = 95%, *** = 99%. All regressions include a third-order polynomial of the age of the oldest elder and a second-order polynomial of the age of the adolescent; and dummy variables for the presence of an elder male and elder couple within bandwidth age, an elder above bandwidth age, education of household head, ethnicity/caste group, and VDC.

Table 14 Results from equation (3) indicating the effects of a difference in timing of receipt of the OAA on selected adolescent life-course circumstances by education level of the household head[†]

	Household head has no formal education							Household head has some formal education						
	OAA eligible male (OE)		OAA eligible female (OE+OEF)		OAA eligible couple (OE+OEF+OEFM)		Adj. R^2	OAA eligible male (OE)		OAA eligible female (OE+OEF)		OAA eligible couple (OE+OEF+OEFM)		Adj. R^2
	(1)		(2)		(3)			(4)		(5)		(6)		
	β_1	S.E.	$\beta_1+\beta_2$	S.E.	$\beta_1+\beta_2+\beta_3$	S.E.		β_1	S.E.	$\beta_1+\beta_2$	S.E.	$\beta_1+\beta_2+\beta_3$	S.E.	
Adolescents, 10-17 years														
Mainstream school	0.024	0.038	*0.086	0.049	0.041	0.059	0.350	0.100	0.076	*0.123	0.071	0.124	0.093	0.202
Public school	0.066	0.040	0.033	0.057	0.072	0.062	0.241	*0.175	0.097	-0.075	0.112	0.149	0.136	0.115
Private school	-0.042	0.029	0.053	0.046	-0.031	0.051	0.085	-0.075	0.095	*0.198	0.119	-0.025	0.140	0.117
Paid work (last year)	-0.046	0.028	-0.010	0.035	-0.011	0.044	0.093	0.000	0.051	-0.014	0.092	-0.054	0.050	0.015
Migrated for work	0.012	0.015	**0.026	0.011	0.005	0.018	0.053	*-0.025	0.014	-0.021	0.014	-0.038	0.024	-0.005
Migrated for marriage	*0.019	0.010	0.004	0.006	*0.034	0.018	0.065	0.000	0.015	0.013	0.028	-0.016	0.014	0.049

Data source: CTALS 2017. [†]Excluding households with widows and single women. For heads with no formal education, n=1922 except for paid work where n=1680; for heads with some education, n=502 except for paid work where n=411. Robust standard errors are used throughout, clustered at the level of household. Statistical significance is indicated by * = 90%, ** = 95%, *** = 99%. All regressions include a third-order polynomial of the age of the oldest elder and of the adolescent; and dummy variables for the presence of an elder male and elder couple within bandwidth age, an elder above bandwidth age, ethnicity/caste group, and VDC.

Table 15 Results from equation (3) indicating the effects of a difference in timing of receipt of the OAA on selected adolescent life-course circumstances by per capita income quintile[†]

	Poorest 40%							Richest 60%						
	OAA eligible male (OE) (1)		OAA eligible female (OE+OEF) (2)		OAA eligible couple (OE+OEF+OEFM) (3)		Adj. R^2	OAA eligible male (OE) (4)		OAA eligible female (OE+OEF) (5)		OAA eligible couple (OE+OEF+OEFM) (6)		Adj. R^2
	β_1	S.E.	$\beta_1+\beta_2$	S.E.	$\beta_1+\beta_2+\beta_3$	S.E.		β_1	S.E.	$\beta_1+\beta_2$	S.E.	$\beta_1+\beta_2+\beta_3$	S.E.	
Mainstream school	*0.095	0.056	0.057	0.072	0.123	0.078	0.354	-0.011	0.041	**0.133	0.053	0.010	0.068	0.369
Public school	**0.144	0.059	-0.037	0.083	*0.156	0.080	0.253	0.055	0.047	0.103	0.068	0.080	0.079	0.180
Private school	-0.049	0.039	0.094	0.059	-0.033	0.061	0.118	*-0.067	0.040	0.030	0.064	-0.070	0.068	0.140
Paid work (last year)	-0.027	0.038	0.019	0.055	-0.033	0.057	0.077	**-0.072	0.034	-0.056	0.037	-0.036	0.053	0.099
Migrated for work	0.018	0.013	**0.030	0.015	0.007	0.019	0.022	-0.000	0.019	0.004	0.013	-0.011	0.022	0.064
Migrated for marriage	0.011	0.010	0.007	0.014	-0.002	0.021	0.084	**0.022	0.013	0.003	0.008	**0.041	0.020	0.064

Data source: CTALS 2017. [†]Excluding households with widows and single women. For the poorest 40%, n=1034 except for paid work where n=970; for the richest 60%, n=1390 except for paid work where n=1121. Robust standard errors are used throughout, clustered at the level of household. Statistical significance is indicated by * = 90%, ** = 95%, *** = 99%. All regressions include a third-order polynomial of the age of the oldest elder and of the adolescent; and dummy variables for the presence of an elder male and elder couple within bandwidth age, an elder above bandwidth age, education of household head, ethnicity/caste group, and VDC.

Table 16 Results from equation (3) indicating the effects of a difference in timing of receipt of the OAA on selected adolescent life-course circumstances by number of working-age adults in the household[†]

	Two or less working age adults							Three or more working age adults						
	OAA eligible male (OE)		OAA eligible female (OE+OEF)		OAA eligible couple (OE+OEF+OEFM)		Adj. R^2	OAA eligible male (OE)		OAA eligible female (OE+OEF)		OAA eligible couple (OE+OEF+OEFM)		Adj. R^2
	(1)		(2)		(3)			(4)		(5)		(6)		
	β_1	S.E.	$\beta_1+\beta_2$	S.E.	$\beta_1+\beta_2+\beta_3$	S.E.		β_1	S.E.	$\beta_1+\beta_2$	S.E.	$\beta_1+\beta_2+\beta_3$	S.E.	
Mainstream school	0.027	0.044	0.014	0.068	-0.030	0.067	0.389	0.048	0.049	***0.172	0.060	*0.129	0.074	0.354
Public school	0.047	0.049	-0.079	0.075	-0.036	0.078	0.224	***0.143	0.053	*0.125	0.074	***0.240	0.078	0.200
Private school	-0.020	0.039	0.093	0.068	0.005	0.067	0.167	**-0.095	0.040	0.046	0.059	-0.111	0.072	0.131
Paid work (last year)	*-0.078	0.041	-0.014	0.060	-0.018	0.063	0.092	-0.022	0.029	-0.027	0.030	-0.027	0.043	0.075
Migrated for work	0.075	0.075	0.019	0.014	-0.007	0.023	0.063	-0.001	0.015	0.011	0.013	0.004	0.019	0.032
Migrated for marriage	*0.025	0.013	0.001	0.014	**0.041	0.019	0.048	0.008	0.011	0.003	0.011	0.001	0.022	0.076

Data source: CTALS 2017. [†]Excluding households with widows and single women. For < 3 adults, n=1114 except for paid work where n=933; for > 2 adults, n=1310 except for paid work where n=1158. Robust standard errors are used throughout, clustered at the level of household. Statistical significance is indicated by * = 90%, ** = 95%, *** = 99%. All regressions include a third-order polynomial of the age of the oldest elder and of the adolescent; and dummy variables for the presence of an elder male and elder couple within bandwidth age, an elder above bandwidth age, education of household head, ethnicity/caste group, and VDC.

As well as boosting public schooling for younger adolescents, households with eligible women use the OAA to increase private school attendance among 15-17 year olds, which is higher by 13.1pp and statistically significant (column 5). Greater educational investment at the point of transitioning to secondary level may be a response to the stark difference in examination pass rates between public and private school. In one study, the SLC pass rate in private schools is shown to be almost double that of public schools (A. Thapa 2015). In contrast, households with elder couples are more likely to boost public school attendance among 15-17 year olds, which is higher by 15.7pp and marginally significant (column 6). Results from Table 12 show that this primarily relates to girls, who are supported by the OAA to continue to secondary level. Given that girls education tends to be a lower priority compared to boys, this effect may only occur because these households are in receipt of double the income from the OAA.

Table 14 shows the difference in effects of the OAA according to the education level of the household head, categorised as having no formal education or some primary education or higher.[69] Among households with an uneducated head, the overall pattern is similar to the main findings in Table 12. However, the only result that remains marginally statistically significant is the 8.6pp higher level of mainstream school attendance for adolescents who co-reside with an OAA eligible woman (column 2), suggesting this is a particularly robust effect.

In the approximately 20% of households with an educated head, differences in school attendance are exaggerated. In these households, adolescents who co-reside with an eligible man or couple see a much larger boost to public school attendance (columns 4 and 6); higher by 17.5pp and marginally significant in the case of adolescents who live with an eligible man. This is well above the concurrent reduction in private school attendance ($\beta_1 = -0.075$), suggesting that adolescents not only transfer from private school but benefit from greater public school attendance. In households with both an eligible woman and an educated household head, there is a particularly large increase in private school attendance; higher by 19.8pp and marginally significant (column 5). Like the results for older adolescents, the negative coefficient for public school attendance

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[69] CTALS data shows that approximately 55% of co-resident elders are the household head; 85% among elder men and 24% among elder women.

suggests that this may include adolescents who transferred from public to private school. Overall, these findings suggest there are intergenerational benefits of education such as greater aspiration or a more supportive home learning environment. The higher level of education among the older generation may also be a correlate of higher income.

Table 15 shows the difference in effects of the OAA according to per capita income by comparing households in the bottom 40% and in the top 60% of the income distribution,[70] and Table 16 shows the difference in effects of the OAA according to the number of working-age adults in the household, comparing adolescents who co-reside with two or fewer adults to those who co-reside with three or more adults. Data presented in Chapter 4 showed a positive correlation between the number of working age adults and household income. However, it is possible that household income and the number of working age adults moderate the effects of additional income in different ways. Looking first at adolescents who co-reside with an elder woman, the largest overall effect on mainstream school attendance is in richer households, higher by 13.3pp (Table 15, column 5), and where there are more working-age adults, higher by 17.2pp (Table 16, column 5). In both cases, this is driven largely by higher public school attendance. Conversely, in poorer households with fewer working age adults, the OAA is more likely to support higher private school attendance (column 2).

Consolidating the results from Table 13 to Table 16 for adolescents who co-reside with an elder woman, the OAA appears to allow older adolescents in the relatively small proportion of smaller, poorer households with better educated elders, to catch up with their better-off counterparts in accessing private school at critical grade-junctures. This suggests that there is an intergenerational education effect that is independent of, but interacts with, income. At the same time, in households with an elder woman, the OAA is more likely to boost public school attendance for younger adolescents in richer households with an uneducated head. As with earlier findings for eligible couples, this may reflect the ability of richer households, that are more likely to already have an adolescent in private school, to support the retention of other 'second priority' adolescents in public school. Data presented in Chapter 7 confirm that households adopt such strategies for prioritisation of educational investment.

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[70] Due to sample size it is not possible to analyse the data by a single income quintile.

Turning to adolescents who co-reside with an elder man or couple, Table 15 and Table 16 suggest that household income and the number of working age adults have a divergent moderating influence on the effects of the OAA on school attendance. First, the positive effect of the OAA on public schooling is larger for adolescents in poorer households (Table 15, columns 1 and 3), but those with more working age-adults (Table 16, columns 4 and 5). Given that effects are also higher in the minority of households with better educated elders, this again suggests that the intergenerational effect of education interacts with additional income in poorer households to boost public school attendance, especially for girls, who were perhaps lower priority for educational investment. However, that these effects are only seen in households with more working age adults, suggests that demand for adolescent girls' labour within the home may negate the potential of the OAA to support their education. Further qualitative evidence for the moderating effects of adult labour supply is provided in Chapter 7.

Second, the negative effect of the OAA on private school attendance is slightly larger and marginally significant in richer households and those with more working age adults (columns 4 and 6 of Table 15 and Table 16). This suggests that households with higher incomes prior to the elder becoming eligible for the OAA may be in a stronger position to secure loans in anticipation of the OAA. The question of anticipatory responses will be taken up again in Chapter 6.

Participation in paid work, economic migration and marriage
The results in Table 13 show that the effects of the OAA on reducing adolescent participation in paid work increase with age. In households with both elder men and couples, coefficients are larger than the main results (Table 12) for 12-14 year olds ($\beta_1 =$ -0.069; $\beta_1+\beta_2+\beta_2 =$ -0.045) and larger still for 15-17 year olds ($\beta_1 =$ -0.074; $\beta_1+\beta_2+\beta_2 =$ -0.093); although only the coefficient for 12-14 year olds who live with an eligible man is statistically significant (column 1). The negative effect is also larger for 15-17 year olds who co-reside with an elder woman ($\beta_1+\beta_2 =$ -0.109). Households that require younger adolescents to engage in paid work may be in greater economic need, and the OAA is unable to compensate their earnings. This is supported by the findings in Table 14 and Table 15, showing that for adolescents who co-reside with an eligible male, participation in paid work is lower in households with an uneducated head ($\beta_1 =$ -0.046)

and in richer households (β_1 = -0.072), although only the latter result is statistically significant.

Table 16 shows that, despite the reduction in paid work being larger in richer households, it is also concentrated in households with fewer working age-adults (β_1 = -0.078). Adolescents in households with fewer adults may be more likely to engage in paid work in the first place, while only relatively better-off households are able to limit their work following receipt of the OAA. Moreover, the previous section showed that households that are better off, have an educated head, and fewer working age adults saw little change in overall mainstream school attendance and only small increases in public school attendance. This suggests that households have an aversion to adolescent paid work regardless of school status, and that increases in school attendance associated with the OAA are more likely due to increased expenditure on direct costs than compensation for foregone adolescent income. This is supported by the estimates of the effects of the OAA on education expenditure in Chapter 6.

In households with an eligible woman, the increase in economic migration is concentrated among 15-17 year olds; higher by 5.0pp and statistically significant (Table 13, column 5). The effect is also larger than average and statistically significant in poorer households and those with an uneducated head, where economic migration is higher by 2.6pp and 3.0pp, respectively (column 2 in Table 14 and Table 15). Poorer households with an uneducated elder woman are seeking better employment opportunities for their older adolescent boys. While there was no decrease in economic migration apparent in the main results, households with better educated elders may use the OAA to prevent boys from leaving home to work. In households with an eligible man, economic migration is lower by 2.5pp and is marginally statistically significant. While these finding are not fully robust, they suggest that some households view economic migration as an opportunity and for others it is an (undesirable) necessity.

Turning to girls' marriage migration, Table 13 shows that the OAA has a larger and statistically significant positive effect on 15-17 year olds in households with an eligible man or couple (columns 4 and 6); higher by 4.5pp and 8.9pp, respectively. Because marriage migration only affects girls the change among girls will be substantially

larger.[71] The OAA is further accelerating the rate of marriage as girls approach later adolescence. Table 14, Table 15 and Table 16 show that, in households with an elder man or couple, the OAA only affects marriage migration in households with an uneducated head ($\beta_1 = 0.019$; $\beta_1+\beta_2+\beta_2 = 0.034$), that are richer ($\beta_1 = 0.022$; $\beta_1+\beta_2+\beta_2 = 0.041$), and that have fewer working age adults ($\beta_1 = 0.025$; $\beta_1+\beta_2+\beta_2 = 0.041$). It was suggested earlier that the negative effect on private school attendance occurs in richer households because they are in a better position to leverage the OAA as collateral for loans in anticipation of eligibility. The same may be true here. The costs of marriage are high and richer households may be better able to use the OAA to access credit, only in this case, after becoming eligible. Further analysis of this issue is provided in Chapters 6 and 7. Moreover, the concentration of effects in households with fewer working age adults may be an indication that the adolescent girls who have out-migrated to their husband's home are older siblings, without a married older brother in the household. Evidence presented in Chapter 7 suggests that households where an adolescent girl has older (married) brothers at home, are in a stronger financial position to have already completed the formalisation of her marriage. Pesando and Abufhele (2019) show that the sex and age order of siblings can affect the marriage timing of adolescent girls.

Robustness and applicability of the results

This section re-examines the main assumptions and potential confounders related to the estimation approach considering the subsequent analysis and results, and touches on questions of generalisability to the Nepali population. A separate discussion of the robustness and validity of the results in relation to the mixed-methods approach and of their wider generalisability in relation to the literature is provided in Chapter 8.

Potential differences between control and treatment groups due to the age of the elder and adolescent are accounted for in the estimations by applying a third-order polynomial expansion in age and by including certain control variables on both theoretical and empirical grounds. All regressions have been tested with second- and fourth-order polynomials; although some variables drop out at the fourth-order in sub-sample analyses. The main results in Table 12 are not sensitive to changing the order of

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[71] Running the same analysis for girls only shows that marriage migration is higher by 9.5pp and 13.6pp, respectively, for 15-17 year old girls who co-reside with an eligible man or elder; both results marginally significant at the 10% level.

the polynomial for adolescent age. However, coefficients are slightly sensitive to the order of the polynomial for elder age. Results for adolescents who co-reside with an elder woman are unaffected except for the coefficient for adolescent religious school attendance which is slightly smaller and becomes marginally non-significant with the fourth order polynomial. However, the equivalent result for boys' religious school attendance remains unchanged and statistically significant. In households with an elder man or couple there are small fluctuations in the magnitude of several coefficients with the second or fourth order polynomial. In most of these cases, statistical significance remains unchanged or becomes marginally significant when previously non-significant. Three coefficients, private school attendance for adolescents who co-reside with an elder man, public school attendance for girls who live with an elder man, and education migration for girls who live with an elder couple, become slightly smaller and marginally non-significant. However, the equivalent coefficients for boys' private school attendance and adolescent public school attendance and education migration are stable and remain statistically significant. Overall, polynomials of different orders do not change the interpretation of the main results. Use of the *Bonferroni* correction in calculating sample size and the treatment of results with a p-value =<.1 and >.05 as marginally significant provides further confidence and transparency in the estimates.

ITT estimates and the relatively low take-up rate of approximately 65% will have attenuated the results. Because those who do not take-up the OAA may be qualitatively different to those who do, more socially excluded for example, it cannot be assumed that the magnitude of the results is reduced proportionally. However, it is reasonable to expect that average effects on adolescents' life-course circumstances would increase to some extent with improved take-up.

Removal of WSW from the analysis was an undesirable but necessary step to better estimate the true effects of the OAA. WSW are eligible for the WSW allowance, at half the value of the full OAA, until becoming eligible for the OAA. The increase in income at the threshold is half that of non-WSW. Comparison with results using the full sample indicates that, as expected, their presence diminishes the effects of the OAA on school attendance, especially for adolescents who co-reside with elder women. Similarly, the increase in economic migration and the reduction in boys' unpaid work at home are

both diminished. While exclusion of WSW means the results better reflect the true effects of the OAA, the smaller sample size may lie behind the lack of statistical significance for some of the moderate to large coefficients for adolescents living with an elder woman. Moreover, exclusion of WSW has implications for the generalisability of the findings as households with WSW are different in other ways that are associated with adolescents' life-course circumstances. For example, WSW may have particular care needs, while married women may have absent husbands that provide migrant opportunities.

Lead effects may occur in relation to private schooling; a theoretical possibility when eligibility for treatment can be anticipated and liquidity or credit constraints are not fully binding. Lag effects are also a theoretical possibility, whereby a delay occurs between treatment and the resultant changes in behaviour or between becoming eligible and actual receipt of the treatment; both of which will affect ITT estimates. If low take-up of the OAA is concentrated among the recently eligible, then this points to delays between eligibility and receipt. Any financial commitments made in anticipation of eligibility may be unsustainable. This could explain the negative effect of the OAA on private school attendance: elders take loans in advance of eligibility to finance the cost of private school but are unable to maintain the payments when the OAA fails to come on time, resulting in drop-out or transfer back to public school. Evidence for this is presented in Chapter 6.

Further confidence in the analysis comes from the internal consistency of the findings, which is apparent in three main ways. First, effects on school attendance for girls and boys are consistent for each type of elder; positive for both public and private school in households with elder women and positive for public school but negative for private school in households with elder men and couples. Second, patterns for elder couples are closer to those of elder men. This suggests that the presence of the male elder within the couple is dominant which aligns with expected gendered norms in Nepali society (Gram et al. 2018). Third, the concentration of effects among certain age groups are congruent with grade structures and expected life-course transitions. The moderating effects of education among the older generation and household income are also consistent with expectations; the better educated older generation enhance the effects of the OAA on

school attendance, while poverty limits the ability of other households to reduce adolescent paid work.

Finally, while adolescents who live with elders are a sub-set of the population, these circumstances are common. Analysis of national survey data suggests that approximately 14% of adolescents co-reside with an elder of bandwidth age, while 50% live with someone of age 50 or older.[72] A further consideration is that the CTALS was conducted in an area of Nepal with high poverty rates and low school attendance. The same level of impact would not necessarily be expected in wealthier areas with higher school attendance. Nevertheless, results conceivably can be generalised to adolescents in poor rural areas of Nepal and across large parts of Northern India with shared social and cultural practices.

Summary and conclusions

The analyses in this chapter have provided evidence towards the first fundamental question of this thesis; whether and to what extent additional household income in the form of a UCT affects adolescents' life-course circumstances. The main analysis estimated the quantitative effects of Nepal's Old Age Allowance (OAA) on the life-course circumstances of co-resident 10-17 year old girls and boys. Subsequent analysis differentiated the findings by narrower age groups and the socioeconomic and demographic circumstances of the household.

The findings suggest that variation in the effects of the OAA on adolescents' life-course circumstance depending on their age and gender reflect differences in the priorities, opportunities, and constraints of households. Households appear to take strategic decisions about which adolescents receive additional investment in education, and when, while others use the OAA to hasten transitions to adulthood.

The largest effects on education are among adolescents who co-reside with an eligible woman, for whom mainstream school attendance is higher by nearly 10pp, approximately 16% higher than the control group mean. The OAA is more likely to

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[72] Based on author's analysis of data from the Nepal DHS conducted in 2016 by the Ministry of Health, New ERA and ICF.

support younger adolescents to remain in public school and older adolescents, especially boys, to transfer into private school, sometimes away from home. This implies that increased investment may be made at more critical grade junctures. The increase in access to private schools is more common in poorer and better educated households where more adolescents have missed out on these opportunities but where (grand)parents may have higher aspirations or a greater ability to support learning (Kilburn et al. 2017).

The OAA also supports boys to access religious school, with attendance rates higher by 7pp, approximately 450% higher than the control group mean. This relates exclusively to Muslim adolescents who attend the madrassa and is therefore a particularly large effect within the Muslim population. At the same time, some poorer but less educated households with an elder woman use the OAA to support boys to migrate for work. The rate of economic migration among older boys is 5pp higher, approximately 49% higher than the control group mean. It is likely that these boys were already out of school and were looking for better employment opportunities. Using data from the Nepal Living Standards Survey (NLSS) 2011, Bossavie and Denisoya (2018) find that economic migration is more likely among lower educated male youth from agricultural areas.

For adolescents who co-reside with an elder man or couple, the overall effect of the OAA on mainstream school attendance is positive but small. However, this masks a much larger positive effect on public school attendance of 9-10pp, 27-29% higher than the control group mean, concurrent with a negative effect on private school attendance of 5-6pp, 25-31% lower than the control group mean. The positive effect on public school attendance is largest for girls and is concentrated in poorer households but with more working age adults and better educated elders. Again, this may reflect that better educated (grand)parents have higher aspirations or a greater ability to support adolescent learning, while the greater number of adults reduce adolescents' burden of work.

While some boys also benefit from retention in public school, the effect of the OAA for other boys is markedly different. Households with an elder man appear to boost younger boys' access to private school in anticipation of eligibility. It is proposed that the negative effect associated with the OAA occurs because the households are unable to

sustain the cost in the face of delayed entry into the programme. The limited change in overall mainstream school attendance suggests that at least some of these boys are able to transfer (back) into public school. A similar pattern is seen for girls who co-reside with an eligible couple, especially in relation to education migration. This potential anticipatory response is largest in richer households with a greater number of working age adults, which may have more liquidity or are in a better position to leverage loans in anticipation of the OAA. Evidence presented in the next chapter supports interpretation of the negative effect on private school as an unsustained anticipatory response.

Some households with an elder man use the OAA to reduce participation in paid work for both girls and boys. Paid work is lower by approximately 4pp, 37% lower than the control group mean, and with larger effects among older adolescents. Moreover, effects are larger in richer households but with fewer working age adults; the OAA may be insufficient to compensate the poorest households that rely on the paid work of younger adolescents. Other households with an elder man or couple use the OAA to hasten the formal marriage of older adolescent girls. While the marriage rate according to marital status is not substantially affected, the marriage migration rate of 15-17 year old girls who co-reside with an OAA eligible man or couple is higher by nearly 5pp and 9pp, respectively, and is higher still in richer households but with fewer working age adults and less educated elders. Given the high financial cost of girls' marriage it may only be richer households that can use the OAA to secure a loan for the dowry and other expenses.

The analyses also provided initial insights into the pathways through which effects occur. That private school is more responsive to additional income suggests that direct costs may be a more important factor than opportunity costs in determining school attendance. Moreover, there is only a weak link between reductions in paid work and increases in school attendance, suggesting that households are averse to adolescent paid work regardless of school status. Certain effects are associated with particularly high costs, especially education migration and marriage. Along with apparent anticipatory responses, this suggests that loans may play an important role in enhancing the effects of the OAA. At the same time, the positive effects on retention in public schools, which incur minimal direct costs, suggest some other factors may be relevant.

Further evidence is required to substantiate these propositions and questions remain about other contextual factors that moderate the effects of the OAA. These issues are taken up in Chapter 6 which examines the dynamics of the household economy and the effects of the OAA on income, expenditure and debt; and in Chapter 7, which examines the other cultural, social and economic factors that shape households' decisions about adolescents' life-course circumstances.

Chapter 6

The OAA and the Household Economy:
Income, Expenditure and Credit

Introduction

The analysis in this chapter integrates quantitative and qualitative data to explore how the OAA interacts with the household economy to provide further evidence towards the second main question of this thesis which asks, what are the pathways through which the OAA affects adolescent life-course circumstances. Much of the literature on the effects of UCTs on individual household members tends to overlook how the transfer interacts with the household economy.[73] Data on transfer size and take-up are sometimes provided but other aspects of implementation that can affect outcomes are rarely considered. At the same time, most studies on the effects of cash transfers make implicit assumptions about how resources are shared within the household. This is problematic, especially when unexpected results are identified that contradict the prevailing theory. Incorrect conclusions may be drawn if important contextual factors are unaccounted for or the underlying assumptions, unknowingly, do not hold.

The OAA has a range of effects on adolescent schooling, work and marriage, which vary in magnitude and sometimes direction, depending on the circumstance of the adolescent and their household. Several aspects of the findings suggest that household income, differential access to credit, and imperfect implementation of the OAA, are important factors in shaping outcomes and may explain possible anticipatory responses. Results also differ depending on the gender and cohabitation status of the recipient, which suggests that decision-making about adolescents' life-course circumstances, and the extent to which the OAA plays a part, also depends on how household members

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[73] There is a body of literature that examines the effects of cash transfers on income and expenditure (see Chapter 2). However, studies focused on second or third order outcomes of individual household members rarely include such analysis. In many cases, these shortcomings result from data limitations, especially in studies that rely on secondary data.

control and share resources. These, and other questions about the pathways through which effects occur, require further understanding.

The next section describes the data and methods. The findings are then organised in four main sections. The first examines the economic status of the population and the value of the OAA to recipients and their households considering how the policy is implemented in practice. The second part investigates the effects of the OAA on general household expenditure and education expenditure. The third analyses how processes of resource sharing within the household shape decisions about adolescents' lives. The fourth part examines loan-taking practices and investigates whether the OAA plays a role in accessing loans for adolescent education and marriage. This is followed by a discussion of the evidence for anticipatory responses to the OAA. The final section summarises and concludes.

Data and methods

All data in this chapter comes from the CTALS and in-depth interviews (IDI) unless otherwise stated. Quantitative data is used to provide a descriptive analysis of the household economy and, following the same estimation approach used in Chapter 5, to make causal inference about the effects of the OAA on income, expenditure and debt. The IDIs sought to place the role of the OAA within the complexities of the household economy and processes of resource sharing. Qualitative data is used to triangulate and provide a more nuanced interpretation of the quantitative findings.

The quantitative analysis draws mainly on household income, expenditure and loan data. Total household income is an aggregate variable made up of four main earned income sources in the past year including remittances, as well as government and non-governmental transfers, and gifts. Household expenditure is a proxy for total annual expenditure based on a representative number of expenditure items. It is a relative measure between sample units rather than an estimate of total expenditure. Both these measures are described in detail in Chapter 3. Adolescent education expenditure is an aggregate variable capturing all potential types of direct expenditure on the education of

the adolescent in the past 12 months.[74] Recent loan value combined the most recent formal and informal loan taken by the household within the past 12 months. Other variables used in the analysis are described in the relevant section.

Each section combines descriptive statistics with the estimation approach used in Chapter 5. Equation (3) (see p.136), including all additional control variables, is estimated with the natural log transformation of household income, household expenditure, adolescent education expenditure and recent loan value, as the dependent variables. Recent loan value has 1,346 zero values among 2,424 cases, so the tobit model is used in place of the linear model. The tobit model presumes that there is a latent variable y_i^* that, like the linear model, depends on x_i via a parameter β and with a normally distributed error term $\in_i$ (Tobin 1958). The observable variable,

$$y_{ij} = \begin{cases} y_{ij}^* & if \ y_{ij}^* > 0 \\ 0 & if \ y_{ij}^* \leq 0 \end{cases} \qquad (4)$$

where $y_{ij} = 1 + \log recent \ loan \ value$ for adolescent j in household i. Other terms in the model are the same as for equation (3) including the additional controls described in Chapter 5. Coefficients are interpreted as the effect of the independent variable (presence of an OAA eligible elder) on the latent variable y_{ij}^*. They represent an element of both the binary status of having a loan (or not) and the value of the loan.

Throughout the chapter, quantitative analysis is combined with data from the IDIs to provide respondent perspectives on the relationship between the OAA and the household economy. As described in Chapter 3, IDI transcripts were subject to a process of iterative deductive and inductive coding. The coding process organised the data into broad themes each with various sub-categories. The data focuses on how meaningful the OAA is perceived to be by the household and the reliability of the scheme; the dynamics of household resource sharing and bargaining; and how the OAA facilitates access to credit. Content analysis is used where it helps to triangulate the quantitative findings. Most qualitative data are presented and analysed as a narrative

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[74] Adolescent education expenditure includes estimated annual expenditure on admission and other fees, books, transport and any other associated costs for each adolescent in the household.

with reference to the quantitative findings and the wider literature where relevant. Selected extracts from the IDIs are provided to exemplify commonalities and exceptionalities among the cases. Due to the nature of the topics in this chapter, most extracts are from elders and parents. Extracts are sometimes combined with survey data from the same household to contextualise the circumstance of the respondent. In some cases, extracts have been edited to remove repetitive material where this does not alter the meaning in any way. Otherwise, apart from the names of the respondents, direct quotations have not been changed from the original translation.

The value of the OAA to recipients and their households

This section explores the economic status of households in the CTALS population and the value of the OAA relative to household income. As well as examining quantifiable monetary measures, the analysis explores how household members perceive the value and usefulness of the OAA considering how the policy is implemented in practice.

Household income and poverty

Data presented in Chapter 4 suggest that annual incomes in the CTALS population are considerably lower than the national average for rural areas. Mean annual household income is NRs 261,020 (US$ 2,310) and per capita income is NRs 39,602 (US$ 350). Figure 29 shows the per capita income distribution of the CTALS population. Each current household member is represented on the x-axis in order of per capita income from lowest to highest. The distribution of income is very flat with a small minority who are considerably richer. As such, median rather than mean income better represents the economic circumstance of the population. Median household income is NRs 229,000 (US$ 2,027) and median per capita income is NRs 27,714 (US$ 245).

The official per capita poverty line is based on the cost of basic needs approach using NLSS data and was last set in 2011 at NRs 19,261 (US$ 170) nationally and NRs 17,540 (US$ 155) in the rural central *Terai* region (Central Bureau of Statistics 2011c). Adjusting for inflation at an average of 7.9% per year from 2012-2017 the sub-regional poverty line is NRs 27,656 (US$ 245) in 2017.[75] The straight lines on Figure 29 indicate

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[75] Inflation data is taken from: https://data.worldbank.org/indicator/FP.CPI.TOTL.ZG?locations=NP. Accessed: 29th June 2020.

the official sub-regional poverty line (2010-11) and the inflation adjusted sub-regional poverty line (2017). The estimated poverty rates are indicated where the poverty lines cross the income distribution curve.

Figure 29 Per capita income distribution for the CTALS household population
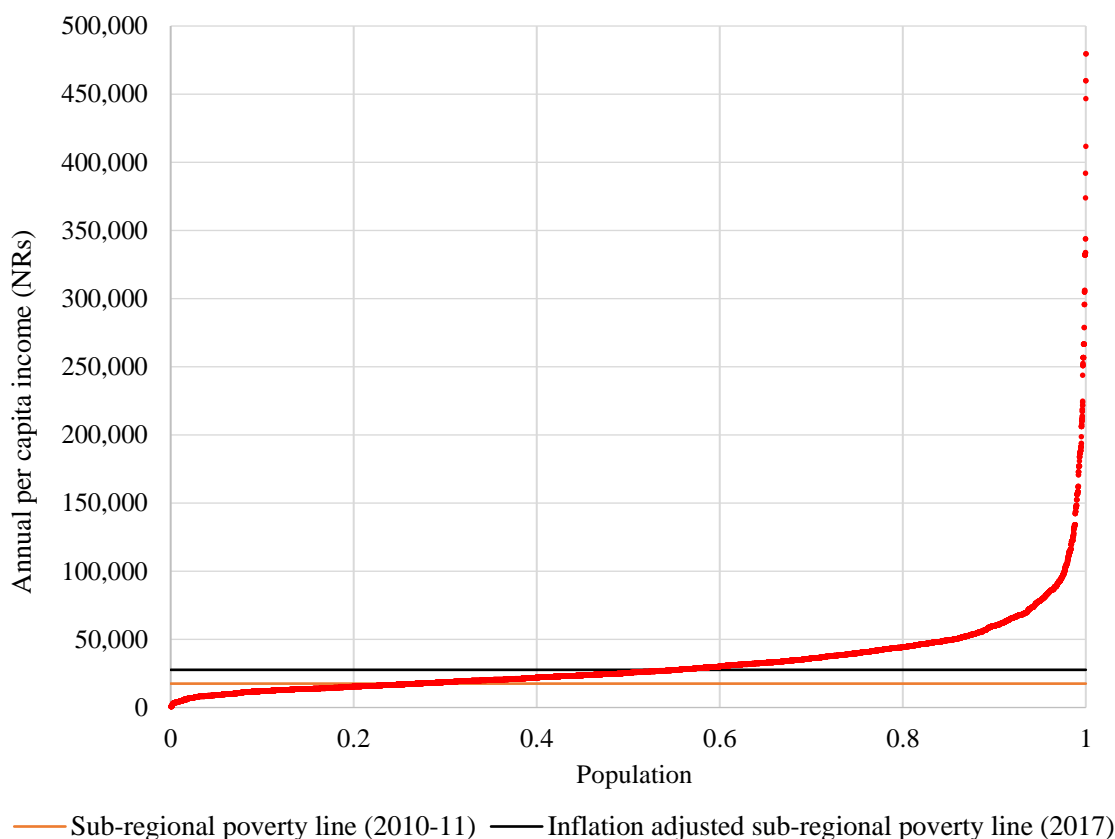
Data source: CTALS 2017, n = 16,091.

Applying the official sub-regional poverty line to the CTALS per capita income data gives a poverty rate of 26.2%. Because the income distribution is so flat, the inflation adjusted line more than doubles the poverty rate to 54.9%. The official 2010-11 poverty rate is 25.2% for Nepal and 23.1% for the rural central *Terai* (Central Bureau of Statistics 2011c). However, using small area estimation techniques, the poverty rate for Rautahat district is an estimated 33.4%; while many of the VDCs surrounding the district capital of Gaur, where the CTALS was conducted, have poverty rates of between 34.5% and 40.7% (Central Bureau of Statistics 2013), much closer to the inflation adjusted estimates of the CTALS population.

For several reasons, including the application of different measures of economic well-being, the poverty rates are not strictly comparable.[76] The analysis does not aim to provide an accurate estimate of poverty rates among the study population, but does provide an indication of their economic status and an approximate benchmark against national data. The broad conclusion is that the CTALS population is considerably poorer than the national, sub-regional and even district average, and is highly economically insecure.

The value of the OAA relative to household income

OAA policy is such that each eligible elder receives NRs 24,000 (US$ 212) per year; approximately 10.5% of median household income and 86.6% of median per capita income. Dalits receive half the full allowance from age 60 until they reach full pension age. To allow simultaneous estimates of the effects of the OAA based on eligibility, elder Dalits in the sample are 10 years younger on average than non-Dalits and therefore receive only the lower amount (see Chapter 3 for a detailed explanation).

Table 17 shows the average amounts received by those eligible for the OAA and by those who reported receipt of the OAA in the past year. Data related to the last payment received (lower panel) is discussed later in this section. The upper panel of the table shows that among eligible elders the average amount received in the past year is just 56% of the stated policy value for non-Dalits and 71% for Dalits. Among elders who received a payment within the past year, the amounts transferred are 88% of the policy value for non-Dalits and 106% for Dalits. This indicates that the low average transfer value among eligible elders is largely due to low take-up rather than under payment. Take-up was shown to be approximately 65% among eligible elders. Once registered and in receipt of payments, elders receive close to the correct amount, equivalent to 8.5% of median household income or 9.2% and 5.6% for non-Dalits and Dalits, respectively.

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[76] The national poverty estimates use data from the Nepal Living Standards Survey (NLSS) and employ a total household consumption approach, while the CTALS uses estimates of total household income.

Table 17 Reported amounts received by OAA eligible elders and recipients in NRs

	Policy value	OAA eligible elders				OAA recipients			
		Mean	S.E.	% of policy	n	Mean	S.E.	% of policy	n
Amount received:									
Last year	-	12,667	312	-	1145	19,570	217	-	746
Non-Dalit	24,000	13,497	353	56.2	952	21,015	195	87.6	616
Dalit	12,000	8,573	517	71.4	193	12,727	387	106.1	130
Last payment	-	6,092	166	-	1145	9,425	151	-	746
Non-Dalit	8,000	6,495	189	81.2	952	10,128	160	126.6	616
Dalit	4,000	4,106	264	102.7	193	6,096	242	152.4	130

Data source: CTALS 2017. Robust standard errors are used throughout, clustered at the level of household.

Davis and Handa's (2015) analysis of 12 cash transfer programmes in sub-Saharan Africa suggests that a transfer value of less than 20% of total household consumption will achieve only small and selective impacts. This study does not look at a comprehensive range of effects for all household members. Nevertheless, the OAA has large positive effects on school attendance in certain households and the effects on adolescent work and marriage are also large considering the low baseline rates. This suggests that even a relatively small injection of cash makes an important difference to those who receive it. On the other hand, the decline in private school attendance among some adolescents suggests that certain households struggle to use the OAA effectively.

Low take-up will diminish the effects of the OAA and may have other implications depending on who is excluded. Figure 30 shows the percentage of elders who received a payment in the past year by their age relative to the age of eligibility; zero is equivalent to 70 years for non-Dalits and 60 years for Dalits. Take-up is lowest at 24% for those in the first year of eligibility and is still just 53% in the second year. Low take-up is largely related to delayed entry into the programme.

While certain aspects of implementation may vary from one administrative area to another, late entry into the programme is systematic (Uprety 2010; Samson 2012). At the time of data collection, the OAA had an annual registration process whereby new applications are accepted in December and the first benefits are received in the new fiscal year, usually in September. If an elder person registers for the OAA at the first

opportunity on turning 70 (or 60 in the case of Dalits), they will receive the first payments 8-9 months later. The problem is compounded if applicants who turn 70 later in the same fiscal year are not accepted during the registration window. Further analysis of CTALS data (not shown) indicates little difference in rates of exclusion by gender, per capita income, education level, ethnicity/caste and VDC. Exclusion from the programme is largely a systematic problem related to the registration process rather than socioeconomic status or geography.

Figure 30 Percent of elders who received the OAA in the past year
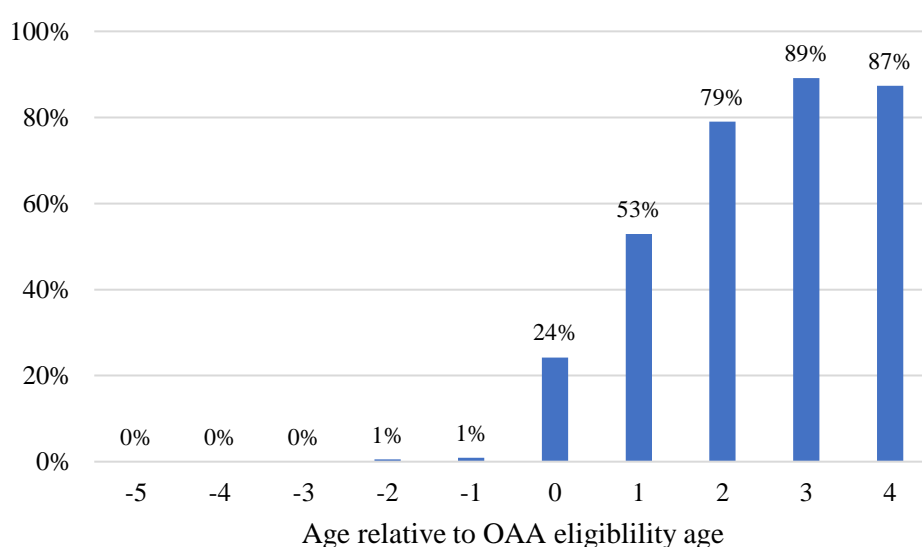
Data source: CTALS 2017, n=2454.

The findings in Chapter 5 show that the OAA has negative effects on private school attendance in certain households, which may relate to an anticipatory change in behaviour. If households with an elder man access credit to pay for school costs based on future eligibility, then delayed entry into the programme will have implications for their ability to maintain payments and to repay the debt. Adolescents may be withdrawn from private school when the OAA does not materialise.

An anticipatory effect will not occur if delayed entry into the programme results from lack of knowledge about the OAA. The OAA is the longest standing and best known of the social security schemes in Nepal and knowledge of the eligibility criteria is high. Just 6% of non-eligible elders in the CTALS sample had not heard of the OAA, dropping to less than 1% among eligible elders; and 88% of non-eligible elders know the correct eligibility age, rising to 94% among eligible elders. Moreover, 60% of

eligible elders who are not registered for the OAA state that the reason is they are not old enough, not eligible, or their application was refused.[77] A large proportion of elders are excluded from the scheme on becoming eligible despite knowledge of their entitlements.

Effects of the OAA on household income

For the OAA to affect education and marriage, it should lead to an increase in average household income. While UCTs are generally found to increase household income (Hagen-Zanker, McCord, and Holmes 2011; Bastagli et al. 2016), it is not guaranteed as cash transfers can potentially reduce work effort, not unreasonable in the case of a pension, and displace other forms of transfer income (Alderman et al. 1995). Nine of 21 elder IDI respondents indicate that they, or others in the household, would need to work more if they did not receive the OAA. Moreover, the findings in Chapter 5 indicate some reduction in adolescent paid work. That said, the weight of evidence shows that cash transfers do not lead to significant reductions in work effort among adults in developing countries (Mathers and Slater 2014).

Table 18 presents regression coefficients from equation (3) in Chapter 5 for measures of total household income, expenditure and loans. As before, columns 3-5 show coefficients associated with moving from a non-eligible elder man to an eligible man (OE), from a non-eligible elder woman to an eligible woman (OE+OEF), and from a non-eligible elder couple to an eligible couple (OE+OEF+OEFM). Columns 1 and 2 show any 'pre-treatment' differences between non-eligible elder men (EM) and couples (EFM) compared to the reference category of non-eligible elder women. The estimates exclude adolescents who co-reside with widows and single women (WSW) and the equivalent data table with the full sample is provided in Table 18a in Appendix 10. The log transformation is applied to all measures. For ease of interpretation, some coefficients are presented in the text as a percentage change using $e^{c\beta}$, where c = the number of units in the independent variable and the natural base $e \approx 2.71828$. This section is focused on income. Estimates for partial household expenditure, adolescent education expenditure, and recent loan value, are discussed in subsequent sections.

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[77] During data collection, evidence was heard anecdotally of eligible elders being turned away from registration because local officials claimed they were not yet 70 years of age.

Table 18 Results from equation (3) indicating the effects of a difference in timing of receipt of the OAA on household income, expenditure and loans[†]

W/o WSW	Elder male (EM) (1)		Elder female and male (EFM) (2)		OAA eligible male (OE) (3)		OAA eligible female (OE+OEF) (4)		OAA eligible couple (OE+OEF+OEFM) (5)		Adj. R2
	α_1	S.E.	α_2	S.E.	β_1	S.E.	$\beta_1+\beta_2$	S.E.	$\beta_1+\beta_2+\beta_3$	S.E.	
All adolescents, 10-17 years											
Household income (log)	-0.093	0.114	-0.011	0.120	*0.113	0.060	**0.188	0.096	**0.173	0.100	0.129
Household expenditure [partial] (log)	*-0.121	0.073	-0.111	0.078	0.051	0.047	0.096	0.072	0.045	0.067	0.122
Adolescent education expenditure (log)	***1.721	0.525	***1.924	0.570	-0.197	0.334	**1.202	0.489	0.201	0.525	0.225
Recent loan value (log)[††]	1.684	2.009	1.415	2.124	*-2.035	1.206	2.135	1.987	-0.627	1.892	0.014
Girls, 10-17 years											
Household income (log)	-0.116	0.152	-0.009	0.160	*0.134	0.074	**0.231	0.117	0.134	0.117	0.138
Household expenditure [partial] (log)	-0.096	0.090	-0.045	0.097	0.063	0.055	0.100	0.085	0.007	0.081	0.138
Adolescent education expenditure (log)	1.278	0.767	**1.778	0.822	-0.343	0.453	0.549	0.684	0.444	0.655	0.245
Recent loan value (log)[††]	0.713	2.351	0.692	2.494	-1.953	1.486	3.148	2.375	-1.704	2.307	0.016
Boys, 10-17 years											
Household income (log)	-0.070	0.123	-0.016	0.132	0.096	0.071	0.150	0.113	*0.211	0.126	0.114
Household expenditure [partial] (log)	*-0.144	0.085	**-0.181	0.090	0.044	0.058	0.091	0.090	0.084	0.083	0.107
Adolescent education expenditure (log)	***2.083	0.652	***2.040	0.722	-0.029	0.426	**1.586	0.657	-0.103	0.771	0.207
Recent loan value (log)[††]	2.608	2.416	1.995	2.557	-2.003	1.433	1.480	2.314	0.747	2.272	0.016

Data source: CTALS 2017 [†]Excluding households with widows and single women, n=2424 for all adolescents, n=1200 for girls and n=1224 for boys. Robust standard errors are used throughout, clustered at the level of household. Statistical significance is indicated by * = 90%, ** = 95%, *** = 99%. All regressions include a third order polynomial of the age of the oldest elder and of the adolescent; and dummy variables for the presence of an elder above bandwidth age, education of household head, caste group, and VDC. [††]The Tobit model is used to account for the large number of households with zero values; coefficients represent change in the latent variable; the pseudo R^2 is given.

Looking first at columns 3-5, household income of adolescents who co-reside with an OAA eligible elder is consistently higher by between 12% ($\beta_1 = 0.113$) and 21% ($\beta_1 + \beta_2 = 0.188$) and statistically significant. Considering that the OAA is just 8.5% of median household income among recipients, it may have a multiplier effect on the household economy through investment. However, standard errors indicate a relatively large margin of error so firm conclusions cannot be drawn beyond the overall positive trend.

The effect of the OAA on household income is larger in households with an eligible woman or couple compared to an eligible man. It is logical that a larger effect occurs with eligible couples as they have double the OAA income. But why are eligible women associated with a larger effect on household income? Given that widows and single women (WSW) have been excluded from the main analysis, there are two possible explanations related to the circumstance of married elder women. First, as discussed in Chapter 5, some elders within the bandwidth age co-reside with an elder who is above the bandwidth age and hence are eligible for the OAA. The presence of an elder above bandwidth has been controlled for in the estimation; however, they are more commonly found in households with married elder women which may result in some residual effect from the additional OAA.[78] Second, other married elder women may have an absent husband who is a remittance sender. In both cases, households with married elder women may be in a stronger economic position to utilise the OAA for investment. While this study does not look at economic investment specifically, this interpretation is supported by the increase in economic migration of older boys in households with (married) eligible women.

Columns 1 and 2 of Table 18 show that prior to eligibility, households with an elder woman have higher incomes than those with an elder man ($\alpha_1 = -0.093$), although the result is not statistically significant. Moreover, the equivalent results in Table 18a in Appendix 10 shows that WSW erode, and even reverse, pre-treatment differences and diminish the effect of the OAA on income in households with an eligible woman. In other words, households with WSW are poorer overall and experience less impact of the OAA on household income due to their prior receipt of the WSW allowance. In

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[78] Excluding WSW, 77.1% of elder women within the bandwidth age co-reside with another elder above bandwidth age; the rate is 86.5% among elder women who are eligible for the OAA (treatment group) compared to 57.1% among non-eligible elders (control group).

contrast, households with a married elder woman are richer overall and see an above average effect of the OAA on income.

In households with an elder man or woman, the effect of the OAA on income is also larger when the adolescent is a girl ($\beta_1 = 0.134$ and $\beta_1+\beta_2 = 0.231$) rather than a boy ($\beta_1 = 0.096$ and $\beta_1+\beta_2 = 0.150$). The OAA is associated with reductions in paid work for both girls and boys for which higher household income is the most likely explanation. The difference in the net effect on income may be because boys earn more than girls. Data in Chapter 5 shows that among adolescents who are engaged in paid work, boys do twice as many hours as girls.

Perceptions of the value and usefulness of the OAA

Data from the IDIs reveal a range of perceptions about the value of the OAA to the household that broadly reflect the shape of the income distribution curve in Figure 29. In most cases, respondents reveal the precarity of their economic situation, into which a modest transfer of income is welcome and makes a difference, although sometimes falls short. The OAA generally makes an important contribution to running the household and is often prioritised towards the needs of the children, including paying for their education.

In contrast, elders from households in the lowest per capita income quintile prioritise use of the OAA for daily subsistence and health needs and are conscious of the trade-offs they make.

> I want to say that the OAA money should be increased, should I spend this money to buy clothes or to buy medicines?
> (Interview with Sumitra, female, 73)

> I have not given even five rupees [to my granddaughter] to eat or to do anything at all. If there is [OAA money] left over then I can give but there is no money left after my medication, so I do not give her at all.
> (Interview with Shiyabati, female, 70)

The findings in Chapter 6 show that the OAA increases public school attendance in households in the bottom two per capita income quintiles. However, the poorest households, in the left-hand tail of the distribution in Figure 29, are more likely to prioritise basic subsistence and health care for increased expenditure, meaning that adolescents are less likely to benefit in terms of higher order outcomes. For very

different reasons, the OAA will make little meaningful difference to adolescents in the richest households where their life-course options are less economically constrained. One adolescent respondent, whose households falls within the upper end of the fourth per capita income quintile, suggests that the OAA is insignificant to the household given their relatively high income status.

Independent of transfer value, the frequency and predictability of cash transfers has implications for households' ability to smooth consumption, make investments, and meet time-sensitive expenditures. Returning to Table 17 (p.175), the lower panel shows the average amounts received for the last OAA payment. Among recipients, payments were 127% and 152% of the prescribed amount for non-Dalits and Dalits, respectively. Given that the annual value is close to the policy amount, this suggests that payments may have been consolidated into fewer than three transfers in the year. CTALS data shows that recipients reported an average of 2.5 payments in the past year, varying between one and four.[79] This can happen due to budget delays from the central level or deliberate deviation from the triannual payment policy on the part of local officials.

All elder IDI respondents raised the infrequency or irregularity of OAA distribution as a concern. Many complained that they had not received the OAA for between six months to one year and that irregular distribution causes them significant problems.

> Older pension was provided in four months duration, so it should be given on time. If people are used to having their meal at four o'clock and they are given it at ten, then they will face difficulties. So, they should be given their money in four months duration if it is scheduled like that, no matter two days late or early. If it won't be distributed on four months and it is distributed in eight months and twelve months duration, then all have to face difficulty. So, it should be provided on time otherwise people will be angry.
>
> (Interview with Aabu Mahamad, son of Aflima, female, 78)

Infrequent and unreliable distribution of the OAA causes multiple problems. The main festival season in Nepal exerts significant financial pressure on households, and the first of three annual OAA payments is scheduled immediately prior to this. However, for many respondents, the pre-festival distribution did not occur during the year of the

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[79] Due to the timing of the survey, for many respondents the last payment was the last of the fiscal year. Any shortfalls in payments earlier in the year may have been made up at this time.

survey. For some respondents, irregular distribution limits their ability to make more strategic expenditures including on adolescent education.

> I can't say [that my Granddaughter will go to study], I can't take guarantee of that. I don't have energy to say anything about that. I can eat till I receive the government's money but cannot take guarantee to educate them.
>
> (Interview with Mahamad, male, 76)

Infrequent payments also lead to loans being taken that would otherwise have been unnecessary.

> People borrow money when they do not get the [OAA] money on time and do their tasks and when they receive it they return the money to the money lenders… If money is given now, then we can invest it on farming. If we do not have [the money] how can we grow corns in our land. [If the money is given on time]… then why should we borrow?
>
> (Interview with Mahendar, male, 69)

Poor implementation may lead to unnecessary debt; however, the OAA can also unlock access to credit for both consumption and investment. The relationship between the OAA and loans is discussed in detail later in the chapter. While one respondent expressed a preference for the OAA to be paid monthly, most recipients and their families simply wish the OAA to be delivered on time in accordance with the triannual schedule. A more reliable scheme may well result in larger marginal effects on adolescents and prevent the failure of investments made in anticipation of the OAA.

Household and education expenditure

This section investigates the effects of the OAA on general household expenditure and adolescent education expenditure.

Effects of the OAA on household expenditure

Returning to Table 18 (p.178), results are shown for estimates of equation (3) with household expenditure as the outcome of interest. The variable for household expenditure is derived from 10 key expenditure items that have a high correlation with total household expenditure. The coefficients indicate the relative effect of the OAA on general household expenditure within the sample, rather than absolute differences in total expenditure.

The OAA is associated with higher household expenditure for all types of elder, with the largest coefficients in households with eligible women ($\beta_1+\beta_2 = 0.096$), although none are statistically significant. The existing literature shows that consumption is generally found to increase for households in receipt of cash transfers (Hagen-Zanker, McCord, and Holmes 2011; Bastagli et al. 2016). Like household income, pre-treatment differences indicate that expenditure is higher in households with elder women compared to elder men ($\alpha_1 = -0.121$) and couples ($\alpha_2 = -0.111$). Comparison with the full sample including WSW in Table 18a in Appendix 10, shows that WSW reverse pre-treatment differences and attenuate the effect of the OAA on household expenditure. In other words, households with a married elder woman spend more in general and the OAA has a larger effect on expenditures. Overall, the OAA likely has a positive effect on general household expenditure that is consistent with the effects on income.

Effects of the OAA on adolescent education expenditure

The variable for household expenditure does not include any component of education expenditure. However, a separate module in the CTALS collected detailed data on education related expenditure in the past year for each adolescent in the sample.

Table 19 shows mean education expenditure among school goers for each type of school and separately for girls and boys. Costs are highest for private school, equivalent to 85% of median per capita household income and 120% of the average amount received by OAA recipients in the past year. Expenditure on boys is higher than girls but not substantially so. Expenditure data is not available for adolescents who are resident elsewhere, but it is likely that those who migrated for education incur above average costs. Considering the high cost of private school, the OAA may prevent adolescents from dropping-out during periods of economic instability. Because the OAA is both infrequent and irregular it may also facilitate access to credit that allows households to smooth education expenditure over time; and in some cases, to transfer adolescents from public into private school by increasing education expenditures. The connection between the OAA, school attendance, and loans will be returned to shortly.

Table 19 Mean adolescent education expenditure among school goers in NRs

	N	Mean	S.E.
All adolescent school-goers, 10-17 years			
Mainstream school	1769	12,136	492
Public school	1201	6,723	231
Private school	568	23,581	1,238
Religious school	166	5,524	581
Girls			
Mainstream school	798	8,878	395
Public school	627	5,733	205
Private school	171	20,408	1,201
Religious school	84	4,563	735
Boys			
Mainstream school	971	14,814	778
Public school	574	7,805	390
Private school	397	24,947	1,655
Religious school	82	6,508	778

Data source: CTALS 2017. Robust standard errors are used
throughout, clustered at the level of household.

The costs of public school are much lower than private school but are not insignificant, equivalent to 24% of median per capita income and 34% of the average amount received by OAA recipients in the past year. According to the Nepal Education Act, public primary education, including textbooks, should be free (Government of Nepal 1971). Public schools can charge fees for lower secondary and secondary level, but provision should be free for children from Dalit and Janajati ethnic/caste groups, girls, and students below the poverty line. The data in Table 19 shows that expenditure on girls in public schools is lower than for boys but it is not possible to know with the given data the extent to which this difference is due to scholarships.[80] At least some of the expenses for adolescents in public school may be for private tuition. In Nepal, private tuition, or 'coaching classes', are taken to supplement public school education, especially to improve the chances of passing major exams including the Secondary Education Examination (SEE) at the end of secondary and the School Leavers Certificate (SLC) at the end of upper secondary (Subedi 2018). Some public schools are known to make private tuition a mandatory requirement for students at these grade junctures (Ministry of Education 2018).

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[80] Further analysis shows that mean education expenditure on adolescents attending public primary schools (below grade 6) is approximately half the average for all grades (data not shown).

The costs of religious school are slightly lower than for public school but are still equivalent to 20% of median per capita income and 28% of the average amount received by OAA recipients in the past year. Religious school expenditures are made up of the typical range of costs including fees, uniforms and books. This suggests that Muslim households opt for religious school as an investment and not because it is substantially lower cost than public school. Overall, the findings suggest that the OAA may have an income effect on public and religious school attendance, either directly or through access to credit. The data does not reveal how much of the expenditure is for private tutoring. However, given its widespread use, especially prior to critical exams, it is possible that the OAA improves retention in public schools at critical grade transitions. This interpretation aligns with the findings in Chapter 5 that suggest only a weak association, if any, between the effects of the OAA on paid work and school attendance. Direct costs appear to be more important than opportunity costs.

If the OAA has an income effect on school attendance, then equation (3) should produce similar results for education expenditure. The results in Table 18 (p.178) show that this is the case. In households with an OAA eligible woman, education expenditure on adolescents is higher by approximately 233% ($\beta_1+\beta_2 = 1.202$) and statistically significant. This is largely driven by the results for boys, with education expenditure higher by approximately 389% ($\beta_1+\beta_2 = 1.586$) and statistically significant. The large differences support the notion that households with an eligible woman not only maintain education expenditures where they may otherwise have declined but increase investment in education. While this could be for private tuition or other material costs, it may also be supporting adolescents to transfer from public into private school, including schools further away from home. Several other studies on UCTs identify simultaneous increases in school attendance or enrolment and education related expenditure, but this has not been linked to expanding school choice. However, Pakistan's Female Secondary School Stipend Programme (FSSP), a CCT, has been shown to benefit co-resident boys, allowing them to shift from public into private schools (IEG 2011a).

The results for education expenditure in households with an eligible man are not statistically significant; however, the negative coefficients indicate a possible reduction in expenditure which is greater for girls ($\beta_1 = -0.343$) than for boys ($\beta_1 = -0.029$). A

reduction in boys' education expenditure aligns with the decline in private school attendance. As proposed in Chapter 5, if households with an elder man access loans in anticipation of becoming eligible for the OAA but are unable to sustain the costs when the OAA fails to materialise, they would need to cut education related costs. Because boys' education tends to be prioritised, it is possible that some of the cut-backs to education expenditure are passed onto girls. This does not necessarily mean that girls are withdrawn from school if investment in private tuition is redirected from girls to boys who have transferred (back) into public school.

Pre-treatment differences in households with non-eligible elders provide further evidence for anticipatory responses. Compared to households with a non-eligible elder woman, adolescent education expenditure is notably higher and statistically significant in households with an elder man ($\alpha_1 = 1.721$) or couple ($\alpha_2 = 1.924$). In both cases, the difference is larger for boys but also large and statistically significant for girls who live with an elder couple. Despite household income and (general) expenditure being lower than households with a non-eligible elder woman, households with an elder man or couple find a way to spend substantially more on adolescent education. This could be a matter of different priorities. However, this is unlikely given that households with an elder woman substantially boost education expenditure once they receive the OAA. It more likely reflects a difference in timing in the response to additional income, with elder men and couples incurring debt based on future eligibility. This is returned to in the section investigating the relationship between the OAA and credit.

Intra-household bargaining and decision-making about adolescents' lives
The results so far point to several measurable effects of the OAA on adolescents' lives, with large differences in school attendance and education expenditure. Moreover, the OAA increases both household income and general expenditure. For the OAA to affect adolescents' lives, the analytical framework in Chapter 2 assumes that some form of resource sharing occurs within the household. If resources are not shared, adolescents will be excluded from the benefits of the OAA. Moreover, the specific processes of household bargaining and who has primary responsibility for major decisions about adolescents' life-course circumstances will determine the nature of the observed outcomes. This section first examines patterns of OAA expenditure and control, then

processes of resource sharing within the household, and finally responsibilities for decision-making about adolescents' lives.

OAA expenditure and control

One way to look at resource sharing within the household is to examine how the OAA is spent. Similar to the findings in Uprety's (2010) study examining the effectiveness of the OAA across 14 districts, recipients in the CTALS used the OAA in a diverse range of ways including expenditure on food, health care, clothing, and other personal items for both the recipient and for other household members, children's education, investment, loan repayments, and social events including weddings.

Table 20 shows the amount of the last payment allocated to different categories. Food, health, clothing, and personal items are consolidated into a single category of basic needs, separately for the recipient and for the household. Data is shown for all recipients and for those with non-zero expenditure in each category. Nearly all recipients spent almost 60% of the last OAA payment on basic needs, approximately equally divided between their own needs and those of the household. Most elders make a substantial contribution to the household pot, a strong indication of the interdependence of elders and other family members. Nevertheless, looking at recipients with non-zero expenditure shows that 11% of recipients did not contribute to the household more generally.

A smaller proportion of the last OAA payment was spent on non-subsistence needs such as education and investment. For recipients that spend in this way, the amounts are more substantial: 35% of recipients spent NRs 1,291 (US$ 11) of the last payment on education while 10% spent an average of NRs 2,813 (US$ 25) on investments and loans. It is possible that these categories overlap if reported loan repayments relate to education expenses and *vice versa*. There are several other reasons why the amounts spent do not necessarily reflect the impact the OAA has in any given area. First, data only relate to the last of three scheduled annual payments, covering a relatively short period and 82% of recipients had not yet spent approximately one-third of the amount received. Moreover, the seasonality of livelihoods, structure of the school year, date of major festivals, and so on, means that expenditures will vary across the year. Second, by increasing access to loans, the OAA may support larger investments in livelihoods and

education. Third, substitutions may occur, whereby spending the OAA on basic subsistence frees up other income for priorities such as education. Equally, if the OAA is spent on education, contributions from other sources such as earned income may be reduced (Alderman et al. 1995). Nevertheless, that one third of OAA recipients use some of the OAA for education indicates that this is a priority for households, and the OAA makes important contributions in other areas that affect adolescents' lives.

Table 20 Mean expenditure of the last OAA payment by expenditure category in NRs

	All recipients (n=745)			Recipients with non-zero expenditure			
	Mean	S.E.	% of total received	Mean	S.E.	n	% of all recipients
Own basic needs	2872	98	30.4	2918	99	734	98.5
Household basic needs	2653	98	28.1	2989	102	663	89.0
Education	437	40	4.6	1291	96	257	34.5
Investment / loan	272	40	2.9	2813	261	72	9.7
Social / other	347	34	3.7	904	79	286	38.4
Saved	102	22	1.1	2399	307	33	4.4
Unallocated	2755	134	29.2	3432	148	608	81.6
Total received	9438	151	100.0	-	-	-	-

Data source: CTALS 2017. Robust standard errors are used throughout, clustered at the level of household.

Whether major decisions about adolescents' life-course are primarily made by parents or elders, recipients of the OAA may exert some (additional) influence over expenditure decisions depending on the extent to which they control the OAA and their status within the households. Table 21 presents data on recipients' control of OAA income by various individual characteristics. While most recipients claim to control OAA income, 15% report that they do not. Control may by relinquished due to societal norms, ill-health, physical or mental disability, or even coercion. Elders are less likely to control the OAA if they are female, married, not the household head, and have no formal education. There is likely to be some correlation between these factors given the traditionally subordinate position of women to men in relation to economic decision making and education in Nepali society (S. Thapa 1996).

Table 21 Control of OAA income by characteristics of the recipient

Controls OAA income	Gender		Household head		Education level		Currently married		Total
	Female	Male	No	Yes	None	Some	No	Yes	
No	**69**	**41**	**85**	**25**	**106**	**4**	**34**	**76**	**110**
	62.7	37.3	77.3	22.7	96.4	3.6	30.9	69.1	100.0
	18.1	11.3	22.0	7.0	15.1	8.9	10.9	17.5	14.8
Yes	**313**	**323**	**302**	**334**	**595**	**41**	**277**	**359**	**636**
	49.2	50.8	47.5	52.5	93.6	6.5	43.6	56.5	100.0
	81.9	88.7	78.0	93.0	84.9	91.1	89.1	82.5	85.3
Total	**382**	**364**	**387**	**359**	**701**	**45**	**311**	**435**	**746**
	51.2	48.8	51.9	48.1	94.0	6.0	41.7	58.3	100.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Data source: CTALS 2017.

Causal estimates for the effects of the OAA on adolescents show marked differences in outcomes depending on the gender of the recipient. The data here suggest that these differences may, in part, be due to variation in control of OAA income. While elder couples may be more likely to share the OAA between them, single female elders are more likely to have relinquished control to the younger generation, the parents of the adolescent, with implications for the level of influence they have over decision-making.

The OAA and household bargaining

Turning to more general processes of resource sharing, the CTALS asked the main household respondent about resource pooling, defined as when adult household members typically contribute their income or labour and share food and other common assets. In 91.5% of households, all adult members pool resources, while in the remaining 8.5% of households only some members pool resources. No households reported that all adult members live economically independently. This is consistent with the OAA expenditure patterns in Table 20 and suggests that, in most households, the OAA can benefit other household members including adolescents.[81]

Parent and elder IDI respondents provide further insights into the processes of resource sharing including between the generations. The data shows that households engage in a spectrum of approaches to resource sharing and decision making about expenditure,

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[81] In a study by Case (2004) the estimation strategy makes use of differences in reported income pooling to identify the effects of South Africa's Old Age Pension on the health status of recipients and co-resident household members. In that context 20-25% of households were reported not to pool income.

from almost complete resource pooling, through mutual exchange, to economic independence. These reflect aspects of the different economic theories of household bargaining described in Chapter 2 including the cooperative and non-cooperative collective models.

Most commonly, respondents suggest that different incomes function as a kind of intra-household safety net between the middle and older generations. This is perhaps closest to the non-cooperative model of household bargaining. Incomes are primarily controlled and used by the recipient or earner, but mutual support is provided on a case by case basis. Once shared, resources may or may not be returned, depending on ability to do so and the level of reciprocity that exists.

> A: Older pension is given to [my parents-in-law]; it's not in my hand. They spend their money if we don't have and later, we spend the money on older people. We spend the money in case of urgency and later we give them the money at the time of need. If I don't have money in my hand old couple give me to spend it, and when I get money, I give it to the old couple back.
> Interviewer: Means when you need money to spend on [your children's] education old couple give you?
> A: Yes, they give me and say: "Spend it now and when you have, give me back."
>
> (Interview with Apsana, daughter-in-law of Sekh Basir, male, 74, and Rojidan, female, 71)

In many cases, inter-generational transfers work both ways.

> M: When the children ask, I give [the OAA] to them. If I don't have money. I borrow money from my son too…
> Interviewer: When you receive your money, do you return him or not?
> M: Sometimes I return and sometimes I do not… when he needs money he asks, and I give him if I have, and I don't if I don't have.
>
> (Interview with Mahamad, male, 76)

This kind of mutual support means that the OAA expands the overall household purse but with the additional income in the hands of the elder. In these circumstances the OAA can affect the lives of other household members, including adolescents, in a way that reflects the preferences of the elder, especially if they already have a role in decision-making.

In some households, while incomes are in the hands of the recipient, resource sharing may take more of a cooperative approach, especially in the case of basic needs. Respondents from both the older and middle generation suggest that sharing food is the

norm, whether purchased with the OAA or other income, and there is little question about contributing. This approach may be more common when the OAA recipient is also the head of the household.

> S: I spend money to run the house. I buy what are needed… Salt, oil, soap, vegetables… meat and fish.
> Interviewer: For your personal food or for whole family?
> S: It's for whole family (laughs). If I eat something how can I alone eat. We all eat. Sometimes I eat alone outside. If I have to eat outside, then only I eat alone but if I eat in home, we all eat together. It's not good that one eats, and others look at him.
> (Interview with Shekh Mubarak, male, 71)

Some respondents indicate that incomes are controlled by different household members but are pooled under the management of one person for the common good of the household.

> R: Now [she receives the OAA], it is better. Children can eat something with that money.
> Interviewer: Does she give to the children?
> R: Its good for the poor, when she adds her [OAA] money we can buy the things two kilos more than what I could buy only with my own money.
> (Interview with Rita, daughter-in-law of Krisna, female, 72)

Survey data shows that both these households fall in the third per capita income quintile and that, while the elders feel they have control of OAA income, expenditure decisions tend to be taken jointly. While the OAA is likely to benefit other household members in these circumstances, the extent to which the elder influences decisions may depend more on their status within the household than on their financial contribution.

Several respondents describe resource sharing that is more clearly based on cooperative pooling, at least intergenerationally, whereby one household member primarily controls all income and expenditure. In some cases, this means that financial responsibility within the household has passed to the next generation.

> Interviewer: Do you give [the OAA] to [your son] yourself or does he ask with you?
> S: I can't lie, he does not ask with me. I give it to him, sometimes I keep one or two hundred with me or even I do not keep it and give it to my son and grandson…
> Interviewer: Suppose if you need clothes, and need medication who takes care of yours?
> S: My son does everything, it's not that I am sick and he does not care me… Listen, these days son and daughter lead the house not the parents. That age is gone when parents used to lead the family. I can oppose him if

he does wrong, but he does not do wrong so I cannot oppose him. When there is problem, he solves it. If he had done wrong, then I could oppose him. All the burdens are on him.

(Interview with Shanti, female, 72)

In this case, like the 15% of OAA recipients who do not control income, the OAA may affect adolescents' lives but without much influence of the elder recipient. Again, this raises questions about how to interpret differences in adolescent outcomes according to the gender of the recipient and whether they reflect gendered or generational preferences.

At the other end of the spectrum, several respondents suggest that there is very limited resource sharing between the generations. In some cases, this may be because the household is relatively better-off. However, this also occurs in households that are among the poorest in the community such as the following case.

R: No, I have not given [the OAA] for anything or to anyone. I eat sweets, fish, meat whatever I want and buy clothes for me. If I fell sick then there is no guarantee how much is spent on my own body, two, three and five thousand rupees. I do not give anyone, not even five rupees, not even to my husband. My husband also does not give to anyone, he eats fish daily, meat, fish, and meat.

(Interview with Shiyabati, female, 70)

In some cases, economic independence may be the norm, but incomes are shared, sometimes reluctantly, at times of critical need.

B: When they give [the OAA] then it can be support, when older man says I will keep, and older woman also says I will keep then how can it be a support there?
Interviewer: Don't they give?
B: Didn't I say that if my son was not sick that time then old lady would not have given me a single penny…. I asked for it, I fell down in their feet, then they give 25 or 50 rupees, that's it, not a single rupee than that.
(Interview with Ram, son of Faguni, male, 64 and Prabha, female, 63)

CTALS data showed that there is an absence of resource sharing in up to 10% of households. There could be several explanations for this, including poor inter-generational relations, a high level of individual need in the case of poor health, or if the household is wealthy. Co-resident adolescents are unlikely to benefit from the OAA in these cases.

There are occasional contradictions in the accounts of resource sharing between the older and middle generations. As far as possible, IDI respondents from the same household were interviewed separately, as in the following case.

> A: I keep [the OAA] with me, and buy medicines when I fall sick, when there is pain in my stomach. If I don't have money, then I have to ask with others. I went to ask son and daughter in law, they did not give me. When I receive older pension, then I have money in my hand, and I can spend it.
> Interviewer: Did you spend on family or not?
> A: No, I don't give to them
>
> $\qquad$ (Interview with Aflima, female, 72)

> A: …But when someone falls sick and I don't have money at that time I spend older pension money on medication…
> Interviewer: Do you return it or not?
> A: No, but if she needs money for something then I give her. I don't say that I return that money, but as I ask money, I spend for her if she needs.
> $\qquad$ (Interview with Aabu Mahamad, son of Aflima, female 72)

It is not uncommon for there to be divergence between a household member's actual needs and contributions and how other household members perceive them (Agarwal 1997). However, these differences may also indicate that a range of resource sharing strategies co-exist and may change over time depending on the fluctuating economic circumstances of the household.

Overall, the data suggest that at the level of basic subsistence, most households take a more cooperative approach to resource sharing with at least some part of the different incomes under the control of one financial manager (Gram et al. 2018). This confirms that the OAA expands the total household budget which allows for re-prioritisation of other income(s) towards adolescents or for other needs. At the same time, expenditures on higher level needs are subject to a greater degree of negotiation over who contributes and how much, and with more influence from the senior decision-maker within the household, usually the household head. This is closer to the non-cooperative model of household bargaining. Thus, elders are more likely to influence major decisions related to adolescent education, work, and marriage, especially if they are the male household head and maintain control over the OAA, and where there is a substantial degree of cross-generational economic interdependence.

Decision-making about adolescent education and marriage

The OAA is associated with increases in income, general consumption and adolescent education expenditure. Moreover, the majority of households in the study share resources in such a way that the OAA expands the total household budget. However, control over OAA income and recipients' influence over expenditure decisions varies according to gender and status within the household. The analysis now turns to which household members are involved in major decisions about adolescents' life-course circumstances. Survey questions were asked to parents of adolescents about who in the household has the main say over adolescent education and marriage. As discussed in Chapter 3, challenges in data collection mean that it is not possible to identify individual household members by their relationship to the adolescent. However, it is possible to distinguish whether the decision-maker is the household head or not. In addition, elders and adolescents were asked the extent to which they are involved in decision-making about adolescent education and marriage.

Table 22 shows the corelation between the household member who has the main say over adolescent's education and marriage decisions. For over 90% of adolescents, the same person is responsible for both education and marriage decisions. The household head is the main decision-maker for just over half of adolescents. Although the age of household heads ranges from 21 to 86 years, mean age is 62 years and median age is 66 years. For nearly 46% of adolescents, the main decision-maker is not the household head and is therefore more likely to be their parents. Excluding children and adolescents under the age of 18, mean age of other household members (non-heads) is 38 years, and median age is 33 years.

Other data from the CTALS shows that just over half (55.1%) of elders within the bandwidth age are the household head. However, this rises to 85% among elder males and drops to 24% among elder females. Table 23 shows how much say that elders have over adolescents' major life-course decisions. Overall, 73.3% of elders claim to have the main or a significant say over adolescents' education and marriage. However, male elders and those who are the household head are much more likely to be a primary decision-maker. At the same time, 26.7% of elders have no or very little say over adolescents' lives and these are more likely to be female and not the household head.

Table 22 Cross-tabulation showing household member with the main say over adolescents' education and marriage decisions

Education decisions	Marriage decisions		
	Household head	Other household member	Total
Household head	**1,787**	**112**	**1,899**
	94.1	5.9	100.0
	92.3	7.2	54.5
Other household member	**150**	**1,438**	**1,588**
	9.5	90.6	100.0
	7.7	92.8	45.5
Total	**1,937**	**1,550**	**3,487**
	55.6	44.5	100.0
	100.0	100.0	100.0

Data source: CTALS 2017.

Table 23 Elders' say over adolescents' life-course decisions by gender and household head status

Say over major life decisions	Gender		Household head		Total
	Female	Male	No	Yes	
Main or significant	**712**	**1,087**	**569**	**1,230**	**1,799**
	39.6	60.4	31.63	68.37	100.0
	59.4	86.5	51.63	90.98	73.3
Some or none	**486**	**169**	533	122	**655**
	74.2	25.8	81.37	18.63	100.0
	40.6	13.5	48.37	9.02	26.7
Total	**1,198**	**1,256**	**1,102**	**1,352**	**2,454**
	48.8	51.2	44.91	55.09	100.0
	100.0	100.0	100	100	100.0

Data source: CTALS 2017.

These findings align with those in the previous section, that male elders and household heads are more likely to control OAA income. This gives further support to the interpretation that differences in observed outcomes according to the gender of the OAA recipient relate more to their relative power within the household than gendered differences in preferences. In households with elder females, decision-makers are more likely to be parents of the adolescent and the elder woman is less likely to control OAA income and to influence decisions. In contrast, elder males have greater control over OAA income and expenditure and exert more influence over decisions about adolescents' lives. In Nepal, the older generation has a stronger preference for earlier marriage than the younger generation (Ghimire and Samuels 2014), but it may only be

elder men, including those in couples, who are able to use the OAA to influence marriage timing. This may explain why increases in marriage migration rates are seen in households with elder men but not elder women.

Decision-making about adolescents' life-course circumstances must, to some degree, involve their cooperation. Adolescents may be able to exert influence over expenditure decisions, especially in relation to education, and have increasing agency as they get older. However, Ghimire and Samuels (2014) show that while adolescents in Nepal are increasingly more likely to have a say over who they marry and when, the traditional role of parents and elders in marriage decisions is still the norm in rural areas. In the CTALS, all adolescents who were at home and available for interview were asked about the extent to which they are involved in decisions about their education and marriage. Table 24 shows that 35.6% of adolescents say they are always involved in decisions about their education, while 38.8% are sometimes involved. Boys are more likely than girls always to be involved, while girls are more likely never to be involved. These findings highlight the importance of gaining the perspectives of adolescents on their education to fully understand why or why not the OAA affects their lives in particular ways. It will be shown in Chapter 7 that for some adolescents, their own ambitions can be a driving factor behind increased educational investment, while for others, poor experiences at school can lead them to drop out against the wishes of their parents or caregivers.

When asked about marriage, just 20.4% of adolescents said that they were fully involved in decisions about marriage. While only 5.4% said they are never involved, more than half of adolescents said there had not (yet) been any discussion about their marriage. Even if adolescents prefer to delay their marriage, most discussion and decision making is dominated by parents and elders within the household. Chapter 7 provides more detailed analysis about parental expectations of age at marriage and adolescent, parent and elder perspectives highlight the social pressures for early marriage and the (sometimes contested) processes of decision-making about marriage timing.

Table 24 Adolescents' level of involvement in own life-course decisions

Level of involvement in decisions	Education			Marriage		
	Gender		Total	Gender		Total
	Female	Male		Female	Male	
Always/fully involved	**442**	**487**	**929**	**284**	**249**	**533**
	47.6	52.4	100.0	53.3	46.7	100.0
	31.7	40.1	35.6	20.4	20.5	20.4
Sometimes/ somewhat involved	**543**	**470**	**1,013**	**303**	**223**	**526**
	53.6	46.4	100.0	57.6	42.4	100.0
	38.9	38.7	38.8	21.7	18.4	20.2
Never involved (don't know)	**410**	**259**	**669**	**97**	**45**	**142**
	61.3	38.7	100.0	68.3	31.7	100.0
	29.4	21.3	25.6	7.0	3.7	5.4
No discussion yet	-	-	-	**711**	**698**	**1,409**
	-	-	-	50.5	49.5	100.0
	-	-	-	51.0	57.5	54.0
Total	**1,395**	**1,216**	**2,611**	**1,395**	**1,215**	**2,610**
	53.4	46.6	100.0	53.5	46.6	100.0
	100.0	100.0	100.0	100.0	100.0	100.0

Data source: CTALS 2017.

The OAA and the role of loans

This section examines loan-taking practices and investigates whether the OAA plays a role in accessing loans for adolescent education and marriage.

Patterns of loan taking

Among the CTALS population, informal money lending dominates the loan market. In the 12 months prior to the survey, 45% of households obtained a new loan. Of these, 82% obtained the loan from an informal source such as a relative, friend, landlord, employer, local shopkeeper or other business; 29% obtained a loan from a financial institution such as a bank, cooperative, microfinance or savings association; and 11% received both (data not shown). While households are not completely credit constrained, more than half either did not require a loan or were unable to access one. It is possible that households have an outstanding loan that was obtained in the years prior to the survey. Data from the 2010-11 NLSS show a higher rate of loan taking across the rural central *Terai*. 73% of households obtained a new loan in the 12 months prior to the survey, mostly from informal sources; and households have an average of 1.4 current loans of which 26% were taken more than 12 months previously (Central Bureau of Statistics 2011b).

Table 25 shows the purpose and mean value of both informal and formal loans obtained by households in the past 12 months. Most commonly, informal loans were for health care; life events including marriages, births, and deaths, investment, and house building or repair. A small minority accessed informal loans for education, economic migration, and other reasons. Formal loans were taken largely for investment, but also for house building or repair, life events, and health care. Similarly, a small minority used formal loans for other unspecified needs, economic migration, and education.

Table 25 Purpose and mean value in NRs of household loans in the past 12 months

	Informal loans				Formal loans			
	n	%	Mean	S.E.	n	%	Mean	S.E.
All loans	749	100.0	121,346	5,912	257	100.0	111,507	11,885
Loan purpose								
Health	220	29.4	90,468	7,913	27	10.5	69,111	16,421
Education	33	4.4	89,909	18,280	9	3.5	508,556	213,630
Life events	177	23.6	162,611	16,804	38	14.8	92,726	12,782
Home building or repair	119	15.9	125,412	11,375	47	18.3	90,045	29,163
Investment	128	17.1	113,594	15,687	106	41.2	89,344	10,332
Economic migration	32	4.3	145,156	21,412	13	5.1	170,385	51,448
Other	40	5.3	128,175	19,062	17	6.6	163,118	43,024

Data source: CTALS 2017.

Among loan-takers, the average value of informal loans is NRs 121,346 (approximately US$ 1,074), slightly higher than formal loans at NRs 111,507 (US$ 987). NLSS estimates are similar, with an average loan value of NRs 111,749 per loan-taking household in the rural central *Terai* (Central Bureau of Statistics 2011b). In this study, formal loans for education are the largest, averaging NRs 508,556 (US$ 4,500), although this is due to a small number of very high value loans.[82] In contrast, informal loans for education average NRs 89,909 (US$ 796). The data suggest that loans taken for education are more likely to be for higher cost private schools and may be to cover fees for multiple years and living costs away from home.[83] This aligns with the findings that the OAA is linked not only to higher private school attendance but higher education migration and substantially higher education expenditures.

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[82] Real-time data quality checks during survey implementation identified and verified any unusually high monetary values.

[83] At least one such case of fees for multiple years was confirmed during verification of a high-value expenditure figure.

Other loan categories vary between an average of NRs 69,111 (US$ 612) and NRs 170,385 (US$ 1,508). Loans for life events including marriage average NRs 92,726 (US$ 821) from formal lenders and NRs 162,611 (US$ 1,439) from informal lenders. By comparison, families of married adolescent girls in the CTALS paid an average dowry of NRs 162,393 (US$ 1,437) although dowry value varies considerably from a low of NRs 15,000 (US$ 133) to a high of NRs 700,000 (US$ 6,195). While the dowry only represents some of the marriage costs, it is typically the largest (Amin and Bajracharya 2011).[84] Loans taken for life-events including marriage are of sufficient value to meet dowry costs. The next section explores whether the OAA has a role in accessing these loans.

The role of the OAA in accessing loans for education and marriage

In the CTALS, the average amount of OAA received in the past year is NRs 19,570 (US$ 173), equivalent to 16% of the average informal loan value. Data from the 2010-11 NLSS show that 60% of loan taking households in the rural central *Terai* did so without collateral (Central Bureau of Statistics 2011b). The OAA could play a role in securing loans, especially for poorer households that do not have collateral in land or other property.

CTALS data (not shown) indicates that 6% of OAA recipients used the last OAA payment for loan repayments with an average allocation of NRs 2,652 (US$ 23). In a separate survey question, 7.6% of elders reported that they had used the OAA as collateral to access a loan in the past 12 months. Given the long-term nature of loans and the limited reference period of the survey question, the proportion of households that have a current loan linked to the OAA may be underestimated. Moreover, smaller, short-term loans for consumption smoothing may by underreported in the survey. Data from the IDIs support this, with reference to the OAA being used to pay back loans in 57% of sampled households.[85]

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[84] No reliable data was found for national or regional comparison of dowry value.
[85] Loan access was not a direct line of enquiry in the IDIs. Any reference to loans was spontaneously raised by respondents.

Most commonly, OAA-facilitated loans are used to meet basic needs, especially medical costs.

> It was difficult when I did not receive [the OAA], when I receive it I buy rice, pulse and when fall sick ask money with others and buy medicines and when I receive pension I give it back to them. That is also development.
>
> (Interview with Maya, female, 64)

> Fifteen [or] sixteen thousand [rupees] was spent on my eyes. I had borrowed that money, as soon as I received my [OAA] money I gave them back. And we also ate with that money.
>
> (Interview with Mahamad, male, 76)

Respondents suggest that loan repayments are a priority for allocation of OAA income; and that the OAA has increased their credibility as a debtor, which allows them to better support the household.

> Yes, [my status after receiving the OAA] changed… To whom I ask money they give us, with the money we fulfil our needs, we all together take care of children.
>
> (Interview with Maya, female, 64)

In some cases, the OAA supports access to credit for investment in the household enterprise as well as to meet basic needs.

> We do farming as *Bataiya* [crop share], the expenses are there in farming. We buy seeds, give the payment to the man who ploughs the land, spend the money on medication. We take loan in the village to do all these things and later when he receives the [OAA] money I give them back. We buy vegetables as we don't have our own garden. We take loans and give them back later when he receives the [OAA] money.
>
> (Interview with Renu, daughter-in-law of Bibat, male, 74)

This supports the suggested made earlier in the chapter that, over time, the OAA may have a multiplier effect on household income.

One case among the IDIs demonstrates how the OAA is used to facilitate small informal loans for education. A Dalit couple both receive the OAA. Survey data shows that there are eleven members of the household including an 11 year old boy, Ajay, the oldest of six children. Two adult males left the household within the past three years to work in India. Despite income from remittances, private sector work and a small business, the household falls within the second poorest per capita income quintile. Ajay had attended public school for three years but recently moved to a nearby private school. Ajay's

grandparents were interviewed together and discuss how they support his education with the OAA and their reliance on loans to smooth education expenditures over the year, including for private tuition and private school fees.

> Yes, there is a drawback [to late receipt of the OAA] …, we have to give private tuition classes for the children and pay 200, 250, 300, 400 rupees per month… If we do not pay it monthly, then it becomes hard to pay all at once after seven or eight months…. If we get money on time, then our needs will be fulfilled.
> (Interview with Mahendar, 69, grandfather of Ajay, 11)

> The school fee of our grandson is 2,000 rupees monthly; we had made the [admission] paper thinking that we would take a loan from the money lenders…. The month is complete in the school, so the teacher and the school are asking for the fees. If I don't give them money, then do they go to study?... Yesterday, [my grandson] was saying that it's 2,000 rupees per month. "If you give me money to give to the school, I will go otherwise I won't go." … He has brought [a loan of] 2,000 rupees. Now he will give him [the money] and he will give to the school.
> (Interview with Budhia, 63, grandmother of Ajay, 11)

> Sometimes I say [to my grandson]: "you go I will pay the fee", he sometimes goes to school when I say so, sometimes he does not go saying that first give me money or "teachers beat me for not paying the fee".
> (Interview with Mahendar, 69, grandfather of Ajay, 11)

> In boarding [school] good clothes are needed, shirt, pants, socks, shoes etc. Those who are poor borrow the money and manage these things. Teachers say to wear this kind of dress, study, and buy bicycle. We bought a bicycle for the boy borrowing six thousand rupees.
> (Interview with Budhia, 63, grandmother of Ajay, 11)

> If we get [the OAA] after nine months, then we have to pay more interest to the money lender. They give us money but while paying them back we have to add money from home because of the high interest rate. If we receive money after three or four months, then our house will run smoothly.
> (Interview with Mahendar, 69, grandfather of Ajay, 11)

This case highlights several challenges facing households that strive for a higher standard of education for their children. First, the initial costs to attend private school can be high, including uniforms and a bicycle in this case, putting the household under additional financial strain. Second, both private school and tuition classes incur recurrent costs for which timely payment is important. If payment is late, Ajay fears he will be beaten by the teacher. Even if a student is not excluded by the school for late payment, they may leave due to abusive treatment. Physical punishment is common in

Nepali schools (Mishra et al. 2010) and data presented in Chapter 7 shows that other adolescents have left school for this reason.

Third, low and irregular income means that the household relies on short-term loans to meet both initial and recurrent costs. Ajay's grandmother suggests that this is a common strategy among the poor and indicates that they committed to private school education knowing they would have to rely on loans to meet the costs. An elder who is nearly eligible for the OAA could plausibly do the same, on the assumption that they will soon receive additional income. Fourth, OAA transfers are too infrequent and unreliable to pay for school fees directly, but they play an important role in accessing and repaying loans. Despite the high level of financial risk associated with loan taking, the household appears to be determined to seek better quality education. Evidence presented in Chapter 7 suggests that most households across the income distribution want to get at least one child into private school.

Two cases among the IDIs demonstrate the link between the OAA, loan-taking, and marriage. An elder widow lives with five other family members including three children. The household relies on paid housework as their sole earned income source and has one of the lowest per capita incomes in the survey sample. She explains how the OAA allowed her to borrow to support the recent marriage of her granddaughter.

> R: I spent five thousand for the marriage of my granddaughter. How could I not give money for the clothes and the other things to my son-in-law and granddaughter? I also gave money to my son.
> Interviewer: Was it from that [OAA] money?
> R: Yes. I have borrowed five thousand now…(interrupted)
> Interviewer: …except clothes and medicine what do you spend the money for?
> R: The money lender will take money adding the interest to it. Then how much will be left for me?
>
> (Interview with Sumitra, female, 73)

It is not known how instrumental the OAA was in determining the timing of the marriage. However, for a household this poor, marriage costs are likely to be lower. Mean dowry value is lowest among households in the lowest per capita income quintile and the lowest reported dowry for a married adolescent is NRs 15,000 (US$ 133).

The effects of the OAA on recent loan value

Several studies point to the role of cash of transfers in leveraging access to credit (IEG 2011b; Scott 2009; Adhikari et al. 2014; Hagen-Zanker, Mallett, and Ghimire 2015). If increased access to loans plays a role in financing private schooling and marriage, then differences in loan value associated with eligibility for the OAA should be observed. Returning to Table 18 (p.178), estimates for equation (3) are shown with recent loan value as the dependent variable. A tobit model is used to account for the large number of zero cases, therefore coefficients represent the change in the latent variable. Overall, the effects of the OAA on recent loan value reflect those of private school attendance and adolescent education expenditure; lower in households with an eligible man and higher in households with an eligible woman, although the only statistically significant result is for adolescents who live with an eligible man (β_1 = -2.035).[86]

Turning to pre-treatment differences, coefficients are also positive and large, although not statistically significant, for boys who co-reside with a non-eligible elder man (α_1 = 2.608) or couple (α_2 = 1.995). Again, this aligns with the findings for education expenditure, suggesting that compared to households with a non-eligible elder woman, those with an elder man or couple access more and larger loans prior to becoming eligible for the OAA. Because households with an elder woman access more loans and spend more on education after becoming eligible, this supports the interpretation of a difference in timing in the response to anticipated income, rather than a difference in preferences. Female elders may be more prudent, but this is difficult to evidence. Alternatively, in Nepal, men tend to engage in livelihood activities that generate cash income more than women. Adhikari et al. (2014) suggest that, as a result, men are better placed to secure loans and that a cash transfer would therefore have a greater effect on enhancing women's credibility as debtors. A perception of greater male creditworthiness may allow them to incur debt in advance of OAA eligibility, while elder women wait until the OAA is received. Moreover, in Nepal, money lenders are reported to be aware of social security distribution days, including the OAA, and pursue repayments accordingly (Drucza 2015). It is plausible that they are also aware of the eligibility criteria and may be willing to advance loans based on future eligibility.

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[86] Given the short-term nature of the data on recent loans, longer standing loans that relate to changes in marriage rates may not be observed in the data. Moreover, the marginal effects on marriage are relatively small compared to those on education; positive effects on marriage loans in some households may be concealed by the negative effects on loans for education in other households.

Interpreting the negative effects of the OAA on private school attendance

The most unexpected aspect of the findings are the negative effects that the OAA has on private school attendance, education expenditures and loans in households with an eligible man or couple. This section draws together the various strands of evidence to interpret the results. Other findings are summarised in the concluding section.

The results in Chapter 5 show that the OAA has a negative effect on private school attendance for boys who co-reside with an elder man; and on girls' education migration in households with an elder couple. At the same time, public school attendance is positively affected, and overall rates of mainstream school attendance are positive or unchanged. The OAA appears to cause adolescents to leave private school and, at least in some cases, to transfer (back) into public school.

An initial question might be whether the results reflect real changes in the population of adolescents. The validity of the estimation approach has been discussed in Chapter 5. Further confidence can be taken from estimates of the effects of the OAA on household income and expenditure; two similar but independently measured indicators of household economic well-being. In line with expectations and the existing literature, the OAA is associated with increases in both income and expenditure. Moreover, there is similar variation in the relative magnitude of the coefficients depending on the type of elder, and effects are diminished by the presence of WSW due to their prior receipt of the WSW Allowance. Accepting the validity of the results, there are two possible explanations for the negative effects of the OAA on private school attendance.

The first interpretation is that households face financial constraints that prevent them from transferring adolescents *from* private school into public school or some other occupation; the OAA allows them to overcome these financial constraints. This scenario lacks credibility. By many measures, including achievement, private schools are better quality and the direct costs are substantially higher than public schools. One alternative occupation for boys is economic migration; however, this only increases in households with an elder woman. Girls in households with an eligible couple may be withdrawn from school to get married. However, evidence presented in Chapter 7 shows that households that invest heavily in girls' education are unlikely to pursue early marriage,

regardless of school status. There is no other evidence that adolescents are engaged in alternative activities with financial barriers to entry.

The second interpretation is that, prior to eligibility, households with an elder man or couple respond to the anticipated increase in income by accessing loans to transfer adolescents into private school. However, on becoming eligible, the OAA fails to be delivered on time, in some cases delayed for up to two years. As a result, the costs of private school and the associated loan repayments are unsustainable, and adolescents drop out or (re)enter public school. Programmes with age-based eligibility criteria can typically be anticipated. In low income settings it could be assumed that anticipatory responses do not occur due to the existence of liquidity and credit constraints. However, how anticipatory responses manifest themselves are highly dependent on the context (Lee and Lemieux 2010).[87] In this case, multiple strands of evidence support an anticipatory response as the correct interpretation.

First, most elders have prior knowledge of the programme and the eligibility criteria. Moreover, other studies have shown that local money lenders are aware of the OAA and receive repayments from it (Drucza 2015). Second, prior to eligibility, private school attendance and education expenditure are both higher in households with an elder man or couple compared to an elder woman; while household income and general household expenditure are lower. In other words, households with a non-eligible elder man or couple find a way to invest more in education than households with an elder woman, despite being economically worse off. This could reflect different priorities. However, households with an elder woman substantially boost education expenditure once they receive the OAA, suggesting that this is not the case. Rather, there is a difference in timing in the response to the additional income. Households with an elder woman boost private school attendance after becoming eligible for the OAA, while households with an elder man or couple do so in anticipation of eligibility.

Third, the OAA supports investment in private school by facilitating access to credit. Loan taking is common in Nepal and among the CTALS population; households take

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[87] Edmonds (2006) argues that anticipatory behaviour is unlikely to have occurred in relation to child work and schooling responses to South Africa's Old Age Pension because households where the effects are greatest are also likely to be the most liquidity and credit constrained.

loans for education both in larger sums and for smoothing of smaller recurrent expenditures. Both quantitative and qualitative evidence show that the OAA is used by some households to facilitate loan access and repayments, and the effects of the OAA on recent loan value reflect those of private school attendance and education expenditure. Prior to eligibility, loan value is higher in households with an elder man or couple compared to households with an elder woman; while loan value is higher in households with an OAA eligible woman. The different timing of the response to the OAA (prior to and after eligibility) can be explained by differences in the level of credit constraints for elder men and women. Elder men are (perceived to be) more creditworthy and can access loans in advance of eligibility. Moreover, the reductions in private school attendance occur in households within the richer 60% of the per capita income distribution; households where the OAA is more likely to unlock access to credit; whereas most of the positive effects on school attendance occur in poorer households.[88]

It is also possible that households with an elder man or couple are more determined than households with an elder woman to fulfil their ambition for private schooling and make greater sacrifices in other areas. In this case, education expenditure would increase at the expense of general household consumption for a limited period while awaiting OAA eligibility. Re-prioritisation may explain some of the observed difference in education expenditure; however, the costs of private school are high, equivalent to 85% of median per capita income and 120% of the average OAA amount received; and may be even higher for education migration. Considering the low levels of income among the population, a substantial and sustained reduction in basic subsistence seems unlikely.

Fourth, increases in private school attendance in anticipation of the OAA should be sustained on becoming eligible, but are not. OAA recipients highlight the problems with infrequent, irregular, and unpredictable distribution which limits their ability to make more strategic expenditures including on adolescent education. More importantly, late entry into the programme is systematic despite knowledge of the scheme among non-eligible elders. Waiting an additional one to two years for anticipated income will put

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[88] The positive effects of the OAA on marriage migration, for which loans would also be necessary, are also only seen in richer households

substantial pressure on any related financial commitments, especially given the economic precarity of the population. Elders may be deterred from taking loans in anticipation of eligibility if they have prior knowledge of the delays in registration and receipt. However, it is not possible to say with the given data whether and to what extent to this occurs.

The data suggests that adolescents who were supported to attend private school based on co-resident elders' future eligibility for the OAA are subsequently withdrawn when the OAA fails to materialise. This primarily affects boys, who tend to be prioritised over girls for education. However, the findings in Chapter 5 showed that girls are also affected in households with an elder couple, who both receive the OAA, and who may have already secured private school education for co-resident boys. There is little measurable change in boys' private school attendance in these households. At least some of the adolescents who are withdrawn from private school (re)enter public school; while some of the reduction in education expenditure is passed on to co-resident girls. Evidence presented in Chapter 7 confirms that most households strive to educate both boys and girls, but boys are prioritised for higher quality and higher levels of education.

Summary and conclusions

This chapter has presented data from the CTALS and IDIs on the household economy, exploring the relationship between the OAA and income, expenditure, and credit, and how these relate to differences in adolescent outcomes observed in Chapter 5. The findings show that, for most households, the underlying conditions necessary for the OAA to affect adolescent household members exist. The CTALS population is poor relative to national, and even district averages, and is highly economically insecure. Moreover, households are slightly more credit constrained than the national average but are not entirely excluded from access to credit. In this context, the OAA is shown to be of sufficient value to meaningfully contribute to subsistence and some higher level needs in most households and the majority of households share resources between the generations.

At the same time, the magnitude of the effects on adolescents' lives, especially on school attendance, are limited by several factors. The high degree of economic insecurity among the population, infrequent and irregular distribution of the OAA, and

delayed entry into the programme, limit the effectiveness of the OAA in allowing households to smooth consumption and to make more strategic expenditures. For very different reasons, adolescents in the poorest households at the bottom end of the lowest income quintile, and adolescents in the richest households in the top income quintile, are unlikely to benefit. Adolescents in the approximately one in ten households where resources are not shared between the generations are also unlikely to be affected.

The findings reveal insights into the pathways through which the OAA affects adolescents' lives. The evidence strongly points to a direct income effect on private, public, and religious school attendance, with increases in private school most likely facilitated by access to loans. While much of the increase in school attendance will be due to retention, possibly at critical grade junctures, the evidence also supports the notion that some adolescents transfer from public to private school. Reductions in paid work and increases in economic migration also align with differential effects on household income and expenditure.

The OAA increases access to credit, both for lower value consumption smoothing to meet subsistence needs and smaller education related expenditures and for lumpier investments including entry into private school and marriage. The analysis also shows that the reduction in private school attendance should be interpreted as an unsustained anticipatory effect. With knowledge of forthcoming eligibility, elder men, who are perceived as more creditworthy than elder women, take loans to transfer adolescents into private school. However, long delays between eligibility and first receipt of the OAA mean the costs are unsustainable and adolescents drop out and (re)enter public school.

Finally, variation in outcomes according to the gender of the recipient may reflect both gendered and generational differences in preferences or interests. While parents are important decision-makers in most cases, elders have an important role in major decision-making. However, the extent of their influence depends on their gender and status within the household. Male elders are more likely to be the household head, and nearly three quarters of male recipients, compared to just half of female recipients, both control OAA income and have a significant say in adolescents' lives. Thus, elder men, including those in couples, have a greater degree of bargaining power within the household and can use the OAA to fulfil their preferences. Conversely, uneducated

elder women who are not the household head are least likely to influence decisions about adolescents' lives and the younger generation is more likely to decide how additional income is used. Adolescents are also shown to have varying degrees of influence over major decisions about their education and marriage, which points to the importance of understanding their perspectives on how their experiences and agency shape the effects of additional household income on their lives.

In summary, the dynamics of the household economy have an important bearing on how the OAA affects co-resident adolescents. Chapter 7 now examines the other cultural, social and economic factors that shape households' decisions about adolescents' life-course circumstances and how these moderate the effects of additional income.

Chapter 7

Exploring the determinants of adolescent life-course circumstances: situating the role of the OAA in context

Introduction

Cash transfers are received into households with a multitude of factors already shaping decisions about adolescent schooling, work and marriage. The analytical framework in Chapter 2 shows that the more proximate determinants of adolescent life-course circumstances can be at the level of the individual, the household, and the community and that they shape the nature of the effects that a cash transfer has on adolescents. Understanding these factors can help explain why certain effects occur, or not, and for whom. This is important as it allows policy makers to design social protection programmes that maximise positive outcomes, minimise potential negative effects, and are more responsive to the varied needs of the intended beneficiary population.

The OAA has been shown to have various impacts on adolescents' lives, some of which are clearly beneficial, but others which are harmful from an individual and societal perspective. The effects vary depending on adolescents' age and gender, the socioeconomic status of the household, the gender and cohabitation status of the recipient, and the dynamics of resource sharing within the household. These are marginal effects and many adolescents are likely to see no change in their lives from the additional income provided by OAA.

The OAA interacts with household decision-making in a complex context and the primarily quantitative analysis presented so far tells only part of the story. Many reasons may underlie the gendered differences in outcomes, including social and economic norms and expectations relating to education, work, and marriage, and how these interact. Variation in effects on school choice may be driven by differences in availability and quality of education provision or other cultural considerations. Despite providing the financial means to continue education, additional income may not make a

difference where other social or cultural factors limit educational opportunities and may even support faster transitions into adulthood where these preferences or interests already exist.

This chapter uses qualitative data complemented by additional quantitative analyses to provide insights into the factors that drive decisions about adolescents' life-course circumstances. The analyses provide evidence towards the third research question of the thesis which asks how OAA income is factored into households' gendered preferences and decision-making about adolescent life-course options. The next section describes the data and methods. This is followed by the findings presented in three parts that examine access to school, work, and marriage in turn. The final section integrates the findings and concludes.

Data and methods

Data in this chapter comes from the in-depth interviews (IDI) with complementary analysis using CTALS data. Semi-structured IDIs were conducted with elders, parents and adolescents from 21 households with a confirmed OAA recipient. Individual interviews were conducted with 16 adolescents, 18 parents, and 21 elders.[89] Households were sampled by randomly selecting an individual adolescent from the survey to maintain a degree of representativeness, but within certain limitations.[90] A detailed account of the sampling approach is provided in Chapter 3.

Including the sampled adolescent, the 21 IDI households contain a total of 43 adolescents who were either resident or had recently left the household. While only one adolescent (at most) was interviewed per household based on the initial sample, parents and elders provided insights into other adolescents within the household. Using data from the CTALS, Table 26 shows the life-course status of adolescents in the IDI and CTALS samples. Mean age of adolescents is similar across the samples. The random element of the IDI sampling has some advantage in reflecting the study community and

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[89] It was intended to interview one elder, one parent or guardian, and one adolescent from each household, but not all were available in each case.

[90] Because of the interest in adolescents who left the household, adolescents were selected evenly between those who were resident at the time of the survey and those who had recently out-migrated. Geographically, the sample was restricted to three of 13 administrative areas covered by the CTALS with a balance of Hindu and Muslim communities. Adolescents from households from the richest income quintile were excluded due to the low relative value of the OAA to the household.

avoiding unintentional bias. As intended, adolescents who out-migrated are over-represented. However, given the findings in Chapter 5, the interviews would have benefited from greater representation of certain groups, especially adolescents who are married and adolescents who were known to have transferred from private into public school and *vice versa*.

As described in chapter 3, organisation and interpretation of the data used a hybrid thematic analysis (Fereday and Muir-Cochrane 2006). The starting point for analysis was the corpus of coded interview transcripts. The data was coded into the broad life-course themes of education, work and marriage and several sub-categories of factors that influence decisions about adolescents' life-course options including individual characteristics, social status, the household economy, OAA income, values and preferences, and external factors. Analysis of the coded corpus involved an iterative process of (re)reading and (re)organising the data by identifying common themes and anomalies and clustering and mapping the themes, integrating with survey data, and writing. The process allowed for new themes and concepts to emerge alongside the initial code structure, promoting subjective interpretations of the data.

The first step involved a careful (re)reading of the extracts relating to a life-course theme, focusing on all interviews from one household. In this way, it was possible to identify coherence and contradictions within as well as between households. The process of reading aimed to identify two main ideas: which influencing factors are important for the given circumstance of an adolescent and in which way; and how this relates to the additional income provided by the OAA. Second, key points of interest were summarised for each household and combined with data from the CTALS about the ethnicity/caste and per capita income quintile of the household. In addition, IDI data about the adolescents was cross-validated with data from the CTALS. In most cases, triangulation verified the accuracy of the data. In some cases, it showed that an adolescent's circumstance had changed between the survey and the IDIs. In a few other cases the data was contradictory, most notably regarding adolescents who were reported in the survey as never having been to school but who may have attended when they were younger and dropped out. Any apparent contradictions in the data are discussed where relevant in the findings.

Table 26 Comparison of adolescent life-course circumstances between IDI sample and CTALS sample

| | CTALS sample | | | | IDI sample (co-resident with OAA recipient) | | | | | |
| | Full sample | | Co-resident with OAA eligible | | Total | | Girls | | Boys | |
	n	%	n	%	n	%	n	%	n	%
Total	3437	100.0	1794	52.2	43	100	25	58	18	42
Mean age (years)	13.1	-	13.2	-	13.3	-	13.2	-	13.5	-
Attends mainstream school	1976	57.5	1085	60.5	28	65.1	17	68.0	11	61.1
Public	1341	39	764	42.6	25	58.1	17	68.0	8	44.4
Private	635	18.5	321	17.9	3	7.0	0	0.0	3	16.7
Dropped-out	332	9.7	169	9.4	4	9.3	1	4.0	3	16.7
Never attended	1126	32.8	539	30	11	25.6	7	28.0	4	22.2
Attends religious school	256	7.5	129	7.2	3	7.0	2	8.0	1	5.6
n	2975	-	1527	-	33	-	21	-	10	-
Work participation										
Paid	281	9.5	132	8.6	2	6.1	2	9.5	0	0.0
Unpaid economic	2062	69.3	1054	69	20	60.6	14	66.7	6	60.0
Domestic	2495	83.9	1294	84.7	26	78.8	20	95.2	6	60.0
n	3437	-	1794	-	43	-	25	-	18	-
Married	241	7	129	7.2	2	4.7	2	8.0	0	0.0
Out-migrated	461	13.4	266	14.8	12	27.9	4	16.0	8	44.4
Education	266	7.7	153	8.5	6	14.0	2	8.0	4	22.2
Employment	106	3.1	64	3.6	4	9.3	0	0.0	4	22.2
Marriage	57	1.7	35	2.0	2	4.7	2	8.0	0	0.0

Data source: CTALS 2017 and IDI sample list.

Third, adolescents from each household were organised into groups reflecting their circumstance. The analysis of school attendance focuses on adolescents who are in public (or low cost religious) school; adolescents who are in private school; and adolescents who are out of school. The analysis of work focuses on school-going adolescents; adolescents who dropped out of school prematurely to work; and adolescents who never went to school or dropped out primarily for non-economic reasons. The analysis of marriage is organised into adolescents who are unmarried and in school; adolescents who are unmarried and out of school; and adolescents who are married.

Fourth, the data were written as a narrative that describes the most important cultural, social and economic factors behind the circumstance of the adolescents and how they interrelate, the choices and trade-offs that households make, and to what extent the OAA was likely to have been factored into decision making. While data from all IDIs have been used to inform the analysis, selected extracts are provided where appropriate to exemplify the points being made. Quotes were selected to balance diversity across the sample with the richness of certain cases. As such, 25 of 52 individual voices from 15 of 21 households are represented with certain individuals reappearing. While adolescent voices are represented through those who were interviewed, parents and grandparents provide insights into many of the other co-resident adolescents in the sampled households. As in Chapter 6, apart from the names of the respondents, direct quotations have not been changed from the original translation.

Quantitative data comes from the CTALS unless otherwise stated. Descriptive statistics are presented on the reasons for being out of school, the relationship between school attendance and marital status, and expected age at school completion and marriage. Details of the specific variables are provided in the text where necessary.

The determinants of access to school: quality, cost, and social norms
The findings in Chapters 5 and 6 show that the OAA supports adolescents to remain in public and private schools through an income effect and, in some cases, supports a shift from public to private school by increasing access to credit. For other adolescents, the shift to private school occurs in anticipation of the OAA but is unsustainable and they drop out or (re)enter public school. Effects vary depending on the gender and age of the

adolescent and the socioeconomic status and structure of the household. Certain adolescents are unlikely to have benefited from the OAA despite it having a positive effect on household income.

The analysis in this section reveals both common and exceptional factors at the level of the individual, household, and community or society, that either enhance or constrain adolescent access to school, and considers how these factors shape the extent to which the OAA supports school attendance or expands school choice. The findings are structured according to three broad groups of adolescents defined by their school status. First, are adolescents who attend mainstream public school or low cost madrassas. Second, are adolescents who have greater school choice and are either in private school or a higher cost madrassa. Third, are adolescents who never attended or dropped out of school.

Adolescents who attend mainstream public school or low cost madrassas
CTALS data show that mainstream public schools attract less than two-fifths (39%) of adolescents; with a higher proportion of girls (42%) than boys (36%). This drops to just 13% among the Muslim population. However, nearly 20% of Muslims, representing 7% of all adolescents, attend madrassas of different fee levels, many of which are as low or lower cost than public schools.

Nearly half of IDI households illustrate where the OAA may have been important in supporting continued attendance at a mainstream public school or a low cost religious school. Common across these households is the high value placed on education and the significant level of personal determination on the part of the adolescent to attend school. Both Hindus and Muslims perceive a range of benefits from mainstream education including being wise and knowledgeable, reading and writing, running a business, finding employment, and improved social mobility. These views were expressed by adolescents, parents, and grandparents, despite most of the middle and older generation having little or no education themselves. Anju, aged 15, has just completed Class 10 and is awaiting the results of her Secondary Education Examination (SEE). She describes the importance of education within society.

> Everyone looks for educated people, everything becomes good if one is educated. To read, write, and know something, education is needed. Even if you have to search some [news] paper you need to be educated.
>
> (Interview with Anju, female, 15, Terai/Madhesi)

Anju's mother is very supportive of her education because Anju has academic ability and personal motivation to go to school.

> Renu: She was a child who wanted to study so she would study anyhow; but if the child does not want to study then no matter how much money you give or beat her, she would not study at all. How to educate the child if she does not study?
> Interviewer: Suppose you have less income than you have now, would you educate her?
> Renu: Yes, I would educate her in that situation too because she is the student who wants to study.
>
> (Interview with Renu, mother of Anju, female, 15, Terai/Madhesi)

Like Renu, most respondents in poorer households who place a high value on education say they would *find a way* if they had less money.

Muslim households gain various benefits from religious education which include fulfilling religious obligations, forgiving the sins of family members, and improving marriage prospects. Some Muslim households send their children exclusively to the madrassa. Survey data shows that this is the case for 19.7% of Muslim adolescents and is similar for girls and boys. Rakiba has five grandchildren including two adolescent girls aged 15 and 11. The girls have never been to mainstream school but attend the local madrassa.

> Rakiba: …Their father and mother educate them [at the madrassa] with my help. This is the age of education. They will be forward when they are educated.
>
> (Interview with Rakiba, grandmother, Muslim)

Attitudes towards education vary within the Muslim community and households may value both mainstream and religious education. As discussed in Chapter 4, some madrassas teach aspects of the national curriculum but integration into madrassa education is limited in practice, especially in Rautahat district. In some Muslim households, adolescents simultaneously attend mainstream school and the madrassa. Two sisters, aged 15 and 12, go to the local public school during the day, occasionally receive (mainstream) private tuition, and attend the madrassa before and after school. Their mother died and their father works in Kathmandu, so they are dependent on their

grandparents. The OAA is a significant part of the household income and directly supports the girls' education.

In other Muslim households, mainstream education is favoured over religious education. This is the view of Ibran, whose ambition is to work in public service.

> Interviewer: Why did you study in government school rather than in Madrasa?
> Ibran: Because I wanted to learn Nepali rather than Urdu… I like Nepali. And Urdu is not good.
> Interviewer: What is the advantage of reading Nepali?
> Ibran: Because people become Sir ji, Officers and Police when they study Nepali.
>
> (Interview with Ibran, male, 11, Muslim)

As the survey data shows, Ibran's attendance at public school is unusual for a Muslim adolescent. His parents support his mainstream education despite social pressure for him to engage in work and pressure from religious advocates to attend the madrassa.

Most Hindu and Muslim IDI households with an adolescent in public or low cost religious school fall within the bottom two income quintiles. They face considerable financial constraints on the level of investment they can make in education, which results in three necessary considerations: who to educate, for how long, and at what quality.

First, one adolescent's education is often prioritised over another. Some households prioritise the adolescent who shows greater academic aptitude and self-motivation. This is the case with Anju and her 13 year old sister, Gita, who never attended school, ostensibly because of lack of interest. In the earlier extract, their mother Renu differentiates between the girls in the willingness of the household to invest in their education. Some households prioritise boys over girls. Boys' attendance at mainstream school is 8 percentage points higher than for girls (see Chapter 4). However, this does not mean an absence of support for girls' education. Many respondents express their determination to educate their girl children and the OAA provides a larger boost to girls' public school attendance compared to boys, especially in poorer households (see Chapter 5). Favouritism towards boys' education is more evident when households have the financial means to pursue private school education (discussed in the next section). However, data presented in Chapter 6 shows that boys in public school receive

approximately 36% more investment in their education than girls. The largest part of this difference relates to fees. Girls may have fees waived as part of the state-funded scholarship scheme. However, it is likely that boys also receive more private tuition, especially at critical grade junctures (Subedi 2018).

In some households, younger adolescents appear to receive greater support for their education following the failure to satisfactorily educate older siblings. Two older brothers, aged 17 and 20, dropped out of school some years earlier when their parents' ill health led to a loss of income. At the time of the interviews, the household was more financially stable, and their 11 year old brother and two younger sisters were all attending school. This aligns with evidence from other developing countries including India that shows first born children are more likely to receive less schooling and to transition into work at a younger age (Kumar 2016). In contrast, other IDI households with slightly higher incomes, falling within the third income quintile, have managed to keep all children in public school.

The second financially-constrained consideration involves limiting the grade level that an adolescent is likely to complete. By law, public education is free up to primary level, and should be free up to secondary level for girls and certain marginalised groups; however, analysis in Chapter 6 shows this may not be the case in practice. Further analysis of CTALS data shows that costs rise with age by a factor of around NRs 1,000 (US$9) per year.[91] Moreover, there are a limited number of schools that offer higher levels of education with as few as 9% of public schools in Province 2 providing upper secondary (Ministry of Education 2018). Even the most determined students and parents from poorer households must limit their ambitions when education becomes too costly.

> Renu: We do not have capacity to educate her further, we are poor people. She says that she will study but we want to stop the study. There is one member of the family who earns the money and seven or eight people for the expenses. Her grandfather receives the money and he gives us little from that.
> (Interview with Renu, mother of Anju, female, 15, Terai/Madhesi)

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[91] Total education expenditure in the past year is regressed on age for adolescents who have lived in the household for at least 2 years and are currently attending public school: $n = 1201$, $\beta = 1011.09$, S.E. = 87.68, $p < 0.001$.

Nonetheless, parents may have a long-term view of the level of education they expect for their children. Ibran's mother is determined for him to complete the SLC, also known as the *matric*, at the end of Class 12 and explains the importance of the OAA in supporting this aim.

> Sabana: He is good at study. He concentrates on study. I want to educate him up to matric. If I can, I will do. If I would get power, then I will educate him further after matric, if not, then only up to matric.
> Interviewer: Do you think this is because you have money of pension?
> Sabana: Yes. If Mother won't live or dies, then how could I get pension? That time, if income supports then I will educate him otherwise it will be stopped.
>
> (Interview with Sabana, mother of Ibran, male, 11, Muslim)

At the same time, Sabana expresses her concern about achieving this. Ibran is currently in Class 3 and, barring delays, will reach Class 12 by age 20. Mainstream school attendance rates among boys decline to just 38% among 17 year olds (see Chapter 4) and Ibran's two older brothers dropped out after Class 5 and 8.

The third consideration that very poor households make related to investment in education is limiting their options to poor quality, local public schools. Sunita, aged 13, is currently studying in Class 3. Her older siblings dropped out of school after Class 2 and 4; but Sunita's mother and grandfather are committed to her education because she *studies well*.

> Sumintra: Sister, I want to send her out for her study but… it needs to take room in rent, food to eat and monthly fee to the teacher… Poor people like me cannot afford all these…
> Interviewer: In what type of school would you send Sunita if you had to take decision?
> Sumintra: In Private school of Gaur looking at things… Sister, everyone wants to do that, but we don't have money… We are loaded with the poverty.
> (Interview with Sumintra, mother of Sunita, female, 13, Terai/Madhesi)

Although private school is out of reach for most adolescents in very poor households, opportunities to access better quality education are sometimes available. Sunita benefited from a government tuition programme that provides catch-up classes to help children (re)enrol in mainstream school. She was able to enrol in a public school in another VDC where the tuition teacher works, and which is attended by other girls from the village.

> Sumintra: Yes sister, teacher said that "teaching method is not good here so I will take her to the school [in Baluwa] and bring her here". I said if she goes with you and you will drop her here, it's fine.
> (Interview with Sumintra, mother of Sunita, female, 13, Terai/Madhesi)

Religious education also varies in quality and cost. Rakiba, whose 15 and 11 year old granddaughters go to the local madrassa, has ambitions for them to go the *big* madrassa in a neighbouring VDC where they are *more serious* about teaching. However, Rakiba explains that the fees are prohibitive at up to NRs 3,000 (US$ 27) per month compared to the costs of the local madrassa at NRs 150-250 (US$ 1-2) per month. The desire to access private schools or more costly madrassas, even among very poor households, reflects the large part they play in the education sector and the marked difference in quality between public and private schools across the country.

In most of these poorer households, respondents recognise the role played by the OAA in supporting the costs of school attendance. As shown in Chapter 6, approximately 36% of OAA recipients spent some of the last payment directly on education and the OAA often acts as a kind of intra-household safety net, allowing the smoothing of education expenditures over time. Returning to the case of Anju, her mother and grandfather confirm that the OAA is added to her father's earned income and contributes to stationery, admission and exam fees, and private tuition. She clearly articulates that the OAA is the factor that allows her to access private tuition.

> Anju: There would be problems [without the OAA] but I would study. Maybe I could not take the coaching classes because they used to ask me money in the beginning of month. But I would study.
> (Interview with Anju, female 15, Terai/Madhesi)

As discussed in Chapter 6, private tuition is critical in supporting adolescents in public school to pass exams and to transition to higher grades.

Incomes also tend to be shared in a way that means the OAA expands the total household budget. Several IDI respondents recognise that, because the OAA is spent on the elder's medicine or other basic needs, it is easier to support the children's education.

> Rakiba: OAA money made the life easier for older people. If we would not receive it then it would be difficult whether to look at the older person of the family or to the children's education. When older people receive it they can spend the money on their medication, buying vegetable and clothes. There would be problem if we would not receive it.

>Interviewer: Even if you do not give them directly it becomes easier for them to educate their children because you spend the OAA money on you?
>Rakiba: If we would not receive it won't be comfortable. Sons would have to look after their sick parents and could not educate their children.
>
>>(Interview with Rakiba, grandmother, Muslim)

Without the OAA, education may be compromised because costs cannot be met, time sensitive payments may be late, and debt may be incurred. The evidence suggests that the OAA plays an important role in supporting continued attendance at school, especially where both the parents or guardians and the adolescent have significant determination to do so.

Adolescents who attend private school and higher cost madrassas

In the CTALS, nearly one-fifth of adolescents attend a mainstream private school. Close to one-third of households involved in the IDIs illustrate where higher incomes, possibly aided by the OAA, have expanded school choice by providing access to higher quality private schools. Most of these are moderately poor households in the third or fourth income quintile. Like very poor households with an adolescent in public school, parents and grandparents are determined to educate their (grand)children and adolescents show strong personal determination to go to school.

Most respondents highlight the quality of teaching as the main reason for sending their adolescents to private school. Aabu Mahamad has four sons and values both mainstream and religious education. His second son, aged 18, completed the SLC at private school and has since left. Attab, his youngest son, aged 12, recently shifted from public to private school. Fees for the private school are relatively low at NRs 500 (US$4.40) per month but Aabu Mahamad sees a substantial difference in the quality of teaching and potential for learning.

>Aabu Mahamad: For three or four years he studied in government school but could not write name and address correctly, then I sent him to the boarding [private school]. What happens there is they pressurize to study. They know that we will pay money, so they continuously teach him, but in government [school] one day vacation, one day only two periods, and this and that. Teachers involve in politics in the village so teaching quality is not good… If I pay in boarding, he studied in one year what he had done in government school in three years.
>
>>(Interview with Aabu Mahamad, father of Attab, male, 12, Muslim)

Abishek, aged 10, recently moved from the local public school in Jhunkhunwa to a nearby private school. His grandfather believes that he would be unlikely to continue his education at the local public school.

> Ajan: No expenses are needed [at government school]. He eats from our own home and goes to study, but I don't think the teaching is good there. Teachers sit on one side, students play on the other side. The boys go to school after finishing the work here, but he does not study well, he is in bad track. He will only study if we keep him in boarding spending the money.
> (Interview with Ajan, grandfather of Abishek, male, 11, Terai/Madhesi)

Abishek's mother confirms that the decision to send him to private school is about the discipline and focus of the teachers.

> Nilam: If the teaching in government school becomes good, people won't send their children to the boarding [private] school…. The main thing is children should learn and be good, it does not matter in which school they study.
> (Interview with Nilam, mother of Abishek, male, 11, Terai/Madhesi)

On transferring to private school, Abishek had to go back two grades from Class 3 to Class 1, reflecting the difference in standards of teaching. Analysis of CTALS data shows that adolescents in private school are on average nearly one year younger and two classes lower than adolescents in public school.[92]

Compared to very poor households, moderately poor households are more likely to have all adolescents in some form of education. However, choices are still constrained by the level of income and decisions must be made about who receives additional investment in education, for how long, and at what quality. First, most households have several school-age children but may only be able to support one to attend private school.[93] This is the case for all IDI households, and it is notable that these are all boys. Most respondents recognise the value of education for both girls and boys, but where additional investment can be made, boys tend to be favoured.

> Archana: Yes, [my daughter is] in government [school]. I am a poor woman how much can I afford? I have sent my son to the boarding [private] school.
> (Interview with Archana, mother, Dalit)

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[92] Among adolescents who lived in the household for at least two years and are currently attending a mainstream school, a t test of age by school type indicates a difference of -0.74 years (S.E. = 0.104, p = 0.000) and a t test of current grade by school type indicates a difference of -1.69 grades (S.E. = 0.137, p = 0.000).

[93] Analysis of CTALS data shows that among households with more than one adolescent of whom at least one is in private school, 54% have only one in private school (data not shown). Moreover, adolescents are not the only school age children in the household.

There is also a tendency to focus on sons when discussing larger ambitions for children, reflecting expectations about their future economic role in society. Bikhari's two oldest sons dropped out of school prematurely, but his two daughters, aged 11 and eight, and six year old son, are in school.

> Bikhari: Whose parents do not dream to make their son a doctor and send him to US by flight, and not to cut the grass? No one wants his son to work in the field. Most important thing is money… Two daughters and one son are studying, I am thinking that we are residents of Nepal, people will say that even their father was illiterate his son is educated.
>
> (Interview with Bikhari, father, Brahmin/Chhetri)

Fewer than half the number of girls attend private school as boys; and the analysis in Chapter 5 finds more substantial effects of the OAA on boys' private school attendance compared to girls. Girls may be more likely to benefit from private school education only when the household is rich enough to have done so first for boys.[94] This is reflected in the attempt, albeit unsuccessful, to boost girls' migration for education in households with elder couples who are both eligible for the OAA. Once girls are in private school, they receive a much higher level of investment, although approximately 18% less than private school-going boys (see Chapter 6). Underlying these differences are gendered economic and social norms and expectations relating to social interaction, future incomes, and age-at-marriage. These issues will be returned to later in the chapter.

Muslim households that have just one school-age child in private school may be financially constrained but may also have preferences (or obligations) for religious education. Aabu Mahamad, who supported two sons to attend private school sent his other two sons to religious school but for different reasons. His eldest son, aged 21, was educated at the madrassa to fulfil the family's religious obligations.

> Aabu Mahamad: Yes, we discussed in the family that at least one among four should learn [at the madrassa]. At least that facility we can have.
> (Interview with Aabu Mahamad, father, Muslim)

His third son, Sahabudin, aged 15, was attending the local public school but recently moved to the madrassa. Both Sahabudin and his father agree that this was his own choice, preferring to study Urdu and the Quran rather than the mainstream curriculum.

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[94] Assuming this to be the case, girls who attend private school are less likely to appear in the IDI data given that the sample deliberately excluded households in the top per capita income quintile due to the limited value of the OAA relative to household income.

Second, as well as limiting the number of adolescents in private school, investment in private education may be delayed until a certain point in the grade structure. Some adolescents shift into private school at a certain stage because higher level classes are not available in the local school or to increase their chances of success at critical junctures, such as when working for the SEE or SLC. Jitendra has two sons, aged 17 and 13, and a 15 year old daughter. The two younger adolescents go to the local public school which may be better quality compared to some, as Jitendra explains, *everyone's children are educated here*. Unusually for his generation, Jitendra completed secondary level education and has ambitions for all his children to complete upper secondary level. His oldest son, Randhir, moved from the local school to a private school in Gaur where he boards. Jitendra's daughter, Anita, aged 15, is still in public school but has the same ambition.

> Interviewer: If it were on you, would you study in government or in other school?
> Anita: …I would study in boarding [private], in big school.
> Interviewer: …Why do you want to study in boarding then?
> Anita: Teaching medium is English in boarding, there are talent students there. It is taught very much there.
> (Interview with Anita, female, 15, Terai/Madhesi)

Results from Chapter 5 show that the increase in private school attendance associated with the OAA in households with an elder woman is larger among older boys. Attending private school can mean a large financial commitment. The costs are relatively high and increase substantially with age; by approximately NRs 4,000 (US$35) per year.[95] While some households may delay entry into private school until a certain grade juncture, private school attendance rates decline considerably with age, suggesting that others may use the OAA to remain in private school for longer. The balance of cases that fall into each of these scenarios is unclear. However, it is notable that three of six adolescents among the IDI sample who are currently in private school, shifted to private school during the months between the survey and the IDIs. Movement between schools is relatively common and aligns with the earlier findings that

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[95] Total education expenditure in the past year is regressed on age for adolescents who have lived in the household for at least 2 years and are currently attending private school, n = 568, β = 4029.45, S.E. = 522.31, p = 0.000.

households with an elder man act in anticipation of the OAA to increase, rather than sustain, private school attendance.

The third constraint on households with an adolescent in private school is that they would prefer their children to attend a better private school if they could afford to.

> Jitendra: If I had better economic situation, I would have sent my children for the study to Birgunj or Kathmandu. I would have sent them to the bigger college. Since I don't have that economic status, I send them in the school of village.
>
> <div align="right">(Interview with Jitendra, father, Terai/Madhesi)</div>

This highlights the variety in cost and quality of private schools. Given the low level of development in Rautahat relative to the rest of the country, better and more expensive schools are almost certainly located outside the district. CTALS data shows that among adolescents, mostly boys, who migrated for education, 18% went to Kathmandu and 26% went abroad, almost all to India. The largest group of education migrants, 36%, stayed in Rautahat and a further 21% went to other, mostly neighbouring, districts. The effects of the OAA on education migration are perhaps more plausible knowing that adolescents do not necessarily have to move far from home.

While most households with an adolescent in private school are only moderately poor, respondents recognise that the OAA is important to the elder or the household in general. In some cases, an explicit link is made between the OAA and adolescent education.

> Jitendra: Yes, it has been a convenience to me that I do not have to spend all money on her medication. Government's money is spent on my mother's which saves my own earned money that I spend on my children's education. Otherwise I would be backward because I would have to spend the money on mother including education and to run the house. But now that money is spent on my mother. That's government's money. If it is not sufficient then only I add in that. And there is no shortage of money to spend on children's education.
>
> <div align="right">(Interview with Jitendra, father, Terai/Madhesi)</div>

The poorest household to have an adolescent in private school was introduced in Chapter 6. Ajay, aged 11, recently moved to a private school in the nearby VDC after three years at the local government school. His grandfather directly supports him with the OAA by paying the monthly fees. However, the household is economically insecure

and the OAA is paid infrequently, so he often relies on loans to pay the fees. Even when receiving the OAA, maintaining private school fee payments can be challenging.

Factors that prevent access to (mainstream) school

Data presented in Chapter 4 shows that 43% of adolescents are not in mainstream school. These include adolescents who reportedly never went to school and those who dropped out; among adolescents who are not attending school, 77% never attended and 23% dropped out.[96] Notably, never attending mainstream school is an issue largely affecting Muslims. Muslim adolescents constitute 38% of the adolescent population but make up 82% of never-attenders compared to 21% of drop-outs.

Figure 31 shows mainstream school attendance and drop-out rates by age. While the school attendance rate decreases and the drop-out rate increases with age, the proportion of adolescents who never attended school stays approximately constant.[97] This suggests that never attending school is a durable issue that continues throughout adolescence and does not generally end with late enrolment. Those who have never been to school are unlikely to ever do so. This implies that any difference in attendance rates brought about by the OAA relates to prevention of drop-out or transfers, in either direction, between public and private schools. Most evidence on UCTs points towards prevention of drop-out rather than inducing (re)enrolment (see Chapter 2).

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[96] IDI data suggests that a small number of adolescents who were reported as never-attenders in the CTALS had been to school at a very young age but dropped out quickly; never-attenders may be over-estimated in the survey data. Having dropped out some years before, it may be that in the mind of survey respondents they never went to school.

[97] Although the population of adolescents includes those who left home within the past three years, the number of adolescents in the sample decreases with age. It is possible that adolescents who left the home more than three years ago would increase the rate of never-attenders to some extent. However, among adolescents who left the households in the past three years, nearly twice as many did so for education than any other reason. The effect, if any, is likely to be small.

Figure 31 Mainstream school attendance and drop-out rates by age
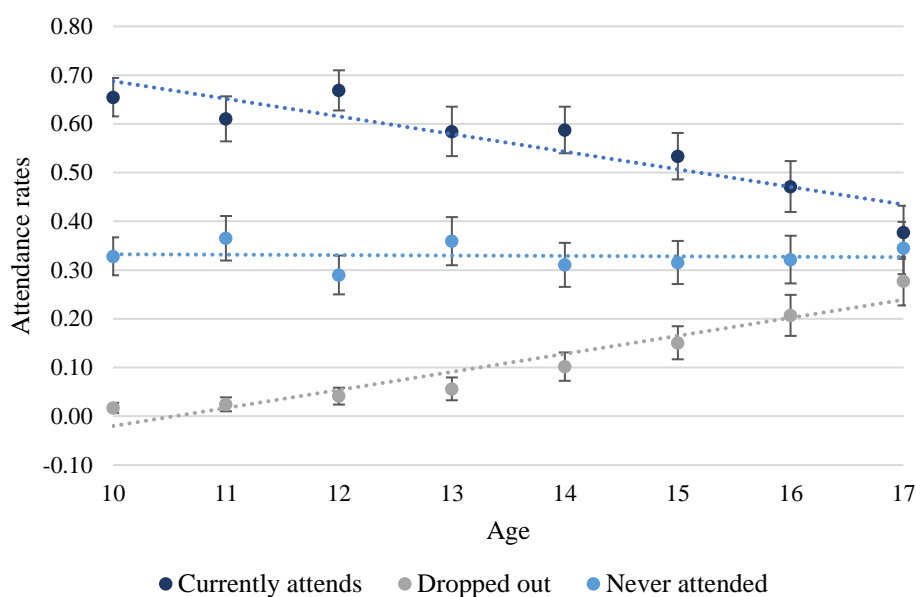
Data source: CTALS 2017. n = 3434. Figure shows the linear fitted line and error bars (95% C.I.) using robust standard errors clustered at the level of the household.

Table 27 and Table 28 show the primary reason that adolescents never went to school and dropped out of school, respectively, as reported by parents or guardians.[98] In nearly half the cases (49%), parents reported that adolescents who never went to school had a lack of interest in going. Most never-attenders are Muslim and there may be a strong perception among this community that mainstream schools are culturally inappropriate (Hafiz, Prakash, and Rajbhandari 2008). However, a sizable minority of never attenders and most drop-outs are non-Muslim; and almost half (48%) of drop-outs did so because of lack of interest. For many, the lack of interest may stem from the poor quality of public school education and the (perception of) limited future opportunities that this education brings.[99]

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[98] The CTALS asked adolescents the same question and the average responses are very similar. Parent/guardian responses are used here because they include adolescents who were unavailable for interview.

[99] Many children start school late, some of whom may have had the chance to form a negative view of school. It may also be that responses to the question are coloured by their parents' current perception of their lack of interest.

Table 27 Primary reason for adolescents never attending mainstream school

	All adolescents		Girls		Boys	
	n	%	n	%	n	%
Too expensive	261	23.5	145	23.9	116	23.0
Needed to help at home	81	7.3	55	9.1	26	5.2
Lack of interest	541	48.7	282	46.5	259	51.4
Marriage	3	0.3	3	0.5	0	0.0
Illness / disability	11	1.0	4	0.7	7	1.4
Poor quality school	15	1.4	4	0.7	11	2.2
Too far	17	1.5	13	2.2	4	0.8
Denied admission	11	1.0	7	1.2	4	0.8
Other reason[†]	170	15.3	93	15.4	77	15.3
Total	1110	100.0	606	100.0	504	100.0

Data source: CTALS 2017. [†]Includes one case of 'don't know' for girls.

Table 28 Primary reason for adolescents dropping out of mainstream school

	All adolescents		Girls		Boys	
	n	%	n	%	n	%
Too expensive	28	8.5	10	5.8	18	11.5
Needed to help at home	62	18.8	35	20.4	27	17.2
Lack of interest	158	48.0	71	41.3	87	55.4
Marriage	24	7.3	23	13.4	1	0.6
Illness / disability	6	1.8	4	2.3	2	1.3
Poor grades / failed exams	18	5.5	8	4.7	10	6.4
Poor quality school	1	0.3	1	0.6	0	0.0
Too far	9	2.7	7	4.1	2	1.3
Denied admission	5	1.5	3	1.7	2	1.3
Other reason[†]	18	5.5	10	5.8	8	5.1
Total	329	100.0	172	100.0	157	100.0

Data source: CTALS 2017. [†]Includes one case of 'don't know' for girls.

The second most common reason for never attending school is economic. Nearly a quarter (24%) of cases reported school to be too expensive, rising to nearly a third (31%) when including those who need their child to help at home. The second most common reason for dropping out of school is to help at home. This could be for either domestic or economic work. The rate is slightly higher for girls for whom domestic work is more likely. That this reason is more common among drop-outs is unsurprising given the value of labour at home increases with age. For those adolescents engaged in economic, especially paid work, the OAA could reduce the need for their income, allowing them to stay in school. However, the findings in Chapters 5 and 6 suggest only a weak link, if any, between reductions in paid work and increases in school attendance.

The direct cost of school is the primary concern for 12% of boys who dropped out, possibly because boys are more likely to be considered for private school. For girls, marriage is also an important factor, driving school dropout in more than 13% of cases. A gendered pattern emerges from the data, whereby boys are more likely to drop out because of lack of interest or cost and girls are more likely to drop out to help at home or for marriage.

The third most common reason for never attending school is the 15% classified as 'other'. Further analysis of the data shows that 91% of these cases are from Muslim households. Among these, 44% are currently attending the madrassa and others may have done so in the past. In these cases, parents may be expressing their preference for religious education, their dissatisfaction with mainstream education, or both. In contrast, just 6% of drop-outs did so for 'other' reasons and few of these are Muslims, suggesting that switching from mainstream to religious education is less common.

The remaining reasons for never attending or dropping out of school include disability, poor school quality, failed exams, distance, and being denied admission, collectively representing approximately 5% of cases. The IDIs reveal that poor quality of teaching in public schools is a significant issue and it is perhaps surprising that this was not more prominent in the survey. As suggested, the problem of low school quality may be expressed by survey respondents as a lack of interest, especially among those who cannot afford better options. This would reflect Nepalis' low expectations of public services, the culture of not speaking out, and possibly fear of exclusion if seen to complain (Adhikari et al. 2014; Hagen-Zanker and Mallett 2016).

Almost half of households involved in the IDIs include at least one adolescent who is out of school, representing one third of all adolescents from the sample. These adolescents either never went to school or dropped out because of a range of financial and non-financial barriers to education. Like the survey responses, lack of interest is sometimes cited as the reason for either never attending or dropping out of school, with little further explanation. Some adolescents may have a learning difficulty. One father says of his 15 year old son who never attended school, that he *didn't know how to study*

and that his *mental condition is less.* However, none of the adolescents in the survey have a reported physical or mental disability.[100]

Most respondents suggest that the circumstances behind being out of school are multifaceted and complex, often involving both push and pull factors. In contrast to the survey findings, most common are push factors relating to the school including poor quality teaching, corporal punishment, and discrimination or unfair treatment. Survey respondents may be more inclined to identify personal reasons when confronted with limited options. However, as will be shown, poor school quality underlies many of the other factors that drive non-attendance. Bindu, aged 13, went to the local public school but was determined to leave after experiencing both poor teaching and violence.

> Bindu: Since the day madam [the teacher] beat me and I got fainted, then I didn't go to school again. Teaching was not good, so I didn't go.
> Interviewer: Why did madam beat you?
> Bindu: Students were quarrelling, but madam came and beat only to me then after I fell down. But she did not care me. Other students had taken me to home from the school. I went to the school next day, but the teaching was not good, so I didn't continue school since then. And I started cutting grass.
>
> (Interview with Bindu, female 13, Dalit)

Other girls, such as Chandani, aged 15, testify to dropping out, in part, due to harassment by boys.

> Chandani: Even when we used to talk with our brothers, they started to gossip that we are having affair with the boy, that's why all the girls left the school.
> Interviewer: Is this also the reason to leave the school?
> Chandani: Yes
>
> (Interview with Chandani, female, 15, Terai/Madhesi)

The poor quality of teaching and difficult environment in public schools aligns with earlier findings from the IDIs. Some households do all they can to shift their children into private school or risk them dropping out altogether. Alternatively, private tuition can make up for the poor quality teaching in many public schools. However, both options are only available to those who can afford it and tuition classes will not overcome the problems of harassment and abuse.

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[100] During the interviews, the research assistants were not aware of any adolescents with a disability or learning difficulty. However, this does not mean that there were none.

Social, economic, and cultural pull factors exert pressure on adolescents to leave school, which tends to increase with age. These include concerns about and constraints on girls' social interaction outside the home, cultural and social exclusion of Muslims from mainstream education, and increasing economic and social pressure to work and to marry. For girls, constraints on female-male public interaction can limit opportunities that are available to boys, and may prevent accessing education altogether.[101] Lilam, aged 12, was in public school at the time of the survey but dropped out shortly after. Her grandmother believes this was because she had to help in the house following major floods that destroyed homes, crops and assets. However, her mother gives a different account.

> Archana: Lilam studied up to third or fourth grade. But the teaching method was not good there so Lilam said "Mommy, teachers do not teach in good way in the school." Then I managed tuition classes for her. She is grown up now, so she said "My friends are also not going. How can I go alone? Her father said her that other friends will go for their education, if you go, you will be knowledgeable. You are making excuses of giving example of others who do not go." Then I also thought it's not good that she goes to Jhunkhunwa alone.
> (Interview with Archana, mother of Lilam, female, 12, Dalit)

Private school was considered as an option for Lilam, but her mother emphasises the difficulty of adolescent girls interacting with males outside the home.

> Archana: [Her father] asked "Daughter why did you leave the study?" Her uncle asked if she would study in boarding [private school] then she answered "No, I will study in government school." Her father also talked to other girls if they would go to school. You know the situation, it's difficult to send the girls alone somewhere, isn't it?
> (Interview with Archana, mother of Lilam, female, 12, Dalit)

The economic shock from the floods and demand for labour at home may have been the immediate trigger for Lilam to leave school in a context where the poor quality teaching provided little incentive to stay. At the same time, constraints on female movement limit her options even though her family can pay for tutoring and private school. In contrast, Lilam's nine year old brother continues to attend private school. Despite these difficulties, her mother is determined for Lilam to go back to school. They hope to buy a bicycle so she can commute to another public school that is considered better quality.

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[101] Actual incidents of inappropriate behaviour could be considered as a push factor; however, perceptions that it could occur are perhaps a more important pull factor.

Some Muslim households may find mainstream schools culturally inappropriate. Based on interviews with students and community members from 11 madrassas that were registered as providing the mainstream curriculum, Hafiz, Prakash and Rajbhandari (2008) suggest that the main reasons for low participation of Muslims in mainstream schools are the lack of religious education, a culturally unfriendly environment, and no instruction in Urdu. Cultural appropriateness of mainstream education was not a direct line of enquiry in this study and may not be readily articulated among the community. Rather, as shown earlier, respondents tend to describe education in the madrassa as a pull factor away from mainstream education. The data suggests that decisions to attend a madrassa rather than mainstream school tend to happen pre-adolescence.

However, some adolescents move from one education system to the other as a result of pressure from religious campaigners who come from outside the local community. Sajid, 15 years old, from Jhunkhunwa, was attending private school but his uncle, a religious teacher, convinced him to go to the madrassa. His mother explains the difficulties caused by changing education systems, which eventually led to him dropping out.

> Kanija: My sister's husband enrolled him [in the madrassa] and went out. Other *Maulavi* [religious teacher] of the Madrassa used to beat him. Two or four times he came home happily then later he said he won't go there. He ran away from there. My husband beat him with the stick. You know the mother loves her child, I said "what will happen when you beat him", and I did not let him beat the boy. Then he went to his maternal grandmother's home, he stayed there for few days then he went to Kathmandu with his maternal uncle saying that he won't study. So, we called him [back] from the maternal grandmother's home. We were penalized with two thousand rupees in the school. They asked for two thousand in the boarding [private school] again. Paying two thousand rupees, we got him re-enrolled in the boarding. Since he was back from studying Urdu, he became weak in boarding school too. Teachers used to beat him and also asked "you studied very good but why are you so weak now?" He left in the boarding too. We tried and beat him two or three days, but he did not study.
>
> (Interview with Kanija, mother of Sajid, male, 15, Muslim)

The data suggests that where there is an existing (or new) preference for religious education over mainstream education, additional income is more likely to facilitate the move by supporting the associated costs.

Expectations and pressures to work and to marry can also lead adolescents to leave school prematurely or to never attend in the first place. The determinants of adolescent work and early marriage, and their relationship to school attendance, are explored in the following two sections.

The determinants of adolescent work: normality, necessity, and opportunity

The findings in Chapters 5 and 6 show that the OAA reduces the rate of participation in paid work by compensating foregone income. It may also reduce the risk of migrating for work for some adolescents while increasing economic migration opportunities for others. As with school attendance, findings vary by age and gender of the adolescent and the socioeconomic status of the household. At the same time, the results show only small and non-significant effects, if any, on unpaid economic and domestic work, despite the potential for the OAA to do so through investment or changes to adult labour supply.

Various other factors affect demand for and supply of adolescent labour which in turn determine the nature of the effects of the OAA on work. IDI data provides insights into the determinants of adolescent work which are presented in three typical scenarios: school-going adolescents who may be at risk of dropping out; adolescents who dropped out of school prematurely because they had to work; and adolescents who never went to school or dropped out primarily for non-economic reasons. Each sub-section explores the nature and drivers of adolescent work and considers how the OAA relates to this.

Work among adolescents who attend school

Data presented in Chapter 4 show that nearly all adolescents, including those in school, do some amount of work, whether domestic or economic. However, participation in paid work is much lower among school-goers. Similarly, most adolescents from the IDI sample engage in some amount of work, including those who attend school, although younger adolescents are sometimes said to contribute less because *they are still a child.*

For most adolescents, work is a part of everyday life which makes an important contribution to the household and develops important skills as they transition to adulthood (Morrow 2012). Sabrina, aged 15, goes to the madrassa, but also works and cooks in the home. Attab, aged 12, goes to private school but sometimes helps his father

and older brother to sell vegetables. These work contributions do not appear to compromise their education. In some cases, work can even make an important contribution to adolescents' education. Anju, aged 15, was shown in previous extracts to be an above average student. She helps in the home and used to contribute to her parents' *batayia* (crop share) work. Now she provides private tuition to other children and uses the money to pay some of her own education costs. Anju's case is exceptional; paid work is predominantly done by out-of-school adolescents.

The analysis in Chapter 5 showed that the effects of the OAA on school attendance were generally larger in households with more working age adults. Households with fewer adults are generally poorer, but they may also place greater demands on adolescent labour which an income transfer is unable to compensate. In some cases, respondents recognise that the OAA may prevent adolescents from having to increase their participation in work, potentially at the cost of leaving school. These happen to be younger adolescents from households in the second poorest per capita income quintile and who are all attending public school. Ibran, aged 10, was shown earlier to benefit from the OAA for his education. His mother suggests that if his grandmother did not receive it, he would have to go out and work.

> Interviewer: When she does not have pension and you need money then what would you do?
> Sabana: I will borrow.
> Interviewer: How would you pay it?
> Sabana: When children will work then I will pay.
> 			(Interview with Sabana, mother of Ibran, male, 10, Muslim)

These cases support the findings from Chapter 5 that the OAA reduces participation in paid work, although in contrast to Ibran, the reductions in paid work are larger among middle to older adolescents in better-off households.

Adolescents who dropped out of school to work

In some cases, poverty has forced adolescents out of school and into work. CTALS data shows that in all these cases, the adolescents dropped out to start work before the co-resident elder was eligible for the OAA. Bikesh, aged 15, left school to work when he was 12 years old. While his mother says he *did not study well*, Bikesh felt a strong determination to contribute income to the family after his father fell into debt.

> Sumintra: No, no one [stopped him from going]. When the brothers were separated and loans were divided, he said "how much father alone can earn, what happens with this earning, let me go out and know some skills". Thinking all these, the boy went out.
> Interviewer: Did you say, "don't go"?
> Sumintra: Yes, we said not to go, first study and then go.
> Interviewer: What did his grandfather say?
> Sumintra: Grandfather said not to go, his father said not to go, his uncle said, "it's not time to go for you, study now." He did not listen to us and said, "if you do not let me go, I will run away." Then everyone said not to run away but go with everyone's consent.
>
> (Interview with R, mother of Bikesh, male, 15, Terai/Madhesi)

The balance between the contribution of poverty and poor quality schooling in driving the transition into work is not always clear. Bikesh may have had little incentive to study given the available options. The family was keen for him to continue his studies but appeared to be unable to pay for private school. Bikesh's grandfather believes that if they had more money at the time, they would have educated him further at private school. Equally, better public schools would provide greater incentive to stay in school, in which case the OAA might have a larger effect on reducing participation in work. The findings in Chapter 5 show that effects on reducing paid work are larger in richer households with fewer working age adults. There may be a necessary level of household income above which the OAA can tip the balance from paid employment to school or other home-based work.

Some girls are required to work fulltime in the home because of a shortage of other female labour in the household. In Nepal, children are sometimes known to move between households to address an imbalance in household composition (Libois and Somville 2018). Among the IDI cases, two adolescent girls live with their maternal grandparents to *keep them company*. This can be to the girls' advantage if they have better opportunities for education. However, in some cases, household work is prioritised over education. Nisha, aged 12, has lived with her maternal grandparents since the age of three when her mother died. They value her education and used the OAA to support it. However, she dropped out of the local public school after missing her exams when her father kept her at his home for an extended period.

> Maya: I did a lot for her, but her father deceived. If she were here, she would do something, we would not leave like this. She was the only one girl in his family, there are no other young ladies that's why they made her stop her study.

> Interviewer: You planned to educate her time and again, but her father dismissed it?
> Maya: Yes, he dismissed it saying: "My daughter will be like this, she will not study. She will live in home."
> (Interview with Maya, grandmother of Nisha, female, 12, Dalit)

In this case, the OAA was supporting Nisha but other forces were stronger in pulling her out of school and into work.

Adolescents who are out of school for reasons other than work

In several cases, adolescents are not able to go to school for a range of non-economic reasons and work becomes the default option. For boys, this can involve migration for paid work opportunities. Sajid, aged 15, dropped out of mainstream school at age nine to attend the madrassa, but then dropped out of school altogether.

> Shekh Mubarak: His mother said if you don't do anything here then go to Kathmandu to learn something. If you don't study, then learn some skill so that you can earn that can feed you. That's why he went to work with his maternal uncle.
> (Interview with Shekh Mubarak, grandfather of Sajid, male, 15, Muslim)

> Sajid: They [said I should go to school] but I said, "I don't like", so I didn't go. Then they said if you don't do anything go to learn some skill. And I went to my maternal uncle and worked, again I will go there.
> (Interview with Sajid, male, 15, Muslim)

For girls, this may mean working in the home until their marriage can be arranged. Chandani left school recently for a range of reasons including poor teaching, difficulty in studying, and harassment, with no options outside the local public school. She is now engaged in household work until her marriage can be arranged.

> Interviewer: I ask you about your daughter Chandani. What does she do?
> Rita: She cooks food, feed everyone, cleans the house and washes the clothes of all.
> Interviewer: What about study?
> Rita: I tried a lot but she did not study, what can I do?
> (Interview with Rita, mother of Chandani, female, 15, Terai/Madhesi)

In such cases, the OAA may prevent adolescents having to engage in more adult work outside the home. Bindu, age 13, left school because of poor teaching and after experiencing corporal punishment, despite the OAA supporting her school costs. She now works in the home and takes the cows grazing but suggests that her grandparents' OAA means she is less likely to engage in paid work.

> Interviewer: What is the convenience with the money of older pension in your life?
> Bindu: I can eat.
> Interviewer: Won't you get things to eat if there were no older pension?
> Bindu: No, I had to go to earn money.
> Interviewer: Would you have to go to earn wages?
> Bindu: Yes
>
> (Interview with Bindu, female 13, Dalit)

In other cases, the OAA may help expand employment opportunities for out of school adolescents. After leaving school, but while still at her maternal grandparents' home, the OAA paid for Nisha to attend tailoring training. This would have continued if she had not gone back to her father's home. When boys migrate for work the OAA can help support the household during initial periods of training when wages are lower. Bikesh, who has been working for three years, left for Delhi in India to train as a painter about one year ago.

> Sumintra: He is learning skills at this moment, once he becomes skilful, he will earn.
> Interviewer: Does he earn too?
> Sumintra: Only little.
> Interviewer: Does he send that money?
> Sumintra: Yes, he does.
> (Interview with Sumintra, mother of Bikesh, male, 15, Terai/Madhesi)

This supports the findings in Chapter 5 that show the OAA is associated with an increase in economic migration among older adolescents who co-reside with an elder woman, especially in poorer households. It is possible that the OAA covers the shortfall in earnings during periods of low paid apprenticeship as well as the initial costs of migration such as transport.

The determinants of early marriage: social expectations, economic incentives

The data presented in Chapter 4 shows that early marriage is a significant problem for girls, but also affects boys. Findings from the literature presented in Chapter 2 are ambiguous about the effects of UCTs on marital status, which have been found to both increase and decrease marriage rates among adolescent girls. The analyses in Chapters 5 and 6 show that the OAA increases the chances of girls leaving the parental home for marriage in certain circumstances, most likely through increased access to credit. The risk is higher among older girls in poorly educated but richer households.

The analysis in this section aims to understand the practice and perceptions of marriage among the study community, and how the OAA may interact with decisions about marriage timing. The first part explores expectations around expected age at school completion and marriage among unmarried, school-going adolescents; the second examines the status of unmarried adolescents who are out of school; and the last part focuses on married adolescents.

Expectations for unmarried, school-going adolescents

Table 29 shows the expected age at school completion and marriage as reported by parents.[102] Among unmarried adolescent girls the average ideal age for marriage is 19.2 years, slightly more than 3 years younger than boys. Among current school goers, expected age at marriage is 20.2 years for girls and 23.6 years for boys, compared to an expected school completion age of 19.3 years and 22.0 years, respectively. For both girls and boys, the transition to marriage is expected to happen soon after completion of schooling, but 3 years earlier for girls.

Table 29 Expected age at school completion and expected age at marriage among non-married adolescents by mainstream school attendance status

	Girls			Boys		
	Mean	S.E.	n	Mean	S.E.	n
Expected age at school completion						
Attends school	19.3	0.10	899	22.0	0.11	1069
Expected age at marriage						
All	19.2	0.08	1502	22.5	0.08	1694
Attends school	20.2	0.09	879	23.6	0.10	1068
Previously attended	18.8	0.20	128	21.5	0.19	147
Never attended	17.7	0.11	495	20.3	0.12	476
Hindu	19.9	0.08	1011	23.3	0.10	1076
Muslim	17.8	0.12	491	20.9	0.12	618

Data source: CTALS 2017. Robust standard errors clustered at the level of the household.

This reflects the circumstance of adolescent girls from at least one third of households involved in the IDIs. For girls with the determination and means to be educated, both they and their parents are clear that marriage will come after those ambitions have been

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[102] The relevant survey module was required to be administered to a parent or guardian of the concerned adolescent. However, this was not always possible and in some cases a grandparent was the most likely alternative respondent.

achieved. Khushbu, aged 19, was recently married after completing upper secondary. Her younger sister Mala, aged 18, is currently in the last year of upper secondary and will be married soon after.

> Pramila: Yes, [Mala] is 18 or 19.
> Interviewer: In your caste does daughter get married at the age of 18?
> Pramila: Yes
> Interviewer: Don't you think that its early?
> Pramila: (Laughs) yes, it's early.
> Interviewer: If you know that then do you get her married now?
> Pramila: We are not doing right now, we are preparing for that. Next year she will be 20 years old.
> (Interview with Pramila, mother of Khushbu, female 19, and Mala, female, 18, Terai/Madhesi)

In contrast, all IDI respondents consider the idea of marriage for adolescent boys as a more distant concern. In richer and poorer household alike, boys' marriage will occur only after education has been completed, they are engaged in work, and are financially independent. For 11 year old Ibran, who has ambitions to complete the SLC and work in public service, both he and his mother agree that he will be married only when he becomes 'young', meaning of-age locally, in his early twenties.

> Interviewer: In the village children are married in early age, what do you think about Ibran?
> Sabana: When he will be young or will be of 22 years aged or 23 years aged then only. If we get him married in this early age then would it be good?
> (Interview with Sabana, mother of Ibran, male, 11, Muslim)

In these circumstances, it is possible that the OAA could help avoid earlier marriage by preventing school drop-out during periods of economic insecurity. However, with such a strong commitment to later marriage, even if the adolescent were to leave school prematurely, marriage would not necessarily immediately follow.

Expectations for unmarried out of school adolescents

Table 29 shows that being out of school is correlated with 2-3 years lower expected age at marriage. For girls, this is 18.8 years among drop-outs and 17.7 years among never attenders. Some girls are no longer in school, but their marriage is likely to be several years away. Bindu, aged 13, was shown earlier to have recently dropped out of school due to poor teaching and corporal punishment. Her mother is considering getting her married by the age of 18 but her grandmother thinks her marriage should be even later.

> Paramsila: Twenty year is the marriageable age, if she gets married earlier, she has to bear child earlier and that will make her physically weak.
> Interviewer: Then when do you think she will get married?
> Paramsila: After she reaches 20 years of age, then she will get married. Now she herself is a child.
> (Interview with Paramsila, grandmother of Bindu, female, 13, Dalit)

For other girls, leaving school prematurely puts them at greater risk of early marriage. Respondents referred to a range of factors that may encourage earlier marriage including social pressure from the community, concern for girls' protection (presumably from pre-marital sex or protection of her well-being in general, although neither was stated explicitly), poverty, transfer of the *burden* of care, and release of tension.

Lilam, aged 12, was shown to have left school for multiple reasons. Because of poverty and concerns about interaction with men outside the home, she does not have the same opportunities as her brother for private education; but her parents may yet help her transfer to another public school. In the meantime, there is some disagreement between her parents about when she should marry.

> Archana: Her father said, "she is a child now, if I get her married then [the husband's family] will not let her stay here". Then I said, "if they don't let her stay here, then I cannot keep her here forever".
> Interviewer: That means you agree with the decision of her father?
> Archana: What to do then? I told [my husband], "you want to keep her in a cage, but you know how the society is, if something happens what would you do?" Then he suggested me to take care of her [with] good responsibility.
> (Interview with Archana, mother of Lilam, female, 12, Dalit)

Archana goes on to say that she and Lilam's grandmother would get her married sooner if it were their decision. However, if Lilam can continue her education, this may provide some protection from early marriage. In such cases, additional income that allows girls to stay in school may have a secondary effect of delaying marriage. If this occurs among the survey sample, the effect is small as the analysis in Chapter 5 finds no measurable reduction in marriage or marriage migration rates.

Some parents would prefer their adolescent daughters to be married sooner rather than later but are constrained financially. Sunita, aged 13, was able to move to a better quality public school by attending state-funded 'child education' classes. Her family is committed to her education for as long as she is unmarried, but they have been

considering her marriage for the past two years. Her grandfather thinks she should be married within the next two or three years but they cannot yet afford to pay the dowry.

> Rambharoshi: From where should we give money, they ask for money.
> Interviewer: How much do they ask for?
> Rambharoshi: Two (hundred thousand rupees) and motorcycle too… first grandson will get married and then only she will get married.
> Interviewer: By that time grandson will earn money.
> Rambharoshi: He will earn by that time and also make house.
> (Interview with Rambharoshi, grandfather of Sunita, female, 13, Terai/Madhesi)

This case suggests that financial constraints may be reduced following the marriage of an older brother. Boys typically stay in the parental home following marriage and most likely will have started to earn their own income. Moreover, the household may benefit from the incoming dowry and increase in female labour. This may also explain why the effect of the OAA on marriage migration is larger in households with fewer working age adults. In households with an existing preference for early marriage, adolescent girls with older, married, brothers may be more likely to have completed their *Gauna* and moved to the husband's home without the need for the OAA.

As shown in Chapter 6, some households take loans to meet the financial costs of girls' marriage. Chandani, aged 15, was shown earlier to have dropped out of public school for multiple reasons including poverty, harassment, and being unable to *study well*. If she continued at school she may not get married until age 20, but since she has left school her marriage is a more pressing concern. Her mother feels that getting her married would be a *release of tension* for the family. Despite not being able to afford the costs of school, her parents would take a loan to manage the costs of her marriage.

> Interviewer: You said that you could not manage the money so you left the study, how would they manage the dowry?
> Chandani: They have to take loan to give the dowry.
> (Interview with Chandani, female, 15, Terai/Madhesi)

In poor rural communities with a dowry culture, many households will need to take a loan to pay for the dowry and the findings from Chapters 5 and 6 suggest that parents or guardians use the OAA to access credit for this purpose.

The data in Table 29 confirms that adolescents who never attended school are particularly at risk of early marriage. Expected age at marriage for girls who never

attended school is 1 year younger than for drop-outs and 2 years younger than for school goers. Moreover, analysis in Chapter 4 shows that Muslim adolescents are more likely than Hindu adolescents to have never attended school. This correlation is reflected in the expected age at marriage for Muslim adolescents which is approximately 2 years younger than for Hindus. Sabrina, aged 15, reportedly never went to mainstream school but is attending the madrassa part-time. Her grandfather and mother are keen to get her married soon but they cannot yet afford the dowry.

> Interviewer: When will you get Sabrina married?
> Apsana: Now… … when there will be money, we will start talking of marriage… … when she will be 15 or 16 years old then she will get married. Even if marriage will be set, we have to manage money. [Her father] has gone to earn money.
> Interviewer: You said 15 or 16 years, she is 15 years old now.
> Apsana: Yes, she is. In our culture at 15 or 16 she can be married but *Gauna* happens at 17, 18, 20 years. If we can manage money within time, then it will be done.
> Interviewer: Is Sabrina's *Nikah* done or not?
> Apsana: No, it's not done now…
> Interviewer: You said you will get her married at 15 or 16 and she is 15 now, why the marriage is delaying then?
> Apsana: It's delayed because we don't have money now and boy is not found yet.
> Interviewer: Suppose you can manage the money now?
> Apsana: Then boy will be found, and marriage will take place.
> Interviewer: Can marriage take place this year?
> Apsana: Yes.
> (Interview with Apsana, mother of Sabrina, female, 15, Muslim)

This case suggests that dowry payments can be made later, at the time of *Gauna*, rather than at the initial marriage ritual, the *Nikah* in Urdu. That the major financial costs of marriage can occur at the *Gauna* ceremony explains why the OAA affects migration for marriage but not marital status. Families of adolescent girls that have a pre-existing preference for earlier marriage and have already made a marriage commitment use the OAA to secure loans to pay for the dowry at the time of *Gauna*, thus hastening the formalisation of the marriage.

Table 29 shows that being out of school is also correlated with 2-3 years lower expected age at marriage for boys; but still within their early twenties. Like girls, boys who are Muslim and who never went to school are most at risk of earlier marriage. Sajid, aged 15, had dropped out of mainstream school to attend the madrassa but then dropped out

of school altogether. While his grandfather thinks he should be married at 17 or 18 years old, once he can earn his own money, his mother believes it should be later.

> Interviewer: When have you thought to get him married?
> Kanija: Marriage (laughs)… when he will be 20 or 25 years old then we will get him married.
> Interviewer: 20 or 25?
> Kanija: 25 years. Till he does not become independent, till he does not learn some skill how could we get him married?
> (Interview with Kanija, mother of Sajid, male, 15, Muslim)

There is some variation in expectations about age of marriage, especially between the generations. Nonetheless, the data suggests that among parents, there is a normative view that boys will get married during their early twenties regardless of their school status. The OAA is unlikely to make any difference to the marriage timing of boys. In a dowry culture, boys' families do not face the same economic incentives for earlier marriage and there is no evidence of the OAA hastening marriage among boys.

The circumstance of married adolescents

Focusing on married adolescents reveals further complexities around marriage decisions and how they relate to education. Data presented in Chapter 4 shows that 11% of adolescent girls are married, rising to 26% among 15-17 year olds; while 3% of adolescent boys are married rising to 8% among 15-17 year olds. Table 30 shows the school attendance status of married adolescents. Approximately two-thirds of adolescents never attended mainstream school and a further one fifth to one quarter had dropped out. Marriage rates are by far the highest among Muslim adolescents; and approximately 74% of married adolescent girls and 83% of married adolescent boys are Muslim (data not shown). There is a notable concentration of early marriage among Muslim girls and boys who never attended school.

Table 30 Mainstream school attendance status of married adolescents

	Girls		Boys	
	n	%	n	%
School attendance status				
Attends school	23	12.3	6	11.11
Previously attended	46	24.6	11	20.37
Never attended	118	63.1	37	68.52
Total	187	100	54	100

Data source: CTALS 2017.

The tradition of early marriage may be more deep-rooted among the Muslim community. It may also reflect the more limited opportunities for (mainstream) education. In part, this is because some parents and adolescents have a positive preference for religious education. However, public schools also offer a poor quality and culturally or religiously inappropriate alternative. Being out of school means that adolescents are likely to transition into adult roles sooner.

Within the IDI sample, two adolescent girls are married. In both cases, they were reported in the survey as never having gone to school. However, their parents suggest that they may have attended the first few grades of public school but dropped out some years ago. This is the case with 17 year old Jasmin, from a Muslim household, who was married when she was 15 years old but only left her parents' home within the past year. She attended both mainstream and public school for a few years, in part, to improve her marriageability.

> Interviewer: Do they study in government school and about their own religion too?
> Kanija: At the time of marriage, they are asked what kind of education they have studied. Have they learned Islam or not? Or are they only studied Hindi? They could ask such kind of questions. So, I am sending my daughters to learn both. I can also say that my daughters are studied up to eight class, or up to six class or up to two class. I can say so.
> Interviewer: Will it be difficult in their marriage if she had not studied Urdu or Islam?
> Kanija: It might be difficult or might not be. Many people have said they have studied only Hindi, she does not know our Urdu, so she will not value us. If she studied more in Islam, then they would say that she does not know Hindi at all. Some people also think "she has not studied Urdu so what she is educated, we can live our life and go for marriage." Two of my daughters are married, they had studied Hindi and Urdu both, so there was no difficulty in their marriage. Now I have four daughters left. One is infant she does not go to school. And three daughters study.
>   (Interview with Kanija, mother of Jasmin, female, 17, Muslim)

Regardless of whether Jasmin attended mainstream school for some time, the overriding concern for her future appears to be to secure her marriage.

Adolescents can be married before they leave school. Table 30 shows that 12% of married girls and 11% of married boys are attending school, although some may have recently left. Sanju, aged 16, was married at age 13 while still at school. Her father

suggests that she dropped out of school because of poverty but that he felt compelled to get her married to avoid pre-marital sex and to reduce his *burden*. Like Jasmin, Sanju moved to her husband's household about a year later.

> Ram: I made her leave the study because I am a poor man. I had four children and I am the only one earning member in the family… It was not because of marriage. I was compelled to do that because of the lack of food and water. I had two young daughters. When she was in class five, I got her married. Six months later she had her half-yearly examination, she appeared for the examination and then I did her *Gauna*.
> Interviewer: …What compelled you to get her married at the very young age?
> Ram: In our culture in rural area, there is no guarantee of young girls. She can elope at any time with anyone. In this village only, there are two or three examples of this. When the daughters turn young parents have to think. That's why I also thought that I would also be burden free. I got her married very well. Her nature is stubborn, so her parents-in-law beat her.
> (Interview with Ram, father of Sanju, female, 16, Dalit)

The practice of *Gauna* means that married girls continue to live with their parents for up to several years before cohabiting (see Chapter 4). CTALS data shows that among girls who are reported as married, 29% left their parental home within the past 3 years and 69% still live in their parental home (data not shown).[103] The initial ritual secures the marital relationship and may reduce the (perceived) risk of pre-marital relationships. At the same time, cohabitation and the onset of childbearing are delayed, and like Sanju this allows some married girls to stay in school in the short term. In the longer term, the predisposition for earlier marriage limits the length of time available for education. Formalising the marriage through the act of *Gauna* means the end of schooling. CTALS data shows that less than 1% of married girls (1 case) who left their parental home are still in school.

Whether marriage leads to dropping out of school or *vice versa* remains uncertain. Both conditions may be true simultaneously. Data in Table 28 (p.228) shows that 13% of girls who dropped-out of school did so primarily because of marriage. Comparing with data in Table 30 (p.243), this suggests that approximately half of married drop-outs did so primarily *because* of marriage, while half dropped out primarily for other reasons and were subsequently married. In many cases, several factors including poor quality

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[103] The remaining 1.6% are daugher-in-laws who moved into their husband's home more than 3 years previously.

schools, poverty, concern about pre-marital relationships, and social pressure, converge to influence decisions about school and marriage simultaneously. Underlying these decisions are pre-existing notions about the appropriate age to be married. Those with a strong preference for earlier marriage are likely to make only limited (or no) investment in education. However, the effect on school going adolescents may not be large. Using an instrumental variable approach, Jafarey, Mainalo and Montes-Roja (2015) show that among married women in Nepal, each additional year in age-at-marriage is associated with an additional 0.2-0.5 years of schooling. That the OAA increases school attendance for some girls while hastening the formalisation of marriage for others, shows that additional income has different effects depending on the existing preferences of households as well as other prevailing circumstances.

Summary and conclusions

This chapter has provided insights into the determinants of, and dynamics surrounding, decision-making about adolescent life-course circumstances. The combination of data from the IDIs and CTALS has corroborated and provided a more nuanced interpretation of the findings regarding the effects of the OAA on school attendance, work and marriage.

The analyses suggest that most households value the benefits of education but face a different set of constraints depending on their level of income. Poorer households, approximately the bottom 40% of the income distribution, limit their ambitions in terms of the number of adolescents and other school-age children who attend school, the quality of the school, and the number of years spent in education. Typically, in poorer households, just one adolescent goes to the local, often poor quality, public school. Adolescents who are favoured tend to be those who show the most academic aptitude, whether girls or boys. Poorer Muslim households may send adolescents only to the madrassa or in some cases to both religious and mainstream school. In poorer households, the OAA plays an important part in supporting the costs of education. Because the direct costs of public school are low, it is likely that in some cases the OAA supports school attendance by increasing expenditure on private tuition. It takes a significant level of self-determination and support from the household for adolescents to continue to higher grades in the public school system, which is often only possible with additional private tuition.

Slightly better-off households, within the upper 60% of the income distribution, are more likely to have all children in school and to have one adolescent attend private school because of better quality teaching. Favouritism towards boys becomes more pronounced in relation to private school attendance. Households sometimes limit expenditure on private school by delaying entry until more critical grades and limiting their ambition in terms of the choice of private school. While most adolescents who migrate for education go outside the district, around one third of education migrants stay closer to home. Some Muslim adolescents attend better quality, and higher cost, madrassas in preference to private schooling. However, sending at least one child to the madrassa is sometimes an obligation more than an active choice.

The OAA makes an important contribution to better off households and some explicitly recognise its role in supporting the costs of private school. Shifts from public into private school appear to be common, supporting the findings that the OAA allows adolescents to transfer into private school, including away from home; albeit in anticipation of eligibility in the case of elder males and couples. At the same time, the rapidly increasing costs of private school with age puts pressure on households that are already economically insecure, supporting the notion that anticipatory responses are unsustainable in the face of an unreliable OAA.

Even in households that receive the OAA, many adolescents drop out of school prematurely and some do not attend at all. There are multiple barriers to accessing mainstream school including push and pull factors, many of which mean that additional income is unlikely to make a difference. The findings reveal a tension between intrinsic and external motivations for being out of school. A large proportion of survey responses cite *lack of interest* of the adolescent as the primary reason for never attending or dropping out of school. Alongside push and pull factors, Singh and Mukherjee (2018) refer to this as *opting out* and find it to be the most common cause for leaving school prematurely in their study on discontinuing education in four countries including India. However, most IDI respondents in this study suggest that underlying the *lack of interest* are push factors related to poor school quality, physical punishment, and harassment, especially of girls. Pull factors include demand for both economic and domestic labour, restrictions on female movement due to concerns about female-male interaction outside

the home, and preferences for early marriage. Muslim households also have a positive preference (or obligation) for religious education alongside a sense of exclusion from mainstream schools. As a result, a large proportion of Muslim adolescents have never attended a mainstream school.

The findings point to an interaction between specific incidents that force school dropout such as violence, exam failure, or an economic shock; underlying material issues including poverty and poor school quality; and social and cultural norms and expectations around work, marriage and religion. Poverty may not always be the primary reason for dropping out, but it limits opportunities. Additional household income can and does help in some cases, but it will not overcome many of the other social and cultural forces that drive school dropout and especially those that mean adolescents never attend mainstream school.

For most adolescents, some level of work is a normal and important part of everyday life. Adolescents who transition into full-time work prematurely may do so because of poverty, but this is likely exacerbated by poor quality school options. Supporting the findings from Chapter 5, IDI respondents suggest that the OAA prevents some adolescents from having to engage in paid work, including those who are already out of school. However, some adolescents, especially girls, are required to work full time at home where there is a shortage of adult female labour in the household in which circumstances the OAA is unlikely to make any difference. There is also evidence to suggest that the OAA increases economic migration by compensating the short-term opportunity costs. Adolescent boys who migrate for work are shown to undergo a period of training when wages are typically low.

For both girls and boys, the transition to marriage is expected to happen soon after completion of schooling; but three years earlier for girls. Preferences for later marriage and higher levels of education occur strongly together, while being out of school is correlated with lower expected age at marriage. Early marriage is strongly correlated with being Muslim and never attending school. This may be driven by cultural preferences for earlier marriage combined with a lack of appropriate educational options. Dropping out of school prematurely for reasons other than marriage does not necessarily mean that marriage will follow quickly, but girls who drop out are at greater

risk. If the reason for dropping out is primarily economic, the OAA could delay marriage by supporting school attendance, but this is not supported by the results in Chapter 5. Conversely, the data shows that some parents or guardians prefer early marriage for their daughters but are financially constrained, especially when the adolescent girl does not have an older brother. There is evidence that these households take loans to pay the dowry, which may be facilitated by the OAA in some cases. Where there are existing preferences for early marriage, additional income will support it rather than mitigate it through a school effect. The traditional practice of *Gauna* and evidence that dowries may be paid at this second stage of the marriage ritual up to several years after the initial marriage ceremony, explains why the OAA affects marriage migration and not marital status.

This chapter shows that the OAA is only one factor among many that can determine adolescents' life-course outcomes and that often multiple conditions must converge for additional income to have an effect. The final chapter collates the main findings in relation to the research questions and considers their contribution to the wider literature, presents a critical review of the research process including the analytical framework, and discusses the relevance of the study for social policy and further research.

Chapter 8

Discussion and conclusions

Introduction

This study aimed to contribute new evidence and analyses on the effects of cash transfers on adolescent life-course circumstances in Nepal. Taking the household decision-making process as the starting point for the analytical framework, and applying integrated mixed methods, the research aimed to provide a deeper understanding of the pathways through which cash transfers affect adolescents and to contextualise the role of this cash within the numerous social, economic and cultural incentives and disincentives for each life-course option.

This chapter summarises the main findings in relation to the research questions and then considers their relevance and contribution to the existing literature on the effects of cash transfers on children and adolescents. This is followed by a review of the strengths and weaknesses of the research approach and methods including their contribution to analytical approaches for researching social transfer programmes. The chapter concludes by discussing the implications of the findings for policy in Nepal and more broadly, and areas for further research.

Summary of the findings in relation to the research questions

The overarching research question (RQ) of this thesis asks, how does Nepal's Old Age Allowance (OAA) change decision-making about adolescents' life-course circumstances in multi-generational households? Through the analyses, a common thread has emerged: additional income provided by the OAA supports households to fulfil existing preferences for adolescents, depending on their gender and age, and circumstances. Preferences and opportunities are shaped by the socioeconomic status, structure, and religion of the household, the type and quality of local schools, the nature of local credit markets, how the OAA is implemented in practice, and gendered social norms and expectations attached to adolescence and transitions to adulthood.

RQ1: What are the effects of OAA income on adolescents' education, work, and timing of marriage?

The findings from Chapter 5 showed that many households take advantage of the OAA to support adolescent education, albeit not always succesfully, and in some cases to prevent adolescents from engaging in paid work. However, other households use the OAA to hasten transitions to adulthood by supporting boys' economic migration and the formalisation of girls' marriage.

While the OAA has a modest positive impact on mainstream school attendance, this hides a far more complex picture, with different effects depending on the gender and age of the adolescent, the gender of the OAA recipient, and the type of school. The OAA unambiguously increases mainstream school attendance for adolescents who co-reside with an elder woman. However, the OAA is more likely to support younger adolescents to remain in public school and older adolescents to transfer from public into private school. Boys especially are supported to access private schools that are away from home. At the same time, the OAA supports some Muslim boys who co-reside with an elder woman to attend religious school.

For adolescents who co-reside with an elder man or couple, the overall effect of the OAA on mainstream school attendance is positive but small. However, this masks a larger positive effect on public school attendance, concentrated among girls, concurrent with a negative effect on private school attendance, concentrated among boys. A similar negative effect is seen for girls who co-reside with an eligible couple, especially in relation to education migration. It was shown that the negative effects on private schooling should be interpreted as an unsustained anticipatory response (discussed further under RQ2).

The OAA also reduces the risk of both girls and boys engaging in paid work, especially those who co-reside with an elder man. Results were only significant for work within the past year and not for hours worked in the past week, which may be due to seasonality in work patterns. At the same time, the OAA has no measurable effect on unpaid work in the home. While many households want to keep adolescents in school and delay them entering the labour market, some use the OAA to accelerate transitions

to adulthood. The findings show that in households with an elder woman, the OAA supports older boys to migrate for work, while households with an elder man or couple use the OAA to hasten the formalisation of marriage of older adolescent girls.

RQ2: What are the pathways through which the OAA affects adolescents' life-course circumstances?

The findings from Chapter 6 confirmed the existence of the underlying conditions assumed to be necessary for the OAA to affect households and individuals. The population is poor and (partially) credit constrained, the OAA provides a meaningful increase in household income, and most households share resources. At the same time, the analysis revealed complexities in the household economy and resource sharing practices, and irregularities in OAA implementation, that moderate the nature of the OAA's impact on adolescents' life-course circumstances.

Evidence presented in Chapters 6 and 7 showed that the OAA primarily affects school attendance by allowing households to maintain, and sometimes to increase, expenditure on the direct costs of school and, most probably, supplemental private tuition. For some, the OAA smooths education expenditure through access to credit to prevent school drop-out. For others, the OAA increases access to larger loans to support a shift into private school. The findings in Chapter 6 about knowledge and take-up of the OAA and pre- and post-treatment differences in income, education expenditures and loans, provided evidence that the negative effect on private school attendance should be interpreted as an unsustained anticipatory response.

The findings in Chapter 7 suggested that reductions in paid work are not strongly linked to increases in school attendance but most likely occur because the OAA allows households to compensate foregone income that would have been essential to their basic needs. At the same time, potential multiplier effects on household income and evidence that migrant work involves initial periods of apprenticeship with lower wages suggest that the increase in economic migration among older boys occurs because the OAA allows households to invest in better (paying) employment opportunities.

Several strands of evidence suggested that the OAA increases the risk of marriage migration because it is used to finance dowry payments and other related expenses,

thereby expediting the formalisation of marriage and cohabitation. Qualitative evidence from Chapter 7 showed that financial constraints can delay the marriage of girls. Moreover, both qualitative and quantitative evidence from Chapter 6 indicated that loans play a part in financing the costs of marriage and that the OAA reduces credit constraints. In addition, preferences for and incidence of early marriage are shown to be more likely for girls who are already out of school and, in many cases, may never have been to school. In this context, a school effect on delaying marriage is unlikely to occur.

RQ3: How is OAA income factored into households' decision-making about adolescent life-course options?

Findings throughout the empirical chapters showed that the OAA is just one factor among many that shape households' decisions about adolescent's life-course circumstance. Understanding the varied socioeconomic circumstances and local cultural, social, economic and institutional context explains why households respond in very different ways to the income transfer.

At the household level, the findings from Chapters 5 and 7 showed that existing levels of income and adult education shape the effects of the OAA on adolescents. While most households across the income distribution were shown to value the benefits of education, poorer households often limit the number of school age children they send to school. The options for adolescents who do attend are more likely to be confined to a local public school. In these circumstances, the findings suggested the OAA is likely to support those adolescents with a greater aptitude for learning to transition to higher grade-levels in public school. However, a minority of poorer households with better educated adults are more likely to use the OAA to support adolescents to attend a low cost private school.

Although adolescents in poorer households are at greater risk of engaging in paid work, the OAA has a larger effect on reducing paid work in better off (but still poor) households. Better off households are also more likely to send all school age children to school with at least one adolescent attending private school. In these households, the OAA is more likely to support adolescents who are a lower priority for educational investment than their siblings, especially when the household head is better educated. The findings showed that additional income will support girls' education if boys' needs

have been met first. The increase in the formalisation of girls' marriage also only occurs among better off households, suggesting that credit constraints may be more binding among poorer households.

Quantitative analysis from chapter 5 and qualitative evidence from Chapter 7 showed that household structure can affect decisions about school attendance and work independently of income. Effects on school attendance are concentrated in households with more adult labour, which may stem from higher incomes, but also because of lower demand for unpaid adolescent work in the home. Conversely, reductions in paid work are concentrated in households with less adult labour, which may be because adolescents are more likely to be working in the first place. The OAA is unlikely to make any difference to either work or education when demand for adolescent labour is not linked to the immediate economic needs of the household, such as when there is a shortage of adult female labour to undertake household chores. The increase in marriage migration is concentrated in households with fewer working-age adults. Qualitative evidence suggests that this may be due to the absence of a married older brother, whose income would have allowed the household to pay for the younger sisters' dowry sooner. The findings also show that the OAA supports older boys to migrate for work but only in households with an elder woman. Migration comes with some risk and a reduction in income in the short term. The findings suggest that these households may have been more risk averse than households with an elder man prior to receiving the OAA.

Turning to community level factors, the findings in Chapter 7 showed that school quality including teaching, discipline practices and the broader environment, plays a major part in shaping decisions about schooling, and consequently about work and marriage. Households across the income distribution have a strong preference for private education. For those who cannot afford private school, the local public school often provides a poor quality option. Private tuition is necessary for those who remain in public school, especially in higher grades. However, for adolescents who struggle academically, experience violence or harassment, or are under pressure to work or marry, there is little incentive to remain in school, and additional income is unlikely to overcome many of these barriers.

Religious and social norms, practices and expectations have also been shown to determine adolescents' life-course options. Evidence from Chapter 7 showed that many Muslim households have an active preference or obligation for adolescents to attend religious school, while simultaneously feeling excluded from mainstream schools (Hafiz, Prakash, and Rajbhandari 2008). The findings also showed that social pressures to prevent pre-marital relationships both increase the risk of earlier marriage and limit access to school even when lack of income is not a barrier. Girls who drop out of school prematurely relative to the household's expectations may be at slightly higher risk of early marriage, but inherent preferences for age-at-marriage do not necessarily change. At the same time, adolescents most likely to marry early are also the most likely to have never attended mainstream school. Collectively, the evidence suggested that social and economic pressures for early marriage and the poor quality of, and cultural exclusion from, public schools reinforce each other, especially among the Muslim community.

Both the design features of the OAA and how it is implemented in practice affect how households make use of the money and how this influences decisions about adolescents' lives. The findings in Chapters 5 and 6 showed that an average transfer value equivalent to 9% of median household income is enough to make a meaningful difference to both consumption and investment depending on existing levels of income. However, evidence from Chapter 6 showed that infrequent and irregular distribution limits households' ability to smooth consumption and to make more strategic expenditures. Moreover, low coverage of the OAA resulting from substantial delays in registration and receipt of the first transfer both diminishes the overall impact and explains why anticipatory responses relating to education investment are not sustained.

Finally, the findings in Chapters 5 and 6 provided evidence that households are collective entities with different preferences, bargaining power, and economic opportunities. While parents are likely to be present in the majority of households and to take a major role in decisions about adolescents' life-course circumstances, elders are also shown to have an important role in some cases. The quantitative results showed that the effects of the OAA differ depending on who is eligible for the OAA. The pattern of results for adolescents who co-reside with an elder man or couple are broadly similar. However, because households with an elder couple receive double OAA income they are able to support investment in additional (lower priority) adolescents.

Variations in the outcomes according to the gender of the co-resident elder are shown to depend on gendered differences in bargaining power and economic opportunity as much as on differences in preferences or interests. Households of all elder type increase education expenditure and adolescent access to school, the main difference being that households with an elder man or couple do so in anticipation of the OAA, reflecting gendered differences in access to credit. Differences in bargaining power suggest that outcomes in households with an elder woman are more likely to reflect preferences of the younger generation, the parents of the adolescents, which may explain why there is no increase in early marriage in these households.

Contributions to the literature

This section reviews the findings in relation to the existing literature. This thesis aimed to understand the effects of an unconditional cash transfer (UCT) on adolescent life-course circumstances in a developing country context. Taking a broad view, the study contributes to the literature on household income effects on adolescent development in lower income countries. As discussed in Chapter 2, the literature primarily emerged out of the rapid growth in cash transfer programmes over the past two decades, initially conditional cash transfers (CCT) in Latin America and later, both UCTs and CCTs in sub-Saharan Africa. Many of these schemes were donor funded and incorporated experimental evaluation components. Other studies have made use of quasi-experimental methods for causal inference using existing survey or administrative data. As such, this study contributes new empirical evidence from the less studied region of South Asia and of a universal scheme that was initiated and is funded by the state. Moreover, the literature from developing countries has largely been concerned with younger children or has tended to inadequately differentiate adolescent age groups within the spectrum of childhood. This thesis brings a specific focus to the opportunities and constraints of adolescents, which are very different to those of younger children and change throughout the transition to adulthood.

The cash transfers literature is dominated by the field of economics, with most studies taking a positivist or post-positivist approach to the analysis – an epistemological perspective that has certain limitations which were discussed in relation to the analytical framework in Chapter 2, and are further reviewed later in this chapter. The literatures of

most relevance to this study fall into three sub-groups related to the main outcomes of interest. First, studies on the effects of cash transfers on access to school tend to assume that increases in attendance or enrolment are due to higher investment in the direct or indirect costs of education. Second, studies on cash transfers and child and adolescent work tend to employ a utility maximisation model, whereby household decision-makers decide children's time allocation between work, leisure, and education, depending on the private returns to each activity. Additional income may reduce or increase adolescent work depending on household consumption and investment priorities. Third, studies on cash transfers and early marriage tend to assume that households are averse to early marriage and will use additional income to support their daughters' upkeep at home or prolong their education. Overall, the findings in this study support the propositions of the family investment model whereby household income determines levels of investment in child well-being and development (Cooper and Stewart 2013; De Walque et al. 2017), but reveal that investment decisions are more diverse than is typically recognised in the literature, and are highly contingent on a range of other individual, household, cultural, social, and environmental factors.

This study also contributes to the literature on household bargaining. While some econometric studies explicitly look at the effects of cash transfers on household bargaining, particularly from a gender perspective (see for example Bergolo and Galván 2018), and other qualitative studies examine the gender dynamics of control of financial resources (see for example Gram et al. 2019), these intra-household relational dynamics are rarely (explicitly) incorporated into studies on the effects of cash transfers on individual household members. The findings in this study support the notion of collective models where expenditure and investment decisions are contingent on who controls income(s), their preferences, relative bargaining power, and access to economic opportunities (Yoong, Rabinovich, and Diepeveen 2012; Doss 2013). However, the findings reveal that in the case of inter-generational resource sharing, gendered differences in bargaining power and economic opportunity interact with inter-generational differences in preferences and interests to produce varied outcomes.

The following discussion first addresses the study's contribution to three empirical gaps in understanding adolescent investment decisions that were identified in the literature review in Chapter 2. These relate to how additional income generates different

educational investment choices within the context of a heterogenous school system; how contextual factors mean that the same income transfer can generate both "well-being" and "investment" responses in relation to adolescent work; and how cash transfers expedite early marriage as a "social investment". The discussion then turns to three key areas that are central to understanding the pathways through which UCTs affect adolescents' lives: the role of credit in human capital and social investments; how differences in bargaining power and economic opportunity, rather than differences in preferences, shape income effects on adolescent outcomes; and the potential for (risky) anticipatory responses.

Three empirical gaps

Broadening understandings of the varied effects of cash transfers on access to school(s)
As discussed in Chapter 2, the assumption made in the literature on income effects on school attendance in developing countries is that households make binary choices between children or adolescents being in school or not (see for example the systematic reviews from Baird et al. 2014; Bastagli et al. 2016; Bauchet et al. 2018). Focusing on the binary question of school access, the effects of the OAA identified in this study are consistent with much of this literature, leading to moderate and sometime large increases in school attendance. However, far from being a homogenous entity there is considerable diversity in education supply in most contexts, including public, private and religious schools. For studies on CCTs that specifically promote school attendance, the focus on the binary question may be because programme rules tend to limit eligibility to children and adolescents in the public-school system. However, the same cannot be said for UCTs. A narrow view of school supply precludes any consideration of whether additional income facilitates access to different types of school and whether it allows individuals to change school type. This study shows increases in public, private and religious school attendance (albeit unsuccessful in some cases) and suggests that there is movement between public and private schools. This is not just a question for policy (discussed in more detail in the next section) but has implications for understanding the interactions between additional income, (perceptions of) school quality, culture, and school attendance, and the pathways through which UCTs may affect higher level learning outcomes.

The findings show that (perceived) school quality and cultural or religious appropriateness shape decisions about use of additional income for education investments. There is some evidence of this in IEG's (2011a) study on Pakistan's Female Secondary Stipend Programme (FSSP) which finds that the CCT allows co-resident boys to shift from public to private school at the primary level without changing overall enrolment rates. The authors propose that this is feasible given the cost of private schools relative to the transfer value, and that private schools are of better quality based on better student test scores. In their evaluation of Kenya's Hunger Safety-net Programme (HSNP), Merttens et al. (2013) find slight improvements in educational achievement but not in school attendance. Although they also find no measurable increase in education expenditure, qualitative data suggests that some children of HSNP households are accepted at fee-paying schools because the school perceives them as more creditworthy. Notably, among the 20 studies identified in Bastagli et al.'s (2016) systematic review that report on overall school attendance, seven find no significant effects. Differentiating the analysis by school type would have allowed the authors to identify whether the transfer had resulted in shifts from public into private schools despite no overall change in attendance.

Understanding the effects of a cash transfer on school choice can also provide insights into the pathways to higher-level educational outcomes such as attainment and cognitive development. However, while school quality is an important focus of education research in developing countries (Masino and Nino-Zarazua 2016), it is typically ignored in the cash transfers literature or provided only as a post analysis explanation for results that differ by geographic area (see for example IEG 2011a). Berhman, Parker and Todd (2008) provide a rare example where school quality is incorporated into the analysis and find that Mexico's CCT, *Oportunidades,* has larger impacts on grade attainment in standard public schools compared to low-cost models for remote areas. The findings here show that the low quality of public schools including poor teaching, frequent absences, and the use of physical punishment, is central to shaping the effects of the OAA on adolescents. This raises an important area for further research, incorporating analysis of the effects of cash transfers on school choice into studies on the impacts on learning outcomes.

In addition to preferences over school type, the findings in this study show that heterogeneity in educational investment decisions are driven by a number of other factors that lead households to strategize about which adolescents to prioritise, at what type of school, and for how long. First, the literature on the effects of cash transfers on school access says little about the moderating role of other sources of household income. This may be because most cash transfers in developing countries are targeted to largely poor populations or because income or consumption data is unavailable in the survey data. One exception is Galiani and McEwan (2013), who find that the Honduran Family Allowances Program, a CCT, has larger effects on school enrolment among the poorest 40% of recipients. However, this study has shown that the interaction between the OAA, household income, and school choice can be more complex, even within a poor population with a relatively flat income distribution. Households with lower levels of income are more likely to use the cash transfer to maintain at least one adolescent in public school, possibly through increased access to private tuition. Households with higher levels of non-transfer income are more likely to use the cash transfer to shift adolescents into private school and to meet the needs of "second priority" adolescents.

Second, the literature has paid slightly more attention to the moderating effects of adult levels of education. Edmonds (2006) finds that increases in adolescent schooling associated with male eligibility for the South African pension are larger when the elder is less educated. He concludes that this is because uneducated men are likely to be more credit constrained and underinvest more in education. DSD, SASSA and UNICEF (2012) find similar results and draw similar conclusions for South Africa's child support grant. This study finds the opposite. The main positive effects on access to school are found in households where the elder has some level of education rather than none. This may be the result of households' earlier investments in human capital development. Shrestha and Shrestha (2019) show that, in Nepal, better educated adults, especially mothers, invest more in their children's education. The child development literature shows that children whose educational development was better supported from a young age will perform better at school in later childhood (Kilburn et al. 2017). As a result, additional investment in education at this later stage will generate larger returns. This is supported by qualitative evidence in this study showing that, within households, parents prioritise education investment in higher ability adolescents.

Third, when studies find that cash transfers have a small or no effect on access to school, the results are typically explained by the low transfer value, high baseline rates, or a lack of compliance in the case of CCTs. This is the case for seven of 20 studies in Bastagli et al.'s (2016) systematic review. The findings in this study suggest that these explanations are inadequate for understanding why cash transfers do not have larger effects on school attendance. In addition to poor quality public schools, several other important barriers to school attendance including shortages of adult labour within the home, social restrictions on female movement outside the home, harassment at school, and pre-existing expectations about age-at-marriage, will likely outweigh financial considerations. These issues affect girls to a greater extent than boys as revealed by the inequality in access to school. At the same time, the findings suggest that education for girls is not un-valued but is undervalued relative to boys. Notably, half the studies on cash transfers and access to school cited in Bastagli et al. (2016) do not differentiate analysis by gender.

Turning to effect pathways, the evidence in this study broadly concurs with much of the literature that increases in school attendance are primarily due to increased expenditure on the direct costs of school, whether public, private or religious (see for example Edmonds 2006; Miller and Tsoka 2012; Handa, Natali, et al. 2015; Kilburn et al. 2017). However, a novel finding of this study is that additional income supports both smoothing of education expenditures over time, thus reducing the risk of dropping out, and increased investment to facilitate shifts into higher costs schools, depending, in part, on existing income and adult education levels. Moreover, most studies consider expenditure on education to be related to direct school costs such as fees and uniforms. For example, Sabates et al. (2019) use school uniforms as a proxy for education expenditures in their study on the effects of a UCT on schooling in Rwanda. However, the qualitative findings in this study suggest that the OAA may lead to better retention in public schools by allowing households to pay for the costs of private tuition. This is a common occurrence across Asia and is even obligatory at some public schools in Nepal (Subedi 2018; Ministry of Education 2018). Merttens et al. (2013) find similar qualitative evidence of Kenya's HSNP being used to pay for private tuition and suggest that this may explain some of the increase in educational attainment. A higher degree of specificity in measuring types of education expenditure can be revealing about the pathways through which cash transfer affect school access.

Finally, economic theory predicts that cash transfers can also increase school attendance by decreasing opportunity costs. Edmonds and Schady's (2012) study on Ecuador's *Bono de Desarrollo Humano* (BDH), a *de facto* UCT, shows reductions in paid work are strongest among baseline school goers, which implies that a lower supply of child labour may prevent drop-out. De Carvalho Filho (2012), Handa et al. (2015), and Gutierrez et al. (2017), provide evidence of cash transfers that reduce children's and adolescents' paid work concurrent with increases in school attendance. However, little evidence is provided that the two effects are connected; they may occur in different sub-groups of the population. In many contexts, including among the CTALS population, paid work is most common among children and adolescents who are already out of school. The findings in this study show that reductions in paid work occur in households that see little overall change in mainstream school attendance and qualitative evidence confirms that households are averse to adolescent paid labour regardless of school status. Reductions in paid work should not be assumed to affect school attendance.

The same UCT can both reduce undesirable adolescent paid work and create economic opportunities

Economic theory on cash transfers and child and adolescent work recognises that responses to additional income are ambiguous and depend on the type of work and certain contextual factors (Dammert et al. 2018). Porreca and Rosati (2018), Handa et al. (2015) and Edmonds and Schady (2012) find that households are averse to children's involvement in paid work outside the home and reduce their participation on receipt of additional income, essentially investing in children's well-being. At the same time, another body of literature shows that cash transfers do not disincentivise adult work in low-income countries (Mathers and Slater 2014). O'Brien et al. (2013), Canavire-Bacarreza and Vásquez- Ruiz (2013) and Barrientos and Villa (2015) show that adults increase labour supply, and Ardington et al. (2009) show increases in economic migration, when cash transfers are used to invest in economic opportunities. The period of adolescence staddles these two circumstances. The findings in this study show that both "well-being" and "economic opportunity" responses can occur within the same adolescent population, depending in part on age, but also on other contextual factors.

The overall pattern of the effects of the OAA on adolescent work aligns with much of the existing literature which suggests that UCTs are more likely to affect child and adolescent participation in paid work than unpaid work (IEG 2011b; de Hoop and Rosati 2014; Bastagli et al. 2016; Dammert et al. 2018). The negative effect of the OAA on paid work is large and is comparable to the 41% decline in adolescent paid employment associated with Ecuador's *Bono de Desarrollo Humano* (BDH), a *de facto* UCT (Edmonds and Schady 2012). Moreover, the findings in this study support the consensus that the main pathway is through compensating foregone income used for basic consumption and that this tends to affect the binary status of participation in paid work rather reducing hours (Edmonds and Schady 2012).

However, the OAA may be insufficient to afford poorer households the possibility of reducing adolescent paid employment, especially where this affects younger adolescents. This appears contrary to studies on CCTs reviewed by de Hoop and Rosati (2014), that generally find larger impacts on child labour among poorer households, which they explain by a combination of lower school attendance and greater credit constraints at baseline. Edmonds and Schady (2012) find that reductions in adolescents' paid work resulting from Ecuador's BDH occurred only among the poorest 25% of the target population, equivalent to the poorest 9% of the national population. In contrast, that the OAA does not reduce paid work among poorer households may be because the sampled area of rural Rautahat has a particularly high rate of poverty relative to national and even district populations, the OAA is unconditional on school attendance, and the poor quality of many local public schools provide little incentive to remain in education.

Turning to economic migration, the findings show that for some adolescents the OAA increases access to better economic opportunities away from home. Evidence on the effects of cash transfers on economic migration is thin, especially in relation to adolescents, but suggests that the nature and direction of the effects are highly dependent on context (Hagen-Zanker and Himmelstine 2013). Behrman, Parker, and Todd (2009) examine medium-term migration effects of Mexico's CCT on adolescents. They find that it reduces the risk of migration among older boys (who are no longer beneficiaries), which the authors speculate is related to economic migration. This study finds that, in limited circumstances where elders are better educated, the OAA may also reduce economic migration. However, in contrast, the more robust findings point to an

increase in economic migration among older boys. Further evidence suggests that the decision to migrate most likely represents a positive opportunity which may even have a multiplier effect on household income. This has been shown to occur in several other studies, albeit for young adults, because of limited employment opportunities at home (Siaplay 2012; Priya Deshingkar, Godfrey Wood, and Béné 2013; Hagen-Zanker and Himmelstine 2013).

These divergent findings raise questions about the particular circumstances under which the "well-being" response and the "economic opportunity" response occur, which the literature does not yet sufficiently address. In this study, decreases in paid work occur among both younger and older girls and boys, although effects are larger among older adolescents, while increases in economic migration occur only among older boys. This suggests that factors other than age are at play. Moreover, in both cases, effects appear larger where there are fewer adults in the household. The clearest distinction between the two effects is the gender of the recipient. Thus, the responses may relate more to intergenerational differences in priorities, whereby (male) elders' interests are to have adolescents in the home, while parental interests are to send adolescents out to work. The issue of household bargaining is discussed in more detail shortly. Nevertheless, it is clear that more research is required to understand in what circumstances income effects tip the balance between investments in adolescent "well-being" by preventing their engagement in paid work, and investments in "opportunity" by supporting access to the labour market.

UCTs can expedite early marriage in a dowry culture, especially where schools offer a poor quality or culturally inappropriate alternative
This study appears to be the first to examine the effects of a UCT on early marriage in a dowry context. Most existing studies on the effects of social transfers on age-at-marriage are for CCTs conditional on school attendance.[104] CCTs provide cash income to help households overcome the direct costs of school, while the condition aims to change (short-term) behaviours by decreasing the opportunity costs of school. In societies where girls' education and marriage are largely mutually exclusive, CCTs can

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[104] Some marriage disincentive schemes pay a lumpsum incentive on reaching a certain age unmarried. These differ from most CCTs in that they do not provide a regular and predictable income.

be expected to reduce marriage rates by increasing the number of years spent in school, although there is some evidence that they may not always be effective, especially in a dowry culture (Amin et al. 2017a).

UCTs, on the other hand, have only an income effect, and do not change preferences or incentives through compulsion. Lee-Rife et al. (2012), Handa et al. (2015) , Bastagli et al. (2016), Kalamar et al. (2016), and Dake et al. (2018) propose two main pathways through which a UCT may affect marriage, either through a school effect or by allowing poor households to support the upkeep of their daughters for longer. In both cases, the expected outcome is a delay in marriage. However, the findings in this study show that the OAA allows some households to fulfil their existing preferences for earlier marriage, most likely by increasing access to credit to pay for the costs of dowry and other expenses. Moreover, effects occur only among slightly better-off households, suggesting that poorer households may face more binding credit constraints. This aligns with the findings of Bajracharya and Amin (2012) who use a panel data-set from Nepal to show that girls who lived in poorer households when they were 5-9 years old are more likely than those from richer households to have left the household for marriage when they reached 13-17 years old. However, girls at the highest risk of early marriage are in the second poorest per capita consumption quintile (nationally), and not the poorest.

Evidence of the practices associated with marriage align with other studies that show societies with a traditional dowry culture tend to value earlier marriage for both social and economic reasons (Anderson 2007; Ghimire and Samuels 2014). The findings also suggest that, although girls who drop out of school prematurely relative to the expectations of the household are at heightened risk of early marriage, inherent preferences for age-at-marriage do not change. At the same time, those at most risk of early marriage, largely from the Muslim community, are also most likely to have never attended school. Thus, in contexts where early marriage is common, and especially where public schools are of poor quality or are considered culturally inappropriate, a UCT is unlikely to substantially reduce the risk of early marriage through a school effect.

Collectively, the findings support the existence of a *social investment* pathway whereby a UCT can facilitate marriage by covering the associated costs when preferences for earlier marriage already exist.[105] Perhaps because of the limited empirical evidence, or a bias towards what *works*, the theoretical possibility of a social investment effect is largely ignored in the research literature cited above, and in policy reports (Thompson 2012; Barrientos et al. 2013; Verma 2018). The findings in this study should prompt recognition that UCTs can, and indeed should be expected to, increase the risk of early marriage in contexts with a dowry culture.

Three factors that moderate cash transfer effect pathways
Credit markets can play an important role in mediating the effect of cash transfers on investment in human capital and marriage

The findings in this study show that gendered access to credit plays an important role in determining the nature of the effects of additional income on adolescent schooling and marriage. However, existing studies on human capital or major social investments such as marriage pay very little attention to the role of credit, beyond the underlying assumption that credit constraints prevent optimal allocation of resources.

The literature on cash transfers and economic productivity shows that the impacts on loans is mixed, at least in part, because transfer income could be used either to repay existing loans or to access new loans. Both the systematic review by Bastagli et al. (2016) and the more recent multi-country study by Daidone at al. (2019) reveal cash transfer programmes that result in increased access to credit or loans, reflecting a more risk-seeking population, and programmes that result in decreased access to credit, reflecting a more risk-averse population. The findings in this study suggest that the CTALS population is, on average, more risk-seeking but also that there is heterogeneity in credit-related responses to the OAA within the population depending on existing levels of income and gender of the recipient.

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[105] While there are multiple facets to a marital union, it can be viewed as an investment from the perspective of the girls' family given the benefits of securing her future, maintaining social esteem, creating economic alliances with another (potentially wealthier) family, and avoiding the risk of the girl being unmarriageable in future (Ghimire and Samuels 2014).

While it is recognised that cash transfers can help both smooth education expenditures and increase investment in education (Fisher et al. 2017) there is very limited discussion in the literature of the links between cash transfers, credit and educational investment. Some studies point to credit constraints as the underlying reason that cash transfers result in increases in school attendance or enrolment, but provide few insights into how this works in practice (see for example Edmonds 2006). A number of qualitative studies point to the role of cash transfers in increasing creditworthiness among beneficiaries due to their ability to repay more reliably, and to support households to access small, short-term loans for smoothing expenditures over time, including for education (DSD, SASSA, and UNICEF 2010; Merttens et al. 2013; Uprety 2010). The qualitative findings in this study reveal similar examples of use of the OAA for smoothing education expenditures over time, and for accessing loans to increase investment through access to private schools. Moreover, the quantitative findings suggest that the OAA increases access to larger loans for investment in better quality education, including to access schools away from home, and to fund the costs of marriage. While the data on loans is not limited to loans for education and marriage, the differences in loan value associated with the OAA align with those for private school attendance. Merttens et al. (2013) also find that the HSNP leads to an increased propensity to borrow but there is no concurrent increase in education expenditures.

Finally, the question of gender is largely overlooked in the literature on the effects of UCTs on access to credit, perhaps due to availability of only household level indicators. However, the findings in this study support claims in studies from Nepal and elsewhere that access to credit is gendered (Adhikari et al. 2014; Doss et al. 2019), with implications for the timing of responses to the OAA, discussed in the final sub-section. Overall, the findings suggest that the nature of local credit markets have important implications for the ways in which cash transfers impact on households and individuals including on adolescent education and marriage.

Variation in outcomes according to the gender of the recipient may stem from differences in bargaining power and economic opportunity as much as from differences in preferences

There are three main strands of literature that deal with intra-household bargaining: studies that explicitly test unitary and collective models, studies that implicitly

incorporate household bargaining into analysis of the determinants of resource allocation within the household, and experiments that examine process of decision-making (Doss 2013). This study is most closely aligned with the second approach while incorporating a more explicit recognition and analysis of the role of household bargaining in shaping outcomes that are determined by the OAA.

Overall, differences in the effects of the OAA on adolescents according to the gender of the eligible elder support the consensus in much of the literature that the household is a collective, rather than a unitary, entity (Alderman et al. 1995; Yoong, Rabinovich, and Diepeveen 2012). The findings also align with existing evidence from UCTs including Duflo (2003), Bertrand et al. (2003), Edmonds (2006), Yanez-Pagans (2008), and Juaraz (2010) that find differential effects on individual household members according to the gender of the recipient or eligible household member. However, no consistent pattern is identified, even among several studies that look at the same UCT, South Africa's Old Age Pension (Bertrand, Mullainathan, and Miller 2003; Duflo 2003; Edmonds 2006). This suggests that how the gender of the recipient affects outcomes is context specific and may also depend on the nature of the outcome of interest.[106]

Understanding why outcomes differ by gender of the recipient requires examination of three dimensions of intra-household decision making: differences in preferences and interests, differences in bargaining power and influence, and differences in economic opportunity (Yoong, Rabinovich, and Diepeveen 2012). Cash transfers, especially CCTs, are often given to women on the basis that they are more likely to invest in the well-being of the children. Agarwal (1997) argues that women in developing countries are just as likely to invest more in children, especially boys, due to their own self-interest, as they will be more reliant on them in future. However, the findings from this study do not necessarily support gendered differences in preferences or interests. While boys are prioritised over girls for investment in education, this is the case for both elder men and elder women, the main difference being one of timing related to differences in economic opportunity, discussed shortly. The lack of any fundamental difference in preferences for education aligns with the findings of Baird et al. (2014), whose meta-

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[106] The studies on South Africa's pension examine its effects on very different outcomes including young child nutrition, adolescent education, and adult labour supply.

analysis of the effects of cash transfers on school enrolment shows that effect sizes do not substantially differ according to the gender of the recipient.

Adato et al. (2000), Bertrand et al. (2003), and Bergolo and Galvan (Bergolo and Galván 2018) provide evidence of gendered differences in bargaining power including that receipt of cash transfers by women can increase their bargaining power within the household. This study did not set out to see whether the OAA changes bargaining power within the household, but rather to understand how differences in bargaining power may affect outcomes. The findings show that uneducated elder women who are not the household head are most likely to have only very weak bargaining power within the household and little influence over decisions about adolescents' lives. This suggests that at least some of the variation in outcomes according to the gender of the recipient reflects generational differences in preferences. This may explain why there are increases in adolescent marriage migration in households with an elder man but not an elder woman. Marriage practices and expectations are changing in Nepal, with younger generations marrying later and sometimes for personal reasons rather than because of family obligations (Ghimire and Samuels 2014). While both men and women in the older generation may have a stronger preference for earlier marriage than the younger generation, elder men with the means to contribute financially are more likely than elder women to influence the decision.

Differences in outcomes according to the gender of the eligible elder can also depend on differences in economic opportunity. In his study on the effects of South Africa's pension on co-resident adolescents' schooling and work, Edmonds (2006) suggests that effects are only found for elder men because they are likely to be more credit constrained than women and thus underinvest in their grandchildren prior to becoming eligible. The findings in this study suggest that the opposite is true in Nepal. Men are less credit constrained than women (Uprety 2010) and are therefore able to leverage the OAA to access credit in anticipation of eligibility. In summary, the findings suggest that variation in outcomes according to the gender of the recipient may stem as much from differences in bargaining power and economic opportunity as from inherent differences in the preferences or interests of elders.

Anticipatory responses to schemes for which eligibility is inevitable can occur

Finally, a limited strand of the methodological literature on causal inference and the empirical literature on the effects of cash transfer programmes recognises that anticipatory responses can occur when eligibility for benefits is known in advance or is inevitable, such as the age-based criteria of pensions. This represents an issue both for estimating impacts and for policy. Lee and Lemieux (2010, 346) point out that "*[optimizing] behavior in anticipation of a sharp regime change may either accentuate or mute observed effects.*" For example, schemes that provide benefits for a specific purpose, such as health insurance, may lead to a delay in expensive medical treatment, knowing that the costs will be covered soon. This would potentially accentuate the impact of the scheme but may be risky from a health perspective. In contrast, a UCT is not tied to a specific purpose and it seems likely that any anticipatory response would be to increase expenditure or investment and thus reduce discontinuities at the eligibility threshold.

Some social transfer schemes in developing countries incorporated an experimental design into their structure for evaluation purposes either at a pilot stage or for a limited period during initial roll-out. Studies of these schemes suggest that measures were taken to minimise knowledge of future eligibility among control group households (Schady and Araujo 2008; Gertler, Martinez, and Rubio-Codina 2012; Handa et al. 2014). In most cases, anticipatory responses were not considered a major concern. However, in their study on the impact of Malawi's SCTS on food security, Miller et al. (2011) note that households in the control group were notified two months after the start of the scheme that they would receive transfers in one year. Assessment of data on borrowing suggests that anticipation, although not widespread, may have moderately attenuated results. This suggests that anticipatory responses can occur even in the context of a new scheme where knowledge and confidence among current and future beneficiaries is likely to be low.

Schemes such as the OAA for which eligibility is inevitable are also susceptible to anticipatory responses. In his study on the effects of South Africa's pension on co-resident adolescents' schooling and work, Edmonds (2006) recognises that households may delay withdrawing adolescents from school knowing that income will increase in the near future. He concludes that the effects on schooling are found in households with elder men but not women because elder men are more likely to be liquidity constrained

due to higher mortality risk and gendered differences in access to credit and in behaviour. Although not stated, the implication is that anticipatory responses to the pension may occur in households with elder women. One study on the effects of Mexico's pension on elder health specifically tests for anticipatory responses. Using a difference-in-difference approach Galiani, Gertler and Bando (2016) test for changes in household consumption and paid labour participation of co-resident younger adults prior to eligibility for the pension and conclude that no substantial anticipatory effects occur.

For an anticipatory effect to occur, a household should have access to cash (liquidity) or credit prior to eligibility (Galiani, Gertler, and Bando 2016). Beyond this, Lee and Lemieux (2010, 346) suggest that it is difficult to take a generalised approach to analysing anticipatory effects because "*...it seems that how one models expectations, information, and behavior in anticipation of sharp changes in regimes will be highly context-dependent*." The findings in this study provide rare empirical evidence that anticipatory effects occur in practice, and why. Interpretation of the negative effects on private schooling as an unsustained anticipatory response depends on a combination of factors including strong preferences for higher cost private schools, widespread prior knowledge of the OAA, the gendered nature of local credit markets, and the systematic unreliability of OAA implementation. This not only diminishes expected results but reverses them because the investments in private school are not sustained due to delays in registration and first receipt of the OAA.

Lessons from the research approach and methods

This section critically reviews the research approach and methods to allow further assessment of the strength and credibility of the findings and to provide lessons for future research. The section starts with an evaluation of the approach taken in the analytical framework, followed by discussion of the issues arising from integrating dual methods, and then issues specific to the quantitative and qualitative methods and data in turn.

The analytical framework

This study has demonstrated that an analytical framework that draws on the tenets of critical realism and centres on the process of decision-making about the outcomes of

interest provides for richer and more nuanced findings than is the case in most econometric studies that draw on a (post)positivist perspective. The critical realist perspective meant that attention was paid to causal processes, the role of values and beliefs, and diversity within the study community. This approach led to findings that show, while important in some cases, a cash transfer is just one consideration among many when decisions are made about adolescents' life-course circumstances. Among other things, the more inductive analysis revealed the importance of school quality and related social issues, how households prioritise educational investment, and the interaction between financial constraints and marriage practices, in understanding the casual processes linking additional income to adolescent outcomes. Importantly, the findings highlight the many circumstances in which adolescents are unlikely to be affected by the cash transfer, with important implications for policy choices and programme design (discussed in the following section).

The analytical framework built on existing evidence and theories but is not prescriptive, in that it does not assume any particular model of household bargaining or pathway through which effects occur. Rather, it set out the important areas of inquiry necessary to more fully understand the impacts of the cash transfer in people's lives. Focusing on decision-making also required consideration of all the potential alternatives, how they interact, and who is involved in the decision-making process. In this study, the interest was in adolescent transitions to adulthood. The findings show that analysing the common (and often competing) set of options together has mutually beneficial explanatory value. A small number of other studies have taken a similar approach in this regard (Behrman, Parker, and Todd 2008; Bajracharya and Amin 2012) although possibly none that focus on UCTs specifically. It should be noted that the framework was developed to study second order effects and may require adaptation for analysis of longer term, more cumulative outcomes that result from multiple decisions over time, such as cognitive and physical development.

Finally, the framework also recognised that while there may be a primary household decision-maker with regards to major expenditures and life-course options, multiple household members can be involved. Importantly, this includes the adolescent, and the findings show that gaining their perspectives was vital to understand why a cash transfer does or does not make a difference in their lives.

Integrated mixed-methods

The approach taken in this study necessarily placed greater demands on data and analytical requirements, which may explain, in part, why limited attention is paid to these issues in the existing literature. Nevertheless, there is a burgeoning literature that demonstrates the feasibility of integrated mixed-methods and examples, beyond this study, of short-form survey modules for collecting economic data of satisfactory quality to allow for analysis of heterogeneity (see Chapter 3). Accounting for more complexity also creates challenges in organising and integrating a larger quantity of data with some necessary trade-offs between breadth and depth. The alternative, however, is that failing to account for the complexity in people's lives can lead to blunt or erroneous conclusions.

Application of integrated mixed-methods increased the robustness and credibility of both the quantitative and qualitative findings. The two methods together demonstrated internal consistency of the findings and provided for more accurate and nuanced interpretation of the results, which gives more confidence in the findings. At the same time, several opportunities were lost due to challenges in the sequencing and timing of each stage of the research process. In particular, the interruption to the survey caused by severe flooding meant that the quantitative analysis was not as advanced as intended by the time qualitative data collection took place. This had implications for the qualitative sampling (discussed shortly) and construction of the topic guides because not all the key quantitative findings were apparent before the IDIs took place. For example, it would have been beneficial to explore certain issues in more depth such as the use of loans and to interview non-eligible elders who may have been anticipating the OAA. In addition, it was not possible for the researchers to return to the study population to gain respondent and other local perspectives on interpretation of the integrated findings.

Quantitative methods and data

This study has demonstrated that surveys can be designed specifically for application of discontinuity approaches to casual inference. Most regression discontinuity and related approaches make use of secondary data, typically requiring large data sets. Studies using this approach have been innovative in exploiting existing data to examine income effects on a whole range of issues. However, analysis is limited to outcomes for which

variables are available in any given dataset. The CTALS has shown that this limitation can be overcome by collecting primary survey data on the policy issue of interest wherever social pension schemes exist. This may be useful to test potential outcomes and assumptions in advance of introducing a new social transfer scheme. Two major challenges were encountered during the research with implications for the estimation approach. First, the OAA take-up rate was overestimated which had significant repercussions for sample size and, consequently, time and cost. Second, the implications of the Widows and Single Women's Allowance (WSWA) only became apparent after data collection, highlighting the need to carefully consider all other possible benefit changes at the age threshold for eligibility prior to data collection. These issues could potentially have been anticipated or investigated in more depth during the pre-survey reconnaissance of the research site.

When researching income effects or evaluating cash transfer schemes it is important to consider the whole population of individuals that may be impacted. As shown in this and other studies, adolescents can leave the home for a range of reasons, most commonly, education, marriage and work. However, most research on the second order effects of cash transfers on children and adolescents either overlook these migration outcomes or may not have data available on those who left the home. In the CTALS, including recent out-migrants in the household roster ensured a more accurate picture of the true effects of the cash transfer. This has implications for how a household is defined and who is enumerated in surveys.

Very few studies on the effects of UCTs on adolescents differentiate analysis by the economic status of the household. However, short-form household economic well-being modules can provide sufficiently robust data for this purpose. The CTALS used short-form modules for collection of data on household income, consumption and assets. Analysis provided in Chapter 3 shows a high degree of correlation between the three composite variables. While the data are not equivalent to other national income and consumption data, they provide an approximate benchmark for comparison and allow for differential analysis within the study sample. At the same time, the analysis revealed some shortcomings in the data related to loans. The findings in Chapter 6 suggested that smaller informal loans may be underrepresented in the survey data. This may be because respondents considered small scale, short-term borrowing was unimportant or

were not aware of all loans taken by other household members. Moreover, by design, the loan variable was limited to loans taken in the past year. However, data on longer term debt may have been more appropriate to analyse and interpret the findings related to anticipatory effects and education.

Two areas of data collection did not work as intended. Many household surveys collect data on the relation between each household member and the household head. This allows for very limited analysis of relations within the household, such as the effect of (grand)parental characteristics on adolescent outcomes. To overcome this, the CTALS attempted to collect data on the relationship between each adolescent and all other members of the household. However, collection of detailed data on intra-household relationships was challenging. Despite training and regular review of the procedures during data collection, reverse relationships were often recorded (e.g. daughter rather than mother) and the data cleaning process was unable to sufficiently rectify all cases. As a result, it was not possible to incorporate a more nuanced analysis of (grand)parental characteristics into the analysis. It was also intended to analyse school attendance within the reference period of the last week as well as the past year. However, a combination of technical difficulties and confusion between local terms for (school) holiday and strike or enforced closure resulted in a large number of cases with missing data.

Qualitative methods and data
Guided by the analytical framework, the structure of the IDI topic guides aimed to explore aspects of adolescents' lives and life-course circumstances before focusing on the role of the household economy and the OAA. This had two major advantages that are apparent in the data. First, conversations generated a breadth and depth of data for understanding the determinants of adolescent outcomes, within which the role of the OAA could be situated. Second, this also meant that links between the household's economic circumstances, including the OAA, and the outcomes of interest could emerge spontaneously, providing greater credibility to aspects of the data. For example, this was the case with references to the relationship between the OAA, credit, and adolescent education and marriage.

The randomised approach to IDI sampling had both advantages and disadvantages. On the positive side, random selection of adolescents (within certain bounds) ensured some degree of representativeness across the survey population, avoiding unconscious selection bias. However, considering the major quantitative findings, analysis of the IDI sample suggests that a greater degree of purposive sampling could have been useful. For example, cases of adolescents who had shifted from public to private school, or *vice versa*, and married girls may have been proportionally represented but were very few in number. More purposive sampling was not done, in part, because of issues related to sequencing of the research process, discussed earlier.

The qualitative research process was limited by two major practical issues. First, the translator was unable to participate in data collection (interviews) as originally planned. This would have had two major benefits. Although de-briefing with the RAs occurred daily, having a skilled translator participating in the process would have allowed the Principal Investigator (PI) to have more detailed insights into the content of the interviews to shape the approach in future interviews. In addition, the translator would have had a stronger foundation prior to translating the transcripts. Second, the PI was unable to remain in Nepal for the coding process. While a limited double-coding was adopted remotely, doing this collaboratively in person could have generated a higher degree of co-construction of meaning from the corpus.

Implications for policy and further research

The findings in this study have implications for the design of cash transfers for adolescents and, more broadly, for the complement of policy approaches that might be most effective at promoting growth and development throughout adolescence and improving life-course transitions.

Access to quality education is central to successful transitions to adulthood and is a strong determinant of many developmental outcomes later in life (Banati and Lansford 2018). The findings in this study show that there are financial barriers to education that increase throughout adolescence, and that a UCT can support some households to overcome these. However, many adolescents face other, often multiple, cultural and

social constraints to education for which a modest amount of additional income will make little difference.

One of the main non-financial barriers to accessing education is the low quality of public schools. The findings highlight issues related to teacher absenteeism, teaching standards, discipline practices, and the social environment. Muslims also experience cultural exclusion from mainstream schools (Hafiz, Prakash, and Rajbhandari 2008). Poorer households have little incentive to support adolescents who struggle academically to remain in school. Likewise, adolescents have little incentive to stay in school when they experience violence or other social challenges. Households choose to allocate additional money towards education that achieves the best available results. Those that can afford to, shift adolescents into private school or pay for private tuition. Research shows that in Nepal, private schools substantially outperform public schools in examination success (A. Thapa 2015). However, Tooley and Dixon (2007) suggest there is little empirical evidence on low-fee private school quality globally. This points to the need for further research to better understand the interactions between household income, school choice and the use of tutoring, and educational attainment.

Nevertheless, in this context, questions must be asked about the efficacy of cash transfers as an intervention to support access to school. Without (drastically) improving the quality and inclusiveness of mainstream public schools, cash transfers will have only limited effects on attendance. Moreover, additional income that is primarily directed by households towards the private sector will do little to support the public education system, even if this improves public school outcomes through the use of private tutoring. This suggests that improving the quality of public schools should be a priority for public policy. At the same time, cash transfers, even when conditional on school attendance, may be diverted towards private education of higher priority adolescents, typically boys rather than girls. Thus, removing school fees at secondary and upper secondary levels would be an important step prior to considering direct income support for adolescent education and would likely be more efficient.

The findings also show that in the study area, most adolescents who are out of mainstream school have either never been to school or dropped out very early. Moreover, households are shown to prioritise educational investment in adolescents

with greater academic aptitude. This suggests the need for greater investment in non-formal education to support (re-)enrolment into mainstream school, which could be linked to income support to incentivise attendance (see below). However, in the longer term, one of the most effective approaches to improving adolescent education outcomes would be early intervention to ensure a sound basis for learning throughout adolescence (Kilburn et al. 2017). This suggests a prioritisation of policy resources towards improving quality and access to early years and primary education. Without this, outcomes during adolescence will continue to be poor. Enrolment rates among primary age children are much higher because primary education is free, is moving towards being compulsory, and opportunity costs are lower (Ministry of Education, UNICEF, and UNESCO 2016). However, outcomes are poor and certain groups, such as Muslims, are still likely to be excluded. This suggests the need for further research on the barriers to achievement in early and primary years education and the extent to which economic support, for example through an enhanced child grant in Nepal, would impact on attendance and attainment.

At the same time, recognising the current state of the education fabric of the country, cash transfers targeted to adolescents could be a useful part of the policy mix. In Nepal a scholarship scheme already exists but is known to be poorly implemented and largely ineffectual due, in part, to the very small scholarship value (Educational Resource and Development Centre 2011; Datt and Uhe 2019).[107] However, the findings in this study show that even when additional income is not intended for adolescents it tends to become part of the overall household budget and has measurable effects on school attendance. It is important to note, the research site for this study was chosen because it has very low levels of economic and human development. School standards, levels of poverty, and other factors will vary across the country. Thus, the optimal balance in the policy mix and allocation of resources towards raising school standards and direct income support to households may vary. Nevertheless, a well designed and implemented cash transfer for the purpose of improving adolescent educational outcomes would likely have greater impact than both the OAA and current scholarship scheme.

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[107] CTALS data shows that the mean value of scholarships received by adolescents in this study is 0.2% of median household income.

The findings point to various design features of a cash transfer for adolescent education that would maximise positive outcomes while guarding against socially negative consequences. First, a wide and inclusive view should be taken of the types of education that can be accessed. To encourage out-of-school adolescents (back) into school, a clear case can be made to include catch-up classes, madrassas that have integrated the mainstream curriculum, and other state-sanctioned non-formal education schemes (Ministry of Education, UNICEF, and UNESCO 2016). Whether fee charging unaided schools should be included is less clear but may be necessary where local public schools do not have adequate capacity or do not (yet) meet minimum quality standards. Second, this inclusive view of education implies that, in contrast to the current scholarship scheme, programme delivery should be de-coupled from the public school system. This would also allow educational institutions to play a more supportive role in monitoring and grievance systems.

Third, the potential for certain socially undesirable effects of a UCT implies that mitigating measures are necessary. While strict, punitive conditions can be counter-productive, application of sensitively applied 'soft' conditions of school attendance could be used as an entry point to overcome other barriers to education (UNICEF 2016). Thus, adolescents who do not attend an appropriate form of education for a specified period should not be cut-off from the programme. Instead, the transfer can help adolescents link to other forms of support such as alternative forms of education and schemes to discourage early transitions into marriage and work. However, as in most low-income countries, administrative capacity in Nepal is low and may be unable, in the short to medium term, to provide effective systems for monitoring and responding to adolescents' needs. As such, there is some evidence that combining a UCT with messaging that promotes socially positive choices can be beneficial (Heinrich and Knowles 2018).

Fourth, the value of the transfer must be sufficient to cover the grade-specific direct costs of school including fees where these are in place, possibly set to a maximum level for private school fees, and other out-of-pocket expenses. In addition, to further incentivise attendance and to see improvements in attainment, the transfer should also cover the costs of additional educational support such as catch-up education, private

tuition, especially for periods prior to critical grade-junctures, and for children with additional needs such as those with disabilities.

Fifth, the findings show that education investment within households can be inequitable. This suggests that education transfers should be provided to all school-age children within the household. Whether this covers primary age children remains a question requiring further research as to whether this would improve outcomes. As in most low income countries, poverty targeting in Nepal is fraught with difficulty and is likely to be counter-productive (Mathers 2017; Kidd, Gelders, and Bailey-Athias 2017; Brown, Ravallion, and van de Walle 2018). Geographic targeting may offer a feasible alternative when resources are scarce. Sixth, lessons from the OAA in this study and evidence from other research in Nepal (Educational Resource and Development Centre 2011; Drucza 2015; Hagen-Zanker and Mallett 2016) show that improvements to social protection management and delivery systems are required to ensure regular and timely transfers that reach the right people. The findings show that this is especially important in relation to time-sensitive payments such as school fees to prevent drop-out and avoid unnecessary and unsustainable debt.

Improvements in school quality and appropriately designed economic support for adolescent education are likely to have positive effects on delaying marriage and work. However, the findings suggest that those most likely to be in work or to marry early are the hardest to support (back) into school and other targeted interventions may be necessary. Existing evidence on what works to delay marriage is thin but points most convincingly to payment of school fees or cash transfers conditional on school attendance (Kalamar, Lee-Rife, and Hindin 2016). Life-skills and parental education may also have a role although their effectiveness is variable (ibid.). This points to the need for more robust evidence on which approaches, beyond CCTs, are most effective at delaying marriage, ensuring that analyses can disentangle effect pathways for multi-component interventions.

There is more consensus on what works to reduce child and adolescent labour, which includes decent work for adults and legal standards and regulation in addition to social protection and quality education (UNICEF 2014; ILO 2017a). Social protection measures include not just education-related transfers, but those that help reduce risk

such as asset building programmes and health insurance (Dammert et al. 2018). However, the findings from this study show that adolescent work is most intransigent among the poorest, and other evidence suggests that children from the poorest households, and those whose father has died or who are living away from both biological parents are most likely to be engaged in hazardous forms of work (Kamei 2018). Further research focused on at-risk groups would be helpful to understand which complementary interventions could improve the circumstances of the most vulnerable adolescents.

References

Aasland, Aadne, and Marit Haug. 2011. "Perceptions of Social Change in Nepal: Are Caste, Ethnicity, and Region of Relevance?" *Journal of Asian and African Studies* 46 (2): 184–201. https://doi.org/10.1177/0021909610389133.

Adato, Michelle. 2008. "Combining Survey and Ethnographic Methods to Improve Evaluation of Conditional Cash Transfer Programs." *International Journal of Multiple Research Approaches* 2 (2): 222–36. https://doi.org/10.5172/mra.455.2.2.222.

Adato, Michelle, Benedicte de la Briere, Dubravka Mindek, and Agnes R Quisumbing. 2000. "The Impact of Progresa on Women's Status and Intrahousehold Relations." Washington D.C.: International Food Policy Research Institute.

Adhikari, Tej Prasad, Fatik Bahadur Thapa, Sonam Tamrakar, Prakash Buda Magar, Jessica Hagen-Zanker, and Babken Babajanian. 2014. "How Does Social Protection Contribute to Social Inclusion in Nepal?" ODI Report. London: Overseas Development Institute.

Adler, Patricia A, and Peter Adler. 2011. "The Reluctant Respondent." In *Handbook of Interview Research*, edited by Jaber F Gubrium and James A Holstein, 515–35. Thousand Oaks, CA: SAGE Publications, Inc. https://doi.org/10.4135/9781412973588.

Agarwal, Bina. 1997. ""Bargaining" and Gender Relations: Within and beyond the Household." *Feminist Economics* 3 (1): 1–51. https://doi.org/10.1080/135457097338799.

Alam, Andaleeb, and Javier E. Baez. 2011. "Does Cash for School Influence Young Women's Behavior in the Longer Term? Evidence from Pakistan." Working Paper No. 5669. Washington D.C.: World Bank.

Alavi, Mousa, Mandy Archibald, Rose McMaster, Violeta Lopez, and Michelle Cleary. 2018. "Aligning Theory and Methodology in Mixed Methods Research: Before Design Theoretical Placement." *International Journal of Social Research Methodology* 21 (5): 527–40. https://doi.org/10.1080/13645579.2018.1435016.

Alderman, Harold, Ravi Kanbur, Lawrence Haddad, Pierre-André Chiappori, and John Hoddinott. 1995. "Unitary Versus Collective Models of the Household: Is It Time To Shift the Burden of Proof?" *The World Bank Research Observer* 10 (1): 1–19. https://doi.org/10.1093/wbro/10.1.1.

Amin, Sajeda, M Niaz Asadullah, Sara Hossain, and Zaki Wahhaj. 2017a. "Eradicating Child Marriage in the Commonwealth: Is Investment in Girls' Education Sufficient?" *The Round Table* 106 (2): 221–23. https://doi.org/10.1080/00358533.2017.1299461.

Amin, Sajeda, Niaz Asadullah, Sara Hossain, and Zaki Wahhaj. 2017b. "Can Conditional Transfers Eradicate Child Marriage?" *Economic and Political Weekly* 52 (6): 20–22.

Amin, Sajeda, and Ashish Bajracharya. 2011. "Costs of Marriage: Marriage

Transactions in the Developing World." Promoting Healthy, Safe, and Productive Transitions to Adulthood Brief. New York, NY: Population Council.

Anderson, Siwan. 2007. "The Economics of Dowry and Brideprice." *Journal of Economic Perspectives* 21 (4): 151–74. https://doi.org/10.1257/jep.21.4.151.

Angrist, Joshua D., and Jorn-Steffen Pischke. 2009. *Mostly Harmless Econometrics*. Princeton, NJ: Princeton University Press.

Archer, Margaret, Roy Bhaskar, Andrew Collier, Tony Lawson, and Alan Norrie, eds. 1998. *Critical Realism: Essential Readings*. 1st ed. New York, NY: Routledge.

Baird, Sarah, Francisco H. G. Ferreira, Berk Özler, and Michael Woolcock. 2014. "Conditional, Unconditional and Everything in between: A Systematic Review of the Effects of Cash Transfer Programmes on Schooling Outcomes." *Journal of Development Effectiveness* 6 (1): 1–43. https://doi.org/10.1080/19439342.2014.890362.

Baird, Sarah, Craig McIntosh, and Berk Özler. 2011. "Cash or Condition? Evidence from a Cash Transfer Experiment." *Quarterly Journal of Economics* 126 (4): 1709–53. https://doi.org/10.1093/qje/qjr032.

———. 2019. "When the Money Runs out: Do Cash Transfers Have Sustained Effects on Human Capital Accumulation?" *Journal of Development Economics* 140 (April): 169–85. https://doi.org/10.1016/j.jdeveco.2019.04.004.

Bajracharya, Ashish, and Sajeda Amin. 2012. "Poverty, Marriage Timing, and Transitions to Adulthood in Nepal ." *Studies in Family Planning* 43 (2): 14.

Baker, Sarah Elsie, and Rosalind Edwards. 2012. "How Many Qualitative Interviews Is Enough: Expert Voices and Early Career Reflections on Sampling and Cases in Qualitative Research." NCRM Methods Review Paper. Southampton, UK: National Centre for Research Methods. https://doi.org/10.1177/1525822X05279903.

Bamberger, Michael. 2015. "Innovations in the Use of Mixed Methods in Real-World Evaluation." *Journal of Development Effectiveness* 7 (3): 317–26. https://doi.org/10.1080/19439342.2015.1068832.

Banati, Prerna, and Jennifer E. Lansford. 2018. "Introduction: Adolescence in a Global Context." In *Handbook of Adolescent Development Research and Its Impact on Global Policy*, edited by Jennifer E. Lansford and Prerna Banati, 1–31. Oxford: Oxford University Press. https://doi.org/10.1093/oso/9780190847128.001.0001.

Barbour, Rosaline S. 2014. "Quality of Data Analysis." In *The SAGE Handbook of Qualitative Data Analysis*, edited by Uwe Flick, 435–50. London, UK: SAGE Publications, Inc. https://doi.org/10.1136/ebnurs.2011.100352.

Barnett, Chris, and Laura Camfield. 2016. "Ethics in Evaluation." *Journal of Development Effectiveness* 8 (4): 528–34.

Barrientos, Armando, Jasmina Byrne, Juan Miguel Villa, and Paola Peña. 2013. "Social Transfers and Child Protection." Working Paper 2013-05. Florence, Italy: UNICEF Innocenti Research Centre. www.unicef-irc.org.

Barrientos, Armando, and Juan Miguel Villa. 2015. "Antipoverty Transfers and Labour Market Outcomes: Regression Discontinuity Design Findings." *The Journal of Development Studies* 519 (August): 1224–40.

https://doi.org/10.1080/00220388.2015.1010157.

Bastagli, Francesca, Jessica Hagen-Zanker, Luke Harman, Valentina Barca, Georgina Sturge, Tanja Schmidt, and Luca Pellerano. 2016. "Cash Transfers: What Does the Evidence Say? A Rigorous Review of Programme Impact and of the Role of Design and Implementation Features." ODI Report. London, UK: Overseas Development Institute.

Bauchet, Jonathan, Eduardo A Undurraga, Victoria Reyes-garcía, Jere R Behrman, and Ricardo A Godoy. 2018. "Conditional Cash Transfers for Primary Education: Which Children Are Left Out?" *World Development* 105: 1–12. https://doi.org/10.1016/j.worlddev.2017.12.021.

Behrman, Jere R., Susan W. Parker, and Petra E. Todd. 2009. "Schooling Impacts of Conditional Cash Transfers on Young Children: Evidence from Mexico." *Economic Development and Cultural Change* 57 (3): 439–77. https://doi.org/10.1086/596614.

Behrman, Jere R, Susan W Parker, and Petra E Todd. 2008. "Medium-Term Impacts of the Oportunidades Conditional Cash Transfer Program on Rural Youth in Mexico." In *Poverty, Inequality and Policy in Latin America*, edited by Stephan Klasen and Felicitas Nowak-Lehmann, 219–70. Cambridge, MA: The MIT Press.

Bergolo, Marcelo, and Estefanía Galván. 2018. "Intra-Household Behavioral Responses to Cash Transfer Programs. Evidence from a Regression Discontinuity Design." *World Development* 103: 100–118. https://doi.org/10.1016/j.worlddev.2017.10.030.

Bertrand, Marianne, Sendhil Mullainathan, and Douglas Miller. 2003. "Public Policy and Extended Families: Evidence from Pensions in South Africa." *The World Bank Economic Review* 17 (1): 27–50. https://doi.org/10.1093/wber/lhgO14.

Bishwa Nath, Tiwari, Yash Ghai, Sarah Levit-Shore, and Lok Raj Baral. 2009. "Nepal Human Development Report 2009: State Transformation and Human Development." Kathmandu, Nepal: UNDP. https://doi.org/10.3109/14992027.2011.562246.

Black, Maggie, Victoria Haeri, and Nicolette Moodie. 2001. "Early Marriage - Child Spouses." *Innocenti Digest*. Vol. 7. Florence, Italy: UNICEF Innocenti Research Centre.

Bossavie, Laurent, and Anastasiya Denisova. 2018. "Youth Labor Migration in Nepal." Washington D.C.: World Bank.

Boyatzis, Richard E. 1998. *Transforming Qualitative Information: Thematic Analysis and Code Development*. Thousand Oaks, CA: SAGE Publications, Inc.

Brown, Caitlin, Martin Ravallion, and Dominique van de Walle. 2018. "A Poor Means Test? Econometric Targeting in Africa." *Journal of Development Economics* 134 (May): 109–24. https://doi.org/10.1016/j.jdeveco.2018.05.004.

Bundy, Donald A P, Nilanthi de Silva, Susan Horton, George C Patton, Linda Schultz, and Dean T Jamison, eds. 2017. *Child and Adolescent Health and Development. Disease Control Priorities*. 3rd ed. Washington D.C.: World Bank.

Canavire-Bacarreza, G, and H Vásquez-Ruiz. 2013. "Labour Supply Effects of Conditional Transfers: Analyzing the Dominican Republic's Solidarity Program."

13–8. Economía y Finanzas CIEF. Medellín.

Carvalho Filho, Irineu Evangelista de. 2012. "Household Income as a Determinant of Child Labor and School Enrollment in Brazil: Evidence from a Social Security Reform." *Economic Development and Cultural Change* 60 (2): 399–435. https://doi.org/10.1086/662576.

Case, Anne. 2004. "Does Money Protect Health Status? Evidence from South African Pensions." In *Perspectives on the Economics of Aging*, edited by David A. Wise, 287–311. Chicago, IL: University of Chicago Press.

Central Bureau of Statistics. 2009. "Report on the Nepal Labour Force Survey 2008." Kathmandu, Nepal: Central Bureau of Statistics, Government of Nepal.

———. 2011a. "National Population and Housing Census 2011." Vol. 01. Kathmandu, Nepal: Central Bureau of Statistics, Government of Nepal.

———. 2011b. "Nepal Living Standards Survey 2010/11 Statistical Report Volumes 1 and 2." Kathmandu, Nepal: Central Bureau of Statistics, Government of Nepal.

———. 2011c. "Poverty in Nepal 2010/2011." Kathmandu, Nepal: Central Bureau of Statistics, Government of Nepal.

———. 2012. "National Population and Housing Census 2011 (National Report) Government of Nepal." Vol. 01. Kathmandu, Nepal: Central Bureau of Statistics, Government of Nepal.

———. 2013. "Small Area Estimation of Poverty." Kathamandu, Nepal: Central Bureau of Statistics, Government of Nepal.

———. 2015. "Multiple Indicator Cluster Survey 2014 Final Report." Kathmandu, Nepal: Central Bureau of Statistics and UNICEF Nepal.

———. 2018. "Annual Household Survey." Vol. 17. Kathmandu, Nepal: Central Bureau of Statistics, Government of Nepal.

Collver, Andrew. 1963. "The Family Cycle in India and the United States." *American Sociological Review* 28 (1): 86–96.

Cooper, Kerris, and Kitty Stewart. 2013. "Does Money Affect Children's Outcomes?: A Systematic Review." York, UK: Joseph Rowntree Foundation.

Cornish, Flora, Gillespie Alex, and Tania Zittoun. 2014. "Collaborative Analysis of Qualitative Data." In *The SAGE Handbook of Qualitative Data Analysis*, edited by Uwe Flick, 79–93. London, UK: SAGE Publications, Inc. https://doi.org/10.1136/ebnurs.2011.100352.

Cosic, Damir, Sudyumna Dahal, and Markus Kitzmuller. 2017. "Climbing Higher: Towards a Middle Income Nepal." Washington D.C.: World Bank.

Covarrubias, Katia, Benjamin Davis, and Paul Winters. 2012. "From Protection to Production: Productive Impacts of the Malawi Social Cash Transfer Scheme." *Journal of Development Effectiveness* 4 (1): 50–77. https://doi.org/10.1080/19439342.2011.641995.

Cronin-Furman, Kate, and Milli Lake. 2018. "Ethics Abroad: Fieldwork in Fragile and Violent Contexts." *PS - Political Science and Politics* 51 (3): 607–14. https://doi.org/10.1017/S1049096518000379.

Daidone, Silvio, Benjamin Davis, Sudhanshu Handa, and Paul Winters. 2019. "The

Household and Individual-Level Impacts of Cash Transfer Programs in Sub-Saharan Africa." *American Journal of Agricultural Economics* 101 (5): 1041–1431. https://doi.org/10.1093/ajae/aay113.

Dake, Fidelia, Luisa Natali, Gustavo Angeles, Jacobus de Hoop, Sudhanshu Handa, and Amber Peterman. 2018. "Cash Transfers, Early Marriage, and Fertility in Malawi and Zambia." *Studies in Family Planning* 49 (4): 295–317. https://doi.org/10.1111/sifp.12073.

Dammert, Ana C., Jacobus de Hoop, Eric Mvukiyehe, and Furio C. Rosati. 2018. "Effects of Public Policy on Child Labor: Current Knowledge, Gaps, and Implications for Program Design." *World Development* 110: 104–23. https://doi.org/10.1016/j.worlddev.2018.05.001.

Datt, Gaurav, and Leah Uhe. 2019. "A Little Help May Be No Help at All: Size of Scholarships and Child Labour in Nepal." *Journal of Development Studies* 55 (6): 1158–81. https://doi.org/10.1080/00220388.2018.1487052.

Davis, Benjamin, and Sudhanshu Handa. 2015. "How Much Do Programmes Pay? Transfer Size in Selected National Cash Transfer Programmes in Sub-Saharan Africa." Research Brief No. 2015-09. Chapel Hill, NC: UNC Carolina Population Center.

Deshingkar, Priya, Rachel Godfrey Wood, and Christophe Béné. 2013. "Adaptive Social Protection and Migration: The Case of Cash Transfers in Ethiopia, Kenya, Tanzania and Malawi." Brighton, UK: Migrating out of Poverty Research Programme Consortium.

Deshingkar, Pryia, Shaheen Akter, P Sharma, and John Farrington. 2010. "The Impacts of Social Protection on Labour Markets and Migration with Particular Reference to the NREGA." London, UK: Overseas Development Institute.

Devereux, Stephen, Keetie Roelen, Christophe Béné, Deepta Chopra, Jennifer Leavy, and J. Allister McGregor. 2013. "Evaluating Outside the Box: An Alternative Framework for Analysing Social Protection Programmes." IDS Working Paper No. 431. Brighton, UK: Institute of Development Studies.

Djimeu, Eric W, and Deo-Gracias Houndolo. 2016. "Power Calculation for Causal Inference in Social Science Sample Size and Minimum Detectable Effect Determination." 3ie Working Paper No. 26. New Delhi, India: International Initiative for Impact Evaluation (3ie).

Doss, Cheryl. 1996. "Testing among Models of Intrahousehold Resource Allocation." *World Development* 24 (10): 1597–1609. https://doi.org/10.1016/0305-750X(96)00063-0.

———. 2013. "Intrahousehold Bargaining and Resource Allocation in Developing Countries." *World Bank Research Observer* 28 (1): 52–78. https://doi.org/10.1093/wbro/lkt001.

Doss, Cheryl, Carmen Diana Deere, Abena D Oduro, Hema Swaminathan, Zachary Catanzarite, and J Y Suchitra. 2019. "Gendered Paths to Asset Accumulation? Markets, Savings, and Credit in Developing Countries." *Feminist Economics* 25 (2): 36–66. https://doi.org/10.1080/13545701.2019.1566753.

Drucza, Kristie. 2015. "Cash Transfers in Nepal: Do They Contribute to Social Inclusion?" *Oxford Development Studies* 44 (1): 49–69.

https://doi.org/10.1080/13600818.2015.1065313.

DSD, SASSA, and UNICEF. 2010. "Child Support Grant Evaluation 2010: Qualitative Research Report." Pretoria, South Africa: UNICEF.

———. 2012. "The South African Child Support Grant Impact Assessment: Evidence from a Survey of Children, Adolescents and Their Households." Pretoria: UNICEF South Africa.

Duflo, Esther. 2003. "Grandmothers and Granddaughters: Old-Age Pensions and Intrahousehold Allocation in South Africa." *The World Bank Economic Review* 17 (1): 1–25. https://doi.org/10.1093/wber/lhg013.

Edmonds, Eric V. 2006. "Child Labor and Schooling Responses to Anticipated Income in South Africa." *Journal of Development Economics* 81 (2): 386–414. https://doi.org/10.1016/j.jdeveco.2005.05.001.

Edmonds, Eric V, Kristin Mammen, and Douglas L Miller. 2005. "Rearranging the Family? Income Support and Elderly Living Arrangements in a Low-Income Country." *The Journal of Human Resources* 40 (1): 186–207.

Edmonds, Eric V, and Norbert Schady. 2012. "Poverty Alleviation and Child Labor." *American Economic Journal: Economic Policy* 4 (4): 100–124. https://doi.org/10.1257/pol.4.4.100.

Edmonds, Eric V, and Maheshwor Shrestha. 2009. "Children's Work and Independent Child Migration: A Critical Review." *Innocenti Working Paper*. Florence, Italy: UNICEF Innocenti Research Centre.

———. 2014. "You Get What You Pay for: Schooling Incentives and Child Labor." *Journal of Development Economics* 111: 196–211.

Educational Resource and Development Centre. 2011. "A Study on Effectiveness of Girls' Scholarship Program." ERDC Report. Kathmandu, Nepal: ERDC.

Emerson, Patrick M, and André Portela Souza. 2002. "Bargaining over Sons and Daughters: Child Labor, School Attendance and Intra-Household Gender Bias in Brazil." Working Paper 02-W13. Nashville, TN: Department of Economics, Vanderbillt University.

Eyal, Katherine, and Ingrid Woolard. 2014. "Cash Transfers and Teen Education: Evidence from South Africa." Working Paper. Cape Town: University of Cape Town.

Fereday, Jennifer, and Eimear Muir-Cochrane. 2006. "Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and Theme Development." *International Journal of Qualitative Methods* 5 (1): 80–92. https://doi.org/10.1177/160940690600500107.

Ferrarini, Tommy, Kenneth Nelson, and Joakim Palme. 2016. "Social Transfers and Poverty in Middle- and High-Income Countries - A Global Perspective." *Global Social Policy* 16 (1): 22–46. https://doi.org/10.1177/1468018115591712.

Fisher, Eleanor, Ramlatu Attah, Valentina Barca, Clare O Brien, Simon Brook, Jeremy Holland, Andrew Kardan, Sara Pavanello, and Pamela Pozarny. 2017. "The Livelihood Impacts of Cash Transfers in Sub-Saharan Africa: Beneficiary Perspectives from Six Countries." *World Development* 99: 299–319. https://doi.org/10.1016/j.worlddev.2017.05.020.

Fuchs, Marek. 2011. "Total Survey Error." In *Encyclopedia of Survey Research Methods*, edited by Paul J. Lavrakas, 897–902. Thousand Oaks, CA: SAGE Publications, Inc. https://doi.org/10.1093/oxfordhb/9780190213299.013.22.

Fujii, Lee Ann. 2012. "Research Ethics 101: Dilemmas and Responsibilities." *PS - Political Science and Politics* 45 (4): 717–23. https://doi.org/10.1017/S1049096512000819.

Galiani, Sebastian, Paul Gertler, and Rosangela Bando. 2016. "Non-Contributory Pensions." *Labour Economics* 38: 47–58. https://doi.org/10.1016/j.labeco.2015.11.003.

Galiani, Sebastian, and Patrick J Mcewan. 2013. "The Heterogeneous Impact of Conditional Cash Transfers." *Journal of Public Economics* 103: 85–96. https://doi.org/10.1016/j.jpubeco.2013.04.004.

Garde, Maricar, Nicholas Mathers, and Thakur Dhakal. 2017. "The Evolution of Nepal's Child Grant: From Humble Beginnings to a Real Driver of Change for Children?" *Global Social Policy* 17 (3): 359–64. https://doi.org/10.1177/1468018117729911.

Gellner, David N. 2007. "Caste, Ethnicity and Inequality in Nepal." *Economic and Political Weekly* 42 (20): 6.

Gennetian, Lisa A, Nina Castells, and Pamela Morris. 2010. "Meeting the Basic Needs of Children: Does Income Matter?" *Child and Youth Services Review* 32 (9): 1138–48. https://doi.org/10.1016/j.childyouth.2010.03.004.Meeting.

Gertler, Paul J., Sebastian W. Martinez, and Marta Rubio-Codina. 2012. "Investing Cash Transfers to Raise Long-Term Living Standards." *American Economic Journal: Applied Economics* 4 (1): 164–92. https://doi.org/10.1257/app.4.1.164.

Ghimire, Anita, and Fiona Samuels. 2014. "Change and Continuity in Social Norms and Practices around Marriage and Education in Nepal." ODI Country Report. London: Overseas Development Institute.

Ghosh, Biswajit. 2011. "Child Marriage, Society and the Law: A Study in a Rural Context in West Bengal, India." *International Journal of Law, Policy & the Family* 25 (2): 199–220. https://doi.org/10.1093/lawfam/ebr002.

Government of Nepal. 1971. *Education Act, 2028 (1971)*. Kathmandu, Nepal.

Gram, Lu, Jolene Skordis-Worrall, Jenevieve Mannell, Dharma S. Manandhar, Naomi Saville, and Joanna Morrison. 2018. "Revisiting the Patriarchal Bargain: The Intergenerational Power Dynamics of Household Money Management in Rural Nepal." *World Development* 112: 193–204. https://doi.org/10.1016/j.worlddev.2018.08.002.

Gram, Lu, Jolene Skordis-Worrall, Naomi Saville, Dharma S. Manandhar, Neha Sharma, and Joanna Morrison. 2019. "'There Is No Point Giving Cash to Women Who Don't Spend It the Way They Are Told to Spend It' – Exploring Women's Agency over Cash in a Combined Participatory Women's Groups and Cash Transfer Programme to Improve Low Birthweight in Rural Nepal." *Social Science and Medicine* 221 (December 2018): 9–18. https://doi.org/10.1016/j.socscimed.2018.12.005.

Gulemetova-Swan, Michaela. 2009. "Evaluating the Impact of Conditional Cash

Transfer Programs on Adolescent Decisions about Marriage and Fertility: The Case of Oportunidades." *PhD Thesis*. Philadelphia, PA: University of Pennsylvania.

Gutierrez, Emilio, Laura Juarez, and Adrian Rubli. 2017. "The Effect of a Transfer Program for the Elderly in Mexico City on Co-Residing Children's School Enrollment." *World Bank Economic Review* 31 (3): 809–28. https://doi.org/10.1093/wber/lhw012.

Hafiz, Zahid Parwez, Swayam Prakash, and Anjana Rajbhandari. 2008. "Formal Education in Madrasas of Nepal: A Study on Emerging Trends and Issues." Kathmandu, Nepal: Tribhuvan University.

Hagen-Zanker, Jessica, and Carmen Leon Himmelstine. 2013. "What Do We Know about the Impact of Social Protection Programmes on the Decision to Migrate?" *Migration and Development* 2 (1): 117–31. https://doi.org/10.1080/21632324.2013.778131.

Hagen-Zanker, Jessica, and Richard Mallett. 2016. "Nepal's Child Grant: A Mixed-Methods Assessment of Implementation Bottlenecks." *International Social Security Review* 69 (1): 47–65. https://doi.org/10.1111/issr.12094.

Hagen-Zanker, Jessica, Richard Mallett, and Anita Ghimire. 2015. "How Does Nepal's Child Grant Work for Dalit Children and Their Families?" London: Overseas Development Institute.

Hagen-Zanker, Jessica, Anna McCord, and Rebecca Holmes. 2011. "The Impact of Employment Guarantee Schemes and Cash Transfers on the Poor: Systematic Review." London: Overseas Development Institute.

Handa, Sudhanshu, Carolyn Tucker Halpern, Audrey Pettifor, and Harsha Thirumurthy. 2014. "The Government of Kenya's Cash Transfer Program Reduces the Risk of Sexual Debut among Young People Age 15-25." *PLoS ONE* 9 (1). https://doi.org/10.1371/journal.pone.0085473.

Handa, Sudhanshu, Luisa Natali, David Seidenfeld, and Gelson Tembo. 2015. "The Impact of Zambia's Unconditional Child Grant on Schooling and Work Results from a Large-Scale Social Experiment." Innocenti Working Paper 2015-01. Florence, Italy: UNICEF Office of Research.

Handa, Sudhanshu, Amber Peterman, Carolyn Huang, Carolyn Halpern, Audrey Pettifor, and Harsha Thirumurthy. 2015. "Impact of the Kenya Cash Transfer for Orphans and Vulnerable Children on Early Pregnancy and Marriage of Adolescent Girls." *Social Science & Medicine* 141: 36–45. https://doi.org/10.1016/j.socscimed.2015.07.024.

Heinrich, Carolyn J, and Matthew T Knowles. 2018. "A Fine Predicament: Conditioning, Compliance and Consequences in a Labeled Cash Transfer Program." Working Paper No. 429. Nashville, TN: Vanderbilt University.

Hoop, Jacobus de, and Furio C Rosati. 2014. "Cash Transfers and Child Labor." *The World Bank Research Observer* 29 (2): 202–34. https://doi.org/10.1093/wbro/lku003.

Hsieh, Hsiu-Fang, and Sarah E Shannon. 2005. "Three Approaches to Qualitative Content Analysis." *Qualitative Health Research* 15 (9): 1277–88. https://doi.org/10.1177/1049732305276687.

IEG. 2011a. "Do Conditional Cash Transfers Lead to Medium-Term Impacts? Evidence from a Female School Stipend Program in Pakistan." IEG Report 65358. Washington D.C.: World Bank.

———. 2011b. "Evidence and Lessons Learned from Impact Evaluations on Social Safety Nets." Washington D.C.: World Bank.

———. 2014. "Social Safety Nets and Gender: Learning From Impact Evaluations and World Bank Projects." Washington D.C.: World Bank.

ILO. 2004. "The Informal Economy and Workers in Nepal." Kathmandu, Nepal: International Labour Organisation.

———. 2007. "Explaining the Demand and Supply of Child Labour : A Review of the Underlying Theories." Geneva: International Labour Organisation.

———. 2017a. "Ending Child Labour by 2025: A Review of Policies and Programmes." Geneva: International Labour Organisation. https://doi.org/10.1007/s10508-017-1008-3.

———. 2017b. "Global Estimates of Child Labour: Results and Trends, 2012-2016." Geneva: International Labour Organisation. https://doi.org/10.1016/j.soilbio.2011.02.006.

ILO, IPEC, and Central Bureau of Statistics. 2011. "Nepal Child Labour Report: Based on Data Drawn from the Nepal Labour Force Survey 2008." Kathmandu, Nepal: International Labour Organisation.

Jafarey, Saqib, Ram Prasad Mainali, and Gabriel Montes-Rojas. 2015. "The Impact of Marital Anticipation on Female Education: Theory and Evidence from Nepal." In *Institutions and Social Norms in Development and History*. Warwick, UK: Centre for Competitive Advantage in the Global Economy.

Jeffrey, Craig, Patricia Jeffery, and Roger Jeffery. 2004. "Degrees without Freedom: Assessing the Social and Economic Impact of Formal Education on Dalit Young Men in North India." *Development and Change* 35 (5): 963–86.

Jensen, Robert, and Rebecca Thornton. 2003. "Early Female Marriage in the Developing World." *Gender and Development* 11 (2): 9–19. https://doi.org/10.2307/4030636.

Johnson, Burke, and Robert Gray. 2015. "A History of Philosophical and Theoretical Issues for Mixed Methods Research." In *SAGE Handbook of Mixed Methods in Social & Behavioral Research*, edited by Abbas Tashakkori and Charles Teddlie, 69–94. Thousand Oaks, CA: SAGE Publications, Inc.

Johnson, John M. 2011. "In-Depth Interviewing." In *Handbook of Interview Research*, edited by Jaber F Gubrium and James A Holstein, 103–19. Thousand Oaks, CA: SAGE Publications, Inc. https://doi.org/10.4135/9781412973588.

Juarez, Laura. 2010. "The Effect of an Old-Age Demogrant on the Labor Supply and Time Use of the Elderly and Non-Elderly in Mexico." *The B.E. Journal of Economic Analysis and Policy* 10 (1): 1–25.

Kalamar, Amanda M., Susan Lee-Rife, and Michelle J. Hindin. 2016. "Interventions to Prevent Child Marriage Among Young People in Low- and Middle-Income Countries: A Systematic Review of the Published and Gray Literature." *Journal of Adolescent Health* 59 (3): S16–21.

https://doi.org/10.1016/j.jadohealth.2016.06.015.

Kamei, Akito. 2018. "Parental Absence and Agency: The Household Characteristics of Hazardous Forms of Child Labour in Nepal." *Journal of International Development* 30 (7): 1116–41. https://doi.org/10.1002/jid.3371.

Karki, Yagya B. 1988. "Sex Preference and the Value of Sons and Daughters in Nepal." *Studies in Family Planning* 19 (3): 169–78.

KC, Sony, Bishnu Raj Upreti, Suman Babu Paudel, Gopikesh Acharya, Annal Tandukar, and Babken Babajanian. 2014. "The Old Age Allowance and Perceptions of the State in Rolpa District of Nepal." Secure Livelihoods Research Consortium Working Paper. London, UK: Overseas Development Institute.

Khadka, Rup. 2017. "An Analytical Briefing on the Social Security Sector in Nepal." Kathmandu, Nepal.

Khatiwada, Yuba Raj, and Gabriele Koehler. 2014. "Social Policy in a Nascent Welfare State." In *Development and Welfare Policy in South Asia*, edited by Gabriele Koehler and Deepta Chopra, 129–47. Routledge.

Kidd, Stephen, Bjorn Gelders, and Diloá Bailey-Athias. 2017. "Exclusion by Design: An Assessment of the Effectiveness of the Proxy Means Test Poverty Targeting Mechanism." ESS Working Paper No. 56. Geneva: International Labour Organisation.

Kilburn, Kelly, Sudhanshu Handa, Gustavo Angeles, Peter Mvula, and Maxton Tsoka. 2017. "Short-Term Impacts of an Unconditional Cash Transfer Program on Child Schooling: Experimental Evidence from Malawi." *Economics of Education Review* 59: 63–80. https://doi.org/10.1016/j.econedurev.2017.06.002.

Koehler, Gabriele, and Nicholas Mathers. 2017. "Dynamics of Social Protection in Fragile Contexts: Nepal and Myanmar." *Global Social Policy* 17 (3): 1–6. https://doi.org/10.1177/1468018117729914.

Kriel, Antionette, Sara Randall, Ernestina Coast, and Bernadene de Clercq. 2014. "From Design to Practice: How Can Large-Scale Household Surveys Better Represent the Complexities of the Social Units under Investigation?" *African Population Studies* 28 (3): 1309–23.

Kumar, Santosh. 2016. "The Effect of Birth Order on Schooling in India." *Applied Economics Letters* 23 (18): 1325–28. https://doi.org/10.1080/13504851.2016.1156225.

Lee-Rife, Susan, Anju Malhotra, Ann Warner, and Allison McGonagle Glinski. 2012. "What Works to Prevent Child Marriage: A Review of the Evidence." *Studies in Family Planning* 43 (4): 287–303.

Lee, David, and Thomas Lemieux. 2010. "Regression Discontinuity Designs in Economics." *Journal of Economic Literature* 48: 281–355. https://doi.org/10.1257/jel.48.2.281.

Lewis, David, Raymond McLain, and Andrew Weiger. 1993. "Vital Realism and Sociology: A Metatheoretical Grounding in Mead, Ortega, and Schutz." *Sociological Theory* 11 (1): 72–95.

Li, Yunrong, and Ricardo Mora. 2014. "Reassessing the Differential Impact of Grandmothers and Grandfathers: The Old Age Program in Nepal." UC3M

Working Paper 14-06. Madrid, Rome: Universidad Carlos III de Madrid.

Libois, François, and Vincent Somville. 2018. "Fertility, Household Size and Poverty in Nepal." *World Development* 103: 311–22. https://doi.org/10.1016/j.worlddev.2017.11.005.

Lloyd, Cynthia B, Jere R Behrman, and Nelly P Stromquist. 2006. *Changing Transitions to Adulthood in Developing Countries: Selected Studies*. Washington D.C.: The National Academies Press.

Long, Norman. 1990. "From Paradigm Lost to Paradigm Regained? The Case for an Actor-Oriented Sociology of Development." *European Review of Latin American and Caribbean Studies* 49 (December): 3–24.

Ludwig, Jens, and Douglas L Miller. 2007. "Does Head Start Improve Children's Life Chances? Evidence from a Regression Discontinuity Design." *The Quarterly Journal of Economics* 122 (1): 159–208. https://doi.org/10.1162/qjec.122.1.159.

Lundgren, Rebecka, Miranda Beckman, Surendra Prasad Chaurasiya, Bhawna Subhedi, and Brad Kerner. 2013. "Whose Turn to Do the Dishes? Transforming Gender Attitudes and Behaviours among Very Young Adolescents in Nepal." *Gender and Development* 21 (1): 127–45. https://doi.org/10.1080/13552074.2013.767520.

Mahendru, Ritu, and Mathew Tasker. 2020. "Mixed-Method Approaches in Child-Sensitive Social Protection Evaluations: The Promises and Pitfalls." *Global Social Policy* 20 (1): 10–14. https://doi.org/10.1177/1468018120902594.

Masino, Serena, and Miguel Nino-Zarazua. 2016. "What Works to Improve the Quality of Student Learning in Developing Countries ?" *International Journal of Educational Development* 48: 53–65. https://doi.org/10.1016/j.ijedudev.2015.11.012.

Mathers, Nicholas. 2017. "Why a Universal Child Grant Makes Sense in Nepal: A Four-Step Analysis." *Global Social Policy* 17 (3): 353–58. https://doi.org/10.1177/1468018117729913.

Mathers, Nicholas, and Rachel Slater. 2014. "Social Protection and Growth: Research Synthesis." Canberra, Australia: Department of Foreign Affairs and Trade.

Maxwell, Joseph A., and Kavita Mittapalli. 2015. "Realism as a Stance for Mixed Methods Research." In *SAGE Handbook of Mixed Methods in Social & Behavioral Research*, edited by Kavita Mittapalli and Charles Teddlie, 145–68. Thousand Oaks, CA: SAGE Publications, Inc.

Merttens, Fred, Alex Hurrell, Marta Marzi, Ramla Attah, Maham Farhat, Andrew Kardan, and Ian Macauslan. 2013. "Kenya Hunger Safety Net Programme Monitoring and Evaluation Component: Impact Evaluation Final Report: 2009 to 2012." OPM Report. Oxford, UK: Oxford Policy Management.

Miller, Candace M., and Maxton Tsoka. 2012. "Cash Transfers and Children's Education and Labour among Malawi's Poor." *Development Policy Review* 30 (4): 499–522. https://doi.org/10.1111/j.1467-7679.2012.00586.x.

Miller, Candace M., Maxton Tsoka, and Kathryn Reichert. 2011. "The Impact of the Social Cash Transfer Scheme on Food Security in Malawi." *Food Policy* 36: 230–38. https://doi.org/10.1016/j.foodpol.2010.11.020.

Ministry of Education. 2015. "Education For All: National Review Report 2001-2015."

Kathmandu, Nepal: Ministry of Education.

———. 2018. "Education in Figures 2017 (At A Glance)." Vol. 2017. Kathmandu, Nepal: Ministry of Education.

Ministry of Education, UNICEF, and UNESCO. 2016. "Global Initiative on Out-of-School Children." Nepal Country Study. Kathmandu, Nepal: UNICEF.

Ministry of Health, New ERA, and ICF International Inc. 2017. "Nepal Demographic and Health Survey 2016." Kathmandu, Nepal: Ministry of Health. https://doi.org/10.1007/b138909.

Mishra, Navin, Kashi Kant Thakur, Rabin Koirala, Devendra Shrestha, Rakesh Poudel, and Rajanee Jha. 2010. "Corporal Punishment in Nepalese School Children: Facts, Legalities and Implications." *Journal of Nepal Paediatric Society* 30 (2): 98–109. https://doi.org/10.3126/jnps.v30i2.2929.

Moratti, Marta, and Luisa Natali. 2012. "Measuring Household Welfare." Innocenti Working Paper No. 4. Florence, Italy: UNICEF Office of Research.

Morris, Saul S, Calogero Carletto, John Hoddinott, and Luc J M Christiaensen. 2000. "Validity of Rapid Estimates of Household Wealth and Income for Health Surveys in Rural Africa." *Journal of Epidemiology Community Health* 54 (October 2005): 381–87. https://doi.org/10.1136/jech.54.5.381.

Morrow, Virginia. 2012. "Troubling Transitions? Young People's Experiences of Growing up in Poverty in Rural Andhra Pradesh, India." *Journal of Youth Studies* 16 (1): 86–100. https://doi.org/10.1080/13676261.2012.704986.

Mosse, David. 2004. "Is Good Policy Unimplementable? Reflections on the Ethnography of Aid Policy and Practice." *Development and Change* 35 (4): 639–71.

National Planning Commission. 2012. "Assessment of Social Security Allowance Program in Nepal." Kathmandu, Nepal.

———. 2017. "Post Flood Recovery Needs Assessment." Kathmandu, Nepal: Government of Nepal.

Ndlovu, Patrick, Sandeep Mohapatra, and Marty Luckert. 2017. "Income Effects on Intra-Household Time Allocation: Regression Discontinuity Evidence." *Journal of International Development* 30 (2018): 713–19. https://doi.org/10.1002/jid.3333.

Nepal, Apsara, and Mani Nepal. 2012. "Is Child Labour a Substitute for Adult Labour? The Relationship between Child Labour and Adult Illness in Nepal." *International Labour Review* 151 (1–2): 109–21. https://doi.org/10.1111/j.1564-913X.2012.00137.x.

O'Brien, C, M. Marzi, L Pellerano, and A Visram. 2013. "Kazakhstan: External Evaluation of BOTA Programmes: The Impact of BOTA's Conditional Cash Transfer (CCT) Programme 2011– 2012." Oxford, UK.

Paitoonpong, Srawooth, Shigeyuki Abe, and Nipon Puopongsakorn. 2008. "The Meaning of 'Social Safety Nets.'" *Journal of Asian Economics* 19 (5–6): 467–73. https://doi.org/10.1016/j.asieco.2008.09.011.

Pandey, Shanta. 2017. "Persistent Nature of Child Marriage among Women Even When It Is Illegal: The Case of Nepal." *Children and Youth Services Review* 73: 242–47. https://doi.org/10.1016/j.childyouth.2016.12.021.

Parajuli, Deepak Raj, and Tapash Das. 2013. "Performance Of Community Schools In Nepal: A Macro Level Analysis." *International Journal of Scientific & Technology Research* 2 (7): 148–54.

Park, Jaddon, and Sarfaroz Niyozov. 2008. "Madrasa Education in South Asia and Southeast Asia: Current Issues and Debates." *Asia Pacific Journal of Education* 28 (4): 323–51. https://doi.org/10.1080/02188790802475372.

Pesando, Luca Maria, and Alejandra Abufhele. 2019. "Household Determinants of Teen Marriage: Sister Effects Across Four Low- and Middle-Income Countries." *Studies in Family Planning*, 113–36. https://doi.org/10.1111/sifp.12089.

Poland, Blake D. 2011. "Transcription Quality." In *Handbook of Interview Research*, edited by Jaber Gubrium and James Holstein, 628–49. Thousand Oaks, CA: SAGE Publications, Inc. https://doi.org/10.4135/9781412973588.

Porreca, Eleonora, and Furio C. Rosati. 2018. "The Impact of Cash Transfer Programmes on Youth and Adult Labour Supply: Evidence from Lesotho and the Philippines." *Journal of International Development* 31 (4): 291–311. https://doi.org/10.1002/jid.3405.

Powell, Mary Ann, Nicola Taylor, Robiyn Fitzgeral, Ann Graham, and Donnah Anderson. 2013. *Ethical Research Involving Children*. Florence, Italy: UNICEF Innocenti Research Centre.

Rubalcava, Luis, and Graciela Teruel. 2006. "Conditional Public Transfers and Living Arrangements in Rural Mexico." *On-Line Working Paper Series*. Los Angeles, CA: California Center for Population Research, University of California.

Ruel, Erin, Wagner William, and Brian Joseph Gillespie. 2018a. "Data Cleaning." In *The Practice of Survey Research: Theory and Applications*, 208–37. Thousand Oaks, CA: SAGE Publications, Inc. https://doi.org/10.1111/j.1432-1033.1981.tb06361.x.

———. 2018b. "The Quality of Measurement Reliability and Validity." In *The Practice of Survey Research: Theory and Applications*, 78–100. Thousand Oaks, CA: SAGE Publications, Inc. https://doi.org/10.1111/j.1432-1033.1981.tb06361.x.

Ryan, Gery W., and H. Russell Bernard. 2003. "Techniques to Identify Themes." *Field Methods* 15 (1): 85–109. https://doi.org/10.1177/1525822X02239569.

Saavedra, Juan Esteban, and Sandra Garcia. 2012. "Impacts of Conditional Cash Transfer Programs on Educational Outcomes in Developing Countries." RAND Labor and Population working paper WR-921-1. Santa Monica, CA: RAND Corporation.

Sabates, Ricardo, Aditi Bhutoria, Rachel Sabates-Wheeler, and Stephen Devereux. 2019. "Schooling Responses to Income Changes: Evidence from Unconditional Cash Transfers in Rwanda." *International Journal of Educational Research* 93 (2019): 177–87. https://doi.org/10.1016/j.ijer.2018.11.011.

Sah, Nepali. 2008. "How Useful Are the Demographic Surveys in Explaining the Determinants of Early Marriage of Girls in the Terai of Nepal?" *Journal of Population Research* 25 (2): 16. https://doi.org/10.1007/BF03031949.

———. 2012. "Does Dowry Affect Age at Marriage of Women? Some Evidence from Terai of Nepal." *Nepal Population Journal* 17 (16): 52–68.

Samson, Michael. 2012. "Nepal's Senior Citizens' Allowance: A Model of Universalism in a Low-Income Country Context." In *Social Protection for Older Persons: Social Pensions in Asia*, edited by Sri Wening Handayani and Babken Babajanian, 214–45. Manilla, Philippines: Asian Development Bank.

Sawyer, Susan M, Peter S. Azzopardi, Dakshitha Wickremarathne, and George C. Patton. 2018. "The Age of Adolescence." *The Lancet Child & Adolescent Health* 2 (3): 223–28. https://doi.org/10.1016/S2352-4642(18)30022-1.

Schady, Norbert, and Maria Caridad Araujo. 2008. "Cash Transfers, Conditions, and School Enrollment in Ecuador." *Economía* 8 (2): 43–70. https://doi.org/10.1353/eco.0.0004.

Schady, Norbert, and Deon Filmer. 2009. "Are There Diminishing Returns to Transfer Size in Conditional Cash Transfers?" Policy Research Working Paper No. 4999. Washington D.C.: World Bank.

Scott, James. 2009. "Social Transfers and Growth in Poor Countries." In *Promoting Pro-Poor Growth: Social Protection*, 61–68. Paris: OECD.

Sharma, Pitamber, Basudeb Guha-Khasnobis, and Dilli Raj Khanal. 2014. "Nepal Human Development Report 2014: Beyond Geography, Unlocking Human Potential." Human Development Report. Kathmandu, Nepal: National Planning Commission, Government of Nepal and UNDP.

Shrestha, Vinish, and Rashesh Shrestha. 2019. "Multigenerational Effects of Education Reform: Mother's Education and Children's Human Capital in Nepal." *The World Bank Economic Review* 0 (2019): 1–32. https://doi.org/10.1093/wber/lhy036.

Siaplay, Mounir. 2012. "The Impact of Social Cash Transfers on Young Adults Labor Force Participation, Schooling, and Sexual Behaviours in South Africa." PhD Thesis. Oklahoma State University.

Sienaert, Alex. 2007. "Migration, Remittances and Public Transfers: Evidence from South Africa." Discussion Paper No. 351. Oxford: Department of Economics, University of Oxford.

Singh, Renu, and Protap Mukherjee. 2018. "Push Out, Pull Out, or Opting Out? Reasons Cited by Adolescents for Discontinuing Education in Four Low- and Middle-Income Countries." In *Handbook of Adolescent Development Research and Its Impact on Global Policy*, edited by Jennifer E. Lansford and Prerna Banati, 239–59. Oxford, UK: Oxford University Press. https://doi.org/10.1093/oso/9780190847128.001.0001.

Slater, Rachel, Anna McCord, and Nicholas Mathers. 2014. "Guidance Note for DFID: Exploiting the Synergies between Social Protection and Economic Development." London: Overseas Development Institute.

Subedi, Khim Raj. 2018. "Shadow Education: A Role of Private Tutoring in Learning." *International Journal of Humanities and Social Sciences* 1 (2): 29–42.

Sundaram, Lakshmi, Ellen Travers, and Matilda Branson. 2018. "How to End Child Marriage Around the World." In *Handbook of Adolescent Development Research and Its Impact on Global Policy*, edited by Jennifer E. Lansford and Prerna Banati, 174–95. https://doi.org/10.1093/oso/9780190847128.001.0001.

Thapa, Amrit. 2015. "Public and Private School Performance in Nepal : An Analysis

Using the SLC Examination." *Education Economics* 23 (1): 47–62. https://doi.org/10.1080/09645292.2012.738809.

Thapa, Shyam. 1996. "Girl Child Marriage in Nepal: Its Prevalence and Correlates." *Contributions to Nepalese Studies* 23 (2): 361.

Thomas, Duncan. 1990. "Intra-Household Resource Allocation: An Inferential Approach." *The Journal of Human Resources* 25 (4): 635–64.

Thompson, Hannah. 2012. "Cash and Child Protection: How Cash Transfer Programming Can Protect Children from Abuse, Neglect, Exploitation and Violence." London, UK: Save the Children.

Thornton, Arland, Dirgha J. Ghimire, and Colter Mitchell. 2012. "The Measurement and Prevalence of an Ideational Model of Family and Economic Development in Nepal." *Population Studies* 66 (3): 329–45. https://doi.org/10.1080/00324728.2012.714795.

Tobin, James. 1958. "Estimation of Relationships for Limited Dependent Variables." *Econometrica* 26 (1): 24–36. https://doi.org/10.2307/1907382.

Tooley, James, and Pauline Dixon. 2007. "Private Education for Low-Income Families: Results from a Global Research Project." In *Private Schools in Less Economically Developed Countries: Asian and African Perspectives*, edited by Prachi Srivastava and Geoffrey Walford, 15–39. Oxford, UK: Symposium Books.

UNDESA. 2017. "Household Size and Composition around the World." New York, NY.

UNESCO. 2019. "New Methodology Shows That 258 Million Children, Adolescents and Youth Are Out of School." Fact Sheet No. 56. Geneva: UNESCO Institute for Statistics.

———. 2020a. "Inclusion and Education: All Means All." Global Education Monitoring Report 2020. Paris, France: UNESCO. http://bit.ly/2020gemreport.

———. 2020b. "UIS.Stat." 2020. http://data.uis.unesco.org/.

UNICEF. 2011. "The State of the World's Children 2011: Adolescence An Age of Opportunity." New York, NY: UNICEF.

———. 2014. "Child Labour and UNICEF in Action: Children at the Centre." New York, NY: UNICEF.

———. 2016. "Conditionality in Cash Transfers: UNICEF's Approach." Social Inclusion Summaries February 2016. New York, NY: UNICEF.

———. 2018. "Child Marriage: Latest Trends and Future Prospects." New York, NY: UNICEF.

———. 2019. "The State of the World's Children 2019. Children, Food and Nutrition: Growing Well in a Changing World." New York, NY: UNICEF.

Upreti, Bishnu Raj, Sony KC, Richard Mallett, and Babken Babajanian. 2012. "Livelihoods, Basic Services and Social Protection in Nepal." Working Paper No. 7. Secure Livelihoods Research Consortium. London, UK: Overseas Development Institute.

Uprety, Laya Prasad. 2010. "The Effectiveness of Non-Contributory Social Pension in Nepal." Participatory Research Report. Kathmandu, Nepal: Nepal Participatory

Action Network (NEPAN).

Verma, Suman. 2018. "Social Protection, Adolescent Well-Being, and Development in Low- and Middle-Income Countries." In *Handbook of Adolescent Development Research and Its Impact on Global Policy*, edited by Jennifer E. Lansford and Prerna Banati, 320–40. Oxford, UK: Oxford University Press. https://doi.org/10.1093/oso/9780190847128.001.0001.

Wagle, Udaya R. 2017. "The Caste/Ethnic Bases of Poverty Dynamics: A Longitudinal Analysis of Chronic and Structural Poverty in Nepal." *Journal of Development Studies* 53 (9): 1430–51. https://doi.org/10.1080/00220388.2016.1224850.

Walque, Damien De, Lia Fernald, Paul Gertler, and Melissa Hidrobo. 2017. "Cash Transfers and Child and Adolescent Development." In *Child and Adolescent Health and Development*, edited by Donald A P Bundy, Nilanthi de Silva, Susan Horton, George C Patton, Linda Schultz, and Dean T Jamison. Washington D.C.: World Bank.

Warren, Carol A. B. 2011. "Qualitative Interviewing." In *Handbook of Interview Research*, edited by Jaber Gubrium and James Holstein, 83–102. Thousand Oaks, CA: SAGE Publications, Inc. https://doi.org/10.4135/9781412973588.

White, Howard. 2008. "Of Probits and Participation: The Use of Mixed Methods in Quantitative Impact Evaluation." *IDS Bulletin* 39 (1): 98–109. https://doi.org/10.1111/j.1759-5436.2008.tb00436.x.

———. 2015. "Fieldwork Is Easy with Eyes Closed , Misunderstanding All You See … and Other Reflections: 3ie Annual Howard White Inaugural Lecture." *Journal of Development Effectiveness* 7 (3): 375–87. https://doi.org/10.1080/19439342.2015.1068359.

Willig, Carla. 2014. "Interpretation and Analysis." In *The SAGE Handbook of Qualitative Data Analysis*, edited by Uwe Flick, 136–50. London, UK: SAGE Publications, Inc.

Yanez-Pagans, M. 2008. "Culture and Human Capital Investments: Evidence of an Unconditional Cash Transfer Program in Bolivia." Discussion Paper 3678. Bonn.

Yeung, W Jean, Miriam R Linver, and Jeanne Brooks-Gunn. 2002. "How Money Matters for Young Children's Development: Parental Investment and Family Processes." *Child Development* 73 (6): 1861–79.

Yoong, Joanne, Lila Rabinovich, and Stephanie Diepeveen. 2012. "The Impact of Economic Resource Transfers to Women versus Men: A Systematic Review." EPPI-Centre Technical Report. London, UK: Institute of Education, University of London.

York, Richard. 2018. "Control Variables and Causal Inference: A Question of Balance." *International Journal of Social Research Methodology* 21 (6): 675–84. https://doi.org/10.1080/13645579.2018.1468730.

Appendices

Appendix 1: Cash Transfers and Adolescent Life-course Survey (CTALS) questionnaire

Ref	Question	Hint	Type of entry	Response options*	Relevance / skip
	Cash transfers and adolescent life-course survey (CTALS)		*Refer to survey questionnaire response options at end*		
	Household eligibility				

A06	Confirm there is at least one household member between age 65 and 74 years (or 55 and 64 years if Dalit)
	   If No, check again, is there anyone of that age who normally lives here but is temporarily away?
	   If No is confirmed, terminate interview.
		A current member of the household typically sleeps under the same roof (or an adjacent roof within the same plot) on a regular basis and does so for at least 6 months of the year.	Acknowledge		If not, terminate interview and delete entry

A07	Confirm there is at least one household member between age 10 and 17 years.
	   If No, check again, is there anyone of that age who normally lives here but is temporarily away?
	   If No, check, is there anyone of that age who used to live here but moved away within the past 3 years?
	   If No is confirmed, terminate interview.
		A current member of the household typically sleeps under the same roof (or an adjacent roof within the same plot) on a regular basis and does so for at least 6 months of the year.	Acknowledge		If not, terminate interview and delete entry

	A. Basic interview information				
A05	Select enumerator name		Select one	enumerator	
A01	Select VDC name		Select one	vdc_list	
A02	Select Ward number		Select one	ward	
A03	Enter Tole name		Enter text		
A04	Enter household I.D.	*Write the 2 digit household I.D. number on the Household Sample List and the Household Roster Record.*	Enter whole number		

Household questionnaire	*To be administered to the household head or the household member who is most knowledgeable about household membership, assets, livelihoods and income*		

B01	Hello. You are being invited to take part in a research study. This study is part of a research project being conducted in Rautahat by a student at the London School of Economics in the United Kingdom who is working with NEPAN. The study wants to understand about the lives of adolescents in Nepal, including about their education, work and living arrangements; and how these are affected by the circumstances of your household. You will not be provided with any incentive to take part in the research and there will be no direct benefit to you. However, your participation will help us to learn more about what can benefit the lives of young people in Nepal. The findings of the research will be published in the student's thesis and a copy will be provided to relevant government Ministries and your local government office. The questions usually take up to 1 hour. Your name and all of the individual answers you give will be confidential. You don't have to take part in the survey, but we hope you will agree to answer the questions since your views are important. If I ask you any question you don't want to answer, just let me know and I will go on to the next question. You can also stop the interview at any time. Do you understand the statement and agree to be interviewed?		Select one	yes_no_only	If no, go to end, A14

B. Household characteristics and members

Basic household information

B01a	What is your name?	*Write respondent's name*	Enter text		
B02	Are you the household head?		Select one	yes_no_only	
B03	What is the main language of the household?		Select one	language	
B03a	Specify other language:	*If unsure type 'don't know'*	Enter text		If language = 4
B04	What is the name of caste of the household?		Select one	caste	
B04a	Specify other caste:	*If unsure type 'don't know'*	Enter text		If caste = 704
B05	What is the religion of the household?		Select one	religion	
B05a	Specify other religion:	*If unsure type 'don't know'*	Enter text		If religion = 6

Household roster

B06	How many people live in this household including you and those who have left within the last 3 years?	*Enter current household members first - a current member of the household typically sleeps under the same roof (or an adjacent roof within the same plot) on a regular basis and does so for at least 6 months of the year. After entering all current members, probe: is there anyone else who lives here who you may have missed such as young children, non-family members, or those who are temporarily absent? Enter previous household members second: include anyone who was previously a household member but left within the last 3 years.*	Enter whole number	

Repeat for all household members

Important: enter the name of the *household head* first and the name of the *respondent* second. | Read only

B07	Line no.		Calculate		
B08	Enter the name of household member:	*Enter current household members first.* *After entering all current members, probe: is there anyone else who lives here who may have missed such as young children, non-family members, or those who are temporarily absent?* *Enter previous household members second - include anyone who was previously a household member but left within the last 3 years.*	Enter text		
B09	How old is [NAME]?	*Double check the age of anyone within 2 years of adolescent and older person age eligibility. Enter '0' for new-borns less than 1 year.*	Enter whole number		
B10	What is the sex of [NAME]?		Select one	sex	
B11	What is the residence status of [NAME]?	*Confirm the residence status of the household member.* *- A current member of the household typically sleeps under the same roof (or an adjacent roof within the same plot) on a regular basis and does so for at least 6 months of the year.* *- A previous household members includes anyone who left the household within the last 3 years.*	Select one	residence_ status	
B11a	Will [NAME] be available for interview?	*Confirm whether the adolescent will be available for interview either now or at a later time. If available later, select 'available' and make arrangements to return to the household.*	Select one	availability	If B09 = 10-17 and B11 = 1
B12	How many years has [NAME] lived in the household?	*Enter '0' if less than 1 year. If resident for whole life, entry should match age.*	Enter whole number		
B13	How many years ago did [NAME] leave the household?	*Enter '0' if less than 1 year ago.*	Enter whole number		If B11 = 2
	Write down the name, age and interview eligibility of the household member on the roster sheet.		Read only		
	Household member characteristics				
	Answer the following questions on marriage, citizenship, education and migration for each household member. - Marriage questions will not appear for under 10s. - Education questions will not appear for under 3s. - Migration questions will not appear for current/usual residents.		Read only		
	Repeat for all household members				
B17	What is [NAME]'s marital status?		Select one	marriage	If B09 > 9
B19	What is the highest grade of education completed by [NAME]?		Select one	education	If B09 >3
B20	Where does [NAME] currently live?		Select one	destination	If B11 = 2
B20a	Select district name:		Select one	district	If B20 = 1

B20b	Select country:		Select one	country	If B20 = 2
B20c	Specify other country:		Enter text		If B20b = 14
B21	What was the main reason for [NAME] leaving the household in the first place?		Select one	migration_reason	If B11 = 2
B21c	Specify other reason:		Enter text		If B21 = 9
B22	Does [NAME] have a physical or mental disability?		Select one	disability	

	C. Household assets and services				
	I am now going to ask you a few questions about your household assets.		Read only		
C09	What is the ownership status of this dwelling?		Select one	house_ownership	
C09a	Specify other occupancy status:		Enter text		If C09 = 5
C01	How many rooms in this household are used for sleeping?	*Include associated dwellings in the same plot, if appropriate*	Enter whole number		
C11	Does any member of this household own any land that can be used for agriculture?	*If yes, enter the total area of agricultural land in bigha, katha and dhur. If no, put '0' for all.*	Read only		
C11a	Bigha	*Put '0' if none.*	Enter whole number		
C11b	Katha	*Put '0' if none.*	Enter whole number		
C11c	Dhur	*Put '0' if none.*	Enter whole number		
C11d	Reconfirm total land area.		Acknowledge		
	Does your household own any of the following?		Read only		
C22a	Bicycles?		Select one	yes_no_dk	
C22b	If yes, how many bicycles?		Enter whole number		If C22a = 1
C23a	Cars, trucks or motorcycles?		Select one	yes_no_dk	
C23b	If yes, how many cars, trucks or motorcycles?		Enter whole number		C23a = 1
C24a	Mobile phones?		Select one	yes_no_dk	
C24b	If yes, how many mobile phones?		Enter whole number		C24a = 1
C25a	Generators / invertors?		Select one	yes_no_dk	
C25b	If yes, how many generators / invertors?		Enter whole number		C25a = 1
C26a	Electric fans?		Select one	yes_no_dk	
C26b	If yes, how many electric fans?		Enter whole number		C26a = 1
C27a	Fridges?		Select one	yes_no_dk	
C27b	If yes, how many fridges?		Enter whole number		C27a = 1
C28a	Umbrellas?		Select one	yes_no_dk	

C28b	If yes, how many umbrellas?	Enter whole number	C28a = 1
C29a	Televisions?	Select one yes_no_dk	
C29b	If yes, how many televisions?	Enter whole number	C29a = 1
C30a	Radios?	Select one yes_no_dk	
C30b	If yes, how many radios?	Enter whole number	C30a = 1
C31a	Small livestock (e.g. chickens, ducks)?	Select one yes_no_dk	
C31b	If yes, how many small livestock?	Enter whole number	C31a = 1
C32a	Medium livestock (e.g. sheep, goats and pigs)?	Select one yes_no_dk	
C32b	If yes, how many medium livestock?	Enter whole number	C32a = 1
C33a	Large livestock (e.g. horses, buffaloes, cows)?	Select one yes_no_dk	
C33b	If yes, how many large livestock?	Enter whole number	C33a = 1
C34a	Hand tools (e.g. for cultivation or wood work)?	Select one yes_no_dk	
C34b	If yes, how many hand tools?	Enter whole number	C34a = 1
C35a	Animal powered tools (e.g. plough, cart)?	Select one yes_no_dk	
C35b	If yes, how many animal powered tools?	Enter whole number	C35a = 1
C36a	Petrol-powered tools or machines (e.g. tractor or harvester)?	Select one yes_no_dk	
C36b	If yes, how many petrol-powered tools?	Enter whole number	C36a = 1
C14	Does any member of this household have a bank account/cooperative/other savings account?	Select one yes_no	
	How long does it take you to reach the following services from your household?	Read only	
C15	Government Primary School:	Select one travel_time	
C16	Private Primary School:	Select one travel_time	
C17	Government Lower Secondary School:	Select one travel_time	
C18	Private Lower Secondary School:	Select one travel_time	
C19	Government Upper Secondary School:	Select one travel_time	
C20	Private Upper Secondary School:	Select one travel_time	
C21	VDC or Ward Office:	Select one travel_time	

D. Livelihoods, income, debt and expenditure	
I am now going to ask you a few questions about your livelihoods, income and household expenditure.	Read only
Livelihoods and earned income	

	I now want to ask you about the three main sources of income for your household in the past 12 months, starting with the largest income.		Read only		
D01	Which of the following activities contributed the largest amount of income to your household in the past 12 months?		Select one	livelihood	
D01a	Specify other livelihood:		Enter text		If D01 = 8
D01b	For how many months did your household have this income in the past 12 months?	*Enter number of months.*	Enter whole number		If D01 < 9
D01c	For the months that your household had this income, what was the average amount of income per month from this activity?	*You may need to help the respondent estimate the average monthly amount.*	Enter whole number		If D01 < 9
D02	Which of the following activities contributed the second largest amount of income to your household in the past 12 months?		Select one	livelihood	
D02a	Specify other livelihood:		Enter text		If D02 = 8
D02b	For how many months did your household have this income in the past 12 months?	*Enter number of months.*	Enter whole number		If D02 < 9
D02c	For the months that your household had this income, what was the average amount of income per month from this activity?	*You may need to help the respondent estimate the average monthly amount.*	Enter whole number		If D02 < 9
D03	Which of the following activities contributed the third largest amount of income to your household in the past 12 months?		Select one	livelihood	
D03a	Specify other livelihood:		Enter text		If D02 = 8
D03b	For how many months did your household have this income in the past 12 months?	*Enter number of months.*	Enter whole number		If D02 < 9
D03c	For the months that your household had this income, what was the average amount of income per month from this activity?	*You may need to help the respondent estimate the average monthly amount.*	Enter whole number		If D02 < 9
D04	Second livelihood cannot be the same as main livelihood. Check previous responses		Acknowledge		D02 = D01 and D02 < 7
D05	Third livelihood cannot be the same as main or second livelihood. Check previous responses.		Acknowledge		D01 = D03 or D02 = D03 and D03 < 7
D10a	Who in your household usually decides how to use earned income?		Select one	income_control	
D10b	Enter line no. of household member who controls income:	*Refer to the household roster.*	Enter whole number		D10a = 2
	Remittances and gifts				
D11	Has the household received any remittances from migrant family members in the past 12 months?	*If so, enter the total remittances received in the past 12 months in rupees:*	Enter whole number		D01, D02 and D03 != 7
D12	Has the household received any gifts in cash or in-kind from other family members, friends or neighbours in the past 12 months?	*If so, enter the total gifts received in the past 12 months in rupees:*	Enter whole number		
	Reconfirm total values of remittances and gifts.		Acknowledge		
	Government transfers				
	I would now like you to tell me about cash and in-kind benefits received from different government and non-governmental programmes in the past 12 months for each member of the household.	*Use the criteria for each scheme to help estimate the amount. Note that any given individual is eligible for only one of the following schemes: public sector pension, old age allowance, single woman/widows*	Read only		

	allowance, child grant and disability allowance. If more than one is claimed, double check the information with the respondent.			
D13	Has [NAME] received any benefits from the Public Sector Pension in the past 12 months?		Select one	yes_no	If B09 > 55
D13a	Enter [NAME]'s total benefit from the Public Sector Pension in the past 12 months in rupees:	*Ex-government employees only. Help the respondent narrow down the estimate. If necessary, consider average income per month and calculate annual total. Put '0' if no income.*	Enter whole number		If D13 = 1
D14	Has [NAME] received any benefits from the Old Age Allowance in the past 12 months?		Select one	yes_no	If B09 > 55
D14a	Enter [NAME]'s total benefits from the Old Age Allowance in the past 12 months in rupees:	*All castes, 70 years and above: Rs.2,000/month, Rs.8,000/4 months or Rs.24,000/year. Dalit 60-69 years: Rs.1,000/month, Rs.4,000/4 months or Rs.12,000/year (from age 70, entitlement should revert to regular allowance).Put '0' if none. If Public Sector Pension is received by household member they should not be eligible for the Old Age Allowance.*	Enter whole number		If D14 = 1
D15	Has [NAME] received any benefits from the Single Women/Widows Allowance in the past 12 months?		Select one	yes_no	B10 = 1 and B17 > 3 and B09 > 55 or B17 = 6
D15a	Enter [NAME]'s total benefits from the Single Women/Widows Allowance in the past 12 months in rupees:	*Female widows from any age up to 69 years: Rs.1,000/month, Rs.4,000/4 months or Rs.12,000/year. Unmarried females, 60-69 years: Rs.1,000/month, Rs.4,000/4 months or Rs.12,000/year. Put '0' if none. Note, actual amount received may differ from expected amounts due to timing of entry into programme, irregular payments and insufficient funds.*	Enter whole number		D15 = 1
D16	Has [NAME] received any benefits from the Disability Grant in the past 12 months?		Select one	yes_no	B22 > 1
D16a	Enter [NAME]'s total benefits from the Disability Grant in the past 12 months in rupees:	*Full disability: Rs.2,000/month, Rs.8,000/4 months or Rs.24,000/year. Partial disability: Rs.600/month, Rs.2,400/4 months, Rs.7,200/year. Put '0' if none. Note, actual amount received may differ from expected amounts due to timing of entry into programme, irregular payments and insufficient funds.*	Enter whole number		D16 = 1
D17	Has [NAME] received any benefits from the Child Grant in the past 12 months?		Select one	yes_no	B09 < 6 and B04 > 199 and B04 < 299
D17a	Enter [NAME]'s total benefits from the Child Grant in the past 12 months in rupees:	*Dalit under-fives: Rs.400/month, Rs.1,600/4 months or Rs.4,800/year. Put '0' if none. Note, actual amount received may differ from expected amounts due to timing of entry into programme, irregular payments and insufficient funds.*	Enter whole number		D17 = 1

D18	Has [NAME] received any benefits from Education Scholarships in the past 12 months?		Select one	yes_no	B09 < 20 and B09 > 3
D18a	Enter [NAME]'s total benefits from Education Scholarships in the past 12 months in rupees:	*Female or Dalit scholarships: Variable amounts. Put '0' if none.*	Enter whole number		D18 = 1
D19	Has [NAME] received any benefits from any Other Government Schemes in the past 12 months?		Select one	yes_no	
D19a	Enter [NAME]'s total benefits from Other Government Schemes in the past 12 months in rupees:	*If there is more than one 'other' government scheme, combine the total transfer income. Put '0' if none.*	Enter whole number		D19 = 1
D19b	Specify the other government scheme(s):		Enter text		D19a > 0
D20	Has [NAME] received any benefits from any Non-Governmental Schemes in the past 12 months?		Select one	yes_no	
D20a	Enter [NAME]'s total benefits from Non-Governmental Schemes in the past 12 months in rupees:	*If there is more than one non-governmental scheme, combine the total transfer income. Put '0' if none.*	Enter whole number		D20- = 1
D21	Who in your household usually decides how to use transfer income?		Select one	transfer_control	
D21a	Enter line no. of household member who controls income:	*Refer to the household roster.*	Enter whole number		D21 = 2

	Loans and debt				
D22	Have you or any household members applied for credit from a bank, cooperative, savings association and microfinance institution in the past 12 months?		Select one	loan_status	
D22a	Why?		Select one	no_loanReason	D22 = 2 or 3
D22b	Specify other reason:		Enter text		D22a = 6
D23	What was the primary reason for the loan?		Select one	loan_reason	
D23a	Specify other reason:		Enter text		D23 = 8
D24	Who was the primary borrower of the loan?	*Enter line no. of household member who responsible for the loan.*	Enter whole number		
D25	How much was the loan in total?	*Enter amount in rupees*	Enter whole number		
D25a	Reconfirm loan value.		Acknowledge		
D26	Have you or any household member requested/applied for credit from an informal money lender in the past 12 months?	*(relatives/friends, landlord/employer, local business /shopkeeper)*	Select one	loan_status	
D236a	Why?		Select one	no_loanReason	D26 = 2 or 3
D26b	Specify other reason:		Enter text		D26a = 6
D27	What was the primary reason for the loan?		Select one	loan_reason	
D27a	Specify other reason:		Enter text		D27 = 8
D29	Who was the primary borrower of the loan?	*Enter line no. of household member who responsible for the loan.*	Enter whole number		
D30	How much was the loan in total?	*Enter amount in rupees*	Enter whole number		
D30	Reconfirm loan value.		Acknowledge		

Consumption / expenditure

I am now going to ask you about how much your household spends on certain items: | Read only

Expenditures per month: | Read only

D13a	How much does your household spend on GHEE AND OIL per month?	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number
D31b	How much does your household spend on CITRUS FRUIT per month?	*Enter amount in rupees. Put '0' if nothing.* *Oranges, Lemon, Lime, Sweet orange, Pummelo, etc.*	Enter whole number
D31c	How much does your household spend on FISH AND MEAT per month?	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number
D31d	How much does your household spend on CUMIN per month?	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number
D31e	How much does your household spend on NEWSPAPERS AND BOOKS per month?	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number
D31f	How much does your household spend on MEALS OUT per month?	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number
D31g	How much does your household spend on PERSONAL CARE per month?	*Enter amount in rupees. Put '0' if nothing.Toothpaste, tooth powder, toothbrush, etc.; other personal care items (shampoo, combs, cosmetics, etc.); dry cleaning and washing expenses; personal services (haircuts, shaving, shoeshine, etc.)*	Enter whole number
	Expenditures per year:		Read only
D31h	How much does your household spend on CLOTHING per year?	*Enter amount in rupees. Put '0' if nothing.* *Clothes include ready-made clothing and apparel; cloth, wool, yarn, and thread for making clothes and sweaters; footwear (shoes, slippers, sandals, etc.)*	Enter whole number
D31i	How much does your household spend on other people's MARRIAGES AND BIRTHS per year?	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number
D31j	How much does your household spend on GIFTS AND DONATIONS per year?	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number
D31h	Reconfirm expenditure values.		Acknowledge

Resource pooling

D32	Apart from sharing the building itself, do members of your household typically pool resources, i.e. contribute their labour or income to the household and / or share common food and assets?	*Ask which statement best describes the situation of the household.*	Select one	pooling

Household questionnaire closing section

A08	Who is the respondent for the next section?	*You will stay with the same respondent if they are also the parent or guardian of the next adolescent in the household roster.*	Select one	respondent

	Read out: Thank you for your time and for participating in this survey. We are now going to interview other members of your household. Before we do, do you have any questions?				
A08a			Select one	yes_no_only	A08 = 2
	We will be coming back to interview some households again in a few months. If your household is selected, are you willing to be interviewed again?				
A08b	Read out: We will be coming back to interview some households again in a few months. If your household is selected, are you willing to be interviewed again?		Select one	yes_no_only	A08 = 1
A09	Can you provide a mobile phone number where we can reach you in case we return here?		Select one	phone	A08 = 1 or A08a = 1
A09a	Name of phone owner:		Enter text		A09 = 2
A09b	Phone number:	*If possible, check the number by ringing once.*	Enter text		A09 < 3
A11	What is your perception of the respondent's responses during the interview?		Select one	respondent_response	
A12	What is your perception of the veracity of the answers you received?		Select one	response_veracity	
A13	Any other comments or observations?	*Did other people interrupt or try to participate in the interview? Was anyone present who may have affected the respondent (e.g. official, local leader, foreigner)? Any other reason that interview quality may be affected?*	Enter text		

	E. Parent/guardian of adolescent questionnaire				B09 = 10-17
	To be administered to the parent of the adolescent where ever possible. An alternative respondent can be found if the parent is unavailable or unable to answer questions.		Read only		

	Repeat for all adolescents **Informed consent**				
	Subject of interview, household member No:[], [NAME], [AGE] years.		Read only		
E01	Who is the respondent for the next section?		Select one	respondent	
E02	Enter the line number of the respondent:	*Refer to the household roster and enter line no. of household member.*	Enter whole number		If E01 = 2
E03	(Read out for the new respondent) *See text in B01*		Select one	yes_no_only	If E01 = 2
E04	After this interview, we also wish to ask some questions directly to [NAME] about their education, work and family life. To maintain confidentiality, we prefer to interview them without other people present, however you can be present if you prefer. If they agree to be interviewed, are you happy for us to interview them?		Select one	ado_consent	Currently resident and available adolescents
	Enter the relationship of [NAME] to all other household members.		Read only		
	Repeat for all household members				

B16	Select relation of [NAME] to [NAME]		Select one	relation	
					Currently resident and available adolescents
	Migration				
E05d	Has [NAME] spent 2 continuous months or more living away from home in the past 3 years?		Select one	yes_no	
E05d	What was the primary reason for [NAME]'s absence at that time?		Select one	migration_ reason	E05d = 1
E05f	Specify other reason:		Enter text		E05e = 9
E05g	Where was [NAME] living during this period away?		Select one	migration_ living	E05d = 1
	Migration				B11 = 2
E06	[NAME] is recorded as having left home. With whom / in which type of accommodation is [NAME] living now?		Select one	migration_ living	
E06a	Specify other living arrangement:		Enter text		E06 = 6
	Education				
	Now I would like to ask you further details about [NAME]'s education.		Read only		
E07	Has [NAME] spent any time in school in the current year (2074/75) or in any previous years?		Select one	enrolment	
E08	What was the primary reason for [NAME] never going to school?		Select one	noschool_ reason	E07 = 3
E08a	What type of school did [NAME] attend in the past?		Select one	school_type	
E9	At what grade did [NAME] drop out of school?		Select one	education	
E10	At what age did [NAME] drop out of school?		Enter whole number		
E11	What was the primary reason for [NAME] dropping out of school?		Select one	noschool_ reason	
E12	Is [NAME] enrolled in any other form of full or part time education?		Select one	yes_no	
E13	What type of educational institution is [NAME] attending?		Select one	other_ education	
E14	Is [NAME] attending this institution full time or part time?		Select one	full_part	
E15	At what age do you expect [NAME] to finish their full or part-time education?		Enter whole number		
E16	What type of school is [NAME] attending?		Select one	school_type	
E17	What grade level is [NAME] currently at?		Select one	education	
E18	What grade level do you expect [NAME] to complete before leaving full time education?		Select one	education	
E19	At what age do you expect [NAME] to be before leaving full time education?		Enter whole number		
E20	Who in your household normally makes major decisions about [NAME]'s education?	*Refer to the household roster and enter line no. of household member.*	Enter whole number		
E21	Does [NAME] have a say in decisions about their own education?		Select one	edu_decision	

E20	Has anyone in this household spent any money on [NAME]'s education in the past 12 months?		Select one	yes_no	
	How much has the household spent on education for [NAME] in the past 12 months for each of the following costs?		Read only		
E20a	Tuition fees (including school / private tuition)	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number		
E20b	Other fees (exam admission, events etc.)	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number		
E20c	Uniform	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number		
E20d	Text book / supplies	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number		
E20e	Transportation	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number		
E20f	Others (snacks etc.)	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number		
E20g	Has any non-household member spent money on [NAME]'s education in the past 12 months?		Select one	yes_no	
E21a	Read out: The total education expenditure for [NAME] in the past 12 months is Rs.[VALUE]. Does that sound correct? If not, go back and revise the expenditure estimates.	*If the total is not verified as correct, probe: Is it too high or too low? Revise previous responses as required.*	Acknowledge		E20 = 1
	Time allocation				Currently resident and unavailable adolescents
E22	Did [NAME] attend school (or other educational institution) last week?	*If it is currently term time, refer to the last 7 days. If it is currently school holidays, refer to the last week of term.*	Select one	attendance	E07 = 1 or E12 = 1
E23	Did [NAME] miss any days of school (other educational institution) in the last week (of term)?	*If it is currently term time, refer to the last 7 days. If it is currently school holidays, refer to the last week of term.* *Enter number of days. Put '0' if none.*	Enter whole number		E22 < 3
E24	What was the main reason for non-attendance?		Select one	absence_reason	E22 = 3 or E23 > 0
E25	Thinking about [NAME]'s homework and study time outside of school hours during the past week (of term), which of the following is true?	*If it is currently term time, refer to the last 7 days. If it is currently school holidays, refer to the last week of term.*	Select one	study_time	E07 = 1 or E12 = 1
E26	What was the main reason for [NAME] not having enough time to study in the last week (of term)?		Select one	Absence_reason	E25 = 2-4
E27	How many days in the last week (of term) was [NAME] able to spend at least some time studying at home/outside school hours?	*If it is currently term time, refer to the last 7 days. If it is currently school holidays, refer to the last week of term.* *Enter number of days. Put '0' if none.*	Enter whole number		E25 < 4
E28	How much time in total in the last week (of term) did [NAME] spend studying at home/outside school hours?	*If it is currently term time, refer to the last 7 days. If it is currently school holidays, refer to the last week of term.* *Enter total number of hours. Put '0' if none.*	Enter whole number		E27 > 0

309

	Now I would like to ask you how much time in the past week [NAME] has spent doing various work and domestic activities. For each activity I would like to know the number of days and the total number of hours.		Read only		
E29a	How many days in the past week has [NAME] spent doing **paid agricultural** work?	*Working for wage or payment in kind*	Enter whole number		
E29b	How many hours in total in the past week has [NAME] spent doing **paid agricultural** work?		Enter whole number		E29a > 0
E29c	Has [NAME] spent any time doing **paid agricultural** work in the past 12 months?		Select one	yes_no	E29a = 0
E30a	How many days in the past week has [NAME] spent doing **paid non-agricultural** work?	*Working for wage or payment in kind*	Enter whole number		
E30b	How many hours in total in the past week has [NAME] spent doing **paid non-agricultural** work?		Enter whole number		E30a > 0
E30c	Has [NAME] spent any time doing **paid-non agricultural** work in the past 12 months?		Select one	yes_no	E30a = 0
E31a	How many days in the past week has [NAME] spent doing **self-employed / family business** work?	*Non-agricultural family/own business*	Enter whole number		
E31b	How many hours in total in the past week has [NAME] spent doing **self-employed / family business** work ?		Enter whole number		E31a > 0
E31c	Has [NAME] spent any time doing **self-employed / family business** work in the past 12 months?		Select one	yes_no	E31a = 0
E32a	How many days in the past week has [NAME] spent doing **home agricultural** work?	*Including any cultivation and tending livestock.*	Enter whole number		
E32b	How many hours in total in the past week has [NAME] spent doing **home agricultural** work?	*Including any cultivation and tending livestock.*	Enter whole number		E32a > 0
E32c	Has [NAME] spent any time doing **home agricultural** work in the past 12 months?	*Including any cultivation and tending livestock.*	Select one	yes_no	E32a = 0
E33a	How many days in the past week has [NAME] spent doing **milling and food processing** at home?		Enter whole number		
E33b	How many hours in total in the past week has [NAME] spent doing **milling and food processing** at home?		Enter whole number		E33a > 0
E33c	Has [NAME] spent any time doing **milling and food processing** in the past 12 months?		Select one	yes_no	E33a = 0
E34a	How many days in the past week has [NAME] spent doing **handicrafts and tailoring** at home?		Enter whole number		
E34b	How many hours in total in the past week has [NAME] spent doing **handicrafts and tailoring** at home?		Enter whole number		E34a > 0
E34c	Has [NAME] spent any time doing **handicrafts and tailoring** in the past 12 months?		Select one	yes_no	E34a = 0
E35a	How many days in the past week has [NAME] spent doing **construction and major repairs** to your home?		Enter whole number		
E35b	How many hours in total in the past week has [NAME] spent doing **construction and major repairs** to your home?		Enter whole number		E35a > 0

310

E35c	Has [NAME] spent any time doing **construction and major repairs** in the past 12 months?	Select one	yes_no	E35a = 0
E36a	How many days in the past week has [NAME] spent fetching **water and firewood/fuel**?	Enter whole number		
E36b	How many hours in total in the past week has [NAME] spent fetching **water and firewood/fuel**?	Enter whole number		E36a > 0
E36c	Has [NAME] spent any time fetching **water and firewood/fuel**?	Select one	yes_no	E36a = 0
E37a	How many days in the past week has [NAME] spent doing **any other economic activities**?	Enter whole number		
E37b	How many hours in total in the past week has [NAME] spent doing **any other economic activities**?	Enter whole number		E37a > 0
E37c	Has [NAME] spent any time doing **any other economic activities** in the past 12 months?	Select one	yes_no	E37a = 0
E38	Read out: The total time spent by [NAME] doing economic activity in the past week is: [HOURS]. This is [HOURS] per day on average. Does this sound correct? If not, go back and revise the individual estimates.	Acknowledge		
	Now I would like to ask you how much time in the past week [NAME] has spent doing various domestic and care activities. For each activity I would like to know the number of days and the total number of hours.	Read only		
E39a	How many days in the past week has [NAME] spent **cooking and serving food**?	Enter whole number		
E39b	How many hours in total in the past week has [NAME] spent **cooking and serving food**?	Enter whole number		E39a > 0
E40a	How many days in the past week has [NAME] spent **cleaning and tidying the house**?	Enter whole number		
E40b	How many hours in total in the past week has [NAME] spent **cleaning and tidying the house**?	Enter whole number		E40a > 0
E41a	How many days in the past week has [NAME] spent doing **minor household repairs**?	Enter whole number		
E41b	How many hours in total in the past week has [NAME] spent doing **minor household repairs**?	Enter whole number		E41a > 0
E42a	How many days in the past week has [NAME] spent **shopping for the household**?	Enter whole number		
E42b	How many hours in total in the past week has [NAME] spent **shopping for the household**?	Enter whole number		E42a > 0
E43a	How many days in the past week has [NAME] spent **caring for elderly, sick or disabled people**?	Enter whole number		
E43b	How many hours in total in the past week has [NAME] spent **caring for elderly, sick or disabled people**?	Enter whole number		E43a > 0
E44a	How many days in the past week has [NAME] spent doing **child care**?	Enter whole number		

E44b	How many hours in total in the past week has [NAME] spent doing **child care**?		Enter whole number	E44a > 0
E45a	How many days in the past week has [NAME] spent doing **other domestic or community chores**?		Enter whole number	
E45b	How many hours in total in the past week has [NAME] spent doing **other domestic or community chores**?		Enter whole number	E45a > 0
E46a	Read out: The total time spent by [NAME] doing domestic and care work in the past week is: HOURS. This is HOURS per day on average. Does this sound correct? If not, go back and revise the individual estimates.		Acknowledge	
E47a	*Read out:* The total time spent by [NAME] doing economic and domestic and care work in the past week is: [HOURS]. This is [HOURS] per day on average. Does this sound correct? *If not, go back and revise the individual estimates.*		Acknowledge	
	Marriage			
	When was [NAME]'s marriage ceremony?	*Enter Nepali calendar date.*	Read only	
E48a	Select year		Select one	year
E48b	Select month		Select one	month
E48c	Select day		Select one	day
E51	How old is [NAME]'s husband/wife?		Enter whole number	
E52	What is the ideal age you would like [NAME] to get married?		Enter whole number	B17 = 0
E53	Who in your household will be (was) primarily responsible for decisions about [NAME]'s marriage?	*Refer to household roster and enter line number of household member. Enter '0' if no one*	Enter whole number	
E54	Does (did) [NAME] have a say in decisions about who and when to marry?		Select one	marital_ decision
E55	Do you expect to (did you) pay/receive a dowry for [NAME]'s marriage?		Select one	yes_no
E55b	How much dowry do you expect to (did you) pay/receive?	*Enter amount in rupees*	Enter whole number	E54 = 1
	Closing section			
E56	Who is the respondent for the next section?	*You will stay with the same respondent if they are also the parent or guardian of the next adolescent in the household roster.*	Select one	respondent
	Thank you for your time and for participating in this survey. We are now going to interview other members of your household. Before we do, do you have any questions?		Read only	E56 > 1
E58	What is your perception of the respondent's responses during the interview?		Select one	respondent_ response
E59	What is your perception of the veracity of the answers you received?		Select one	response_ veracity
E60	Any other comments or observations?	*Did other people interrupt or try to participate in the interview? Was anyone present who may have affected the respondent (e.g. official, local leader, foreigner)? Any other reason that interview quality may be affected?*	Enter text	

F. Adolescent questionnaire

	Check household roster. Reconfirm availability of adolescent for interview. If an 'unavailable' adolescent can be interviewed at a later time change the status to 'available' (Section B).	Read only		

Repeat for all adolescents (current household members)
Informed consent

	Subject of interview, household member LINE NO.[]: [NAME], [AGE] years.	Read only		
F03	(Read out for the new respondent) *See text in B01*	Select one	yes_no_only	If no, go to next adolescent or Section G
	Migration			
F05d	Have you spent 2 continuous months or more living away from home in the past 3 years?	Select one	yes_no	
F05e	What was the primary reason for your absence at that time?	Select one	migration_reason	F05d = 1
F05f	Specify other reason:	Enter text		F05e = 9
F05g	Where were you living during this period away?	Select one	migration_living	F05d = 1
	Education			
	Now I would like to ask you about your education.	Read only		
F07	Have you spent any time in school in the current year (2074/75) or in any previous years?	Select one	enrolment	
	[NAME]'s highest grade completed was previously stated as: [GRADE]. Reconfirm the response and change the earlier response if necessary (Section B).	Read only		F07 < 3 and B19 = 0
F08a	What was the primary reason that you never went to school?	Select one	noschool_reason	F07 = 3
F08b	What type of school did you attend in the past?	Select one	school_type	
F09	At what grade did you drop out of school?	Select one	education	
F10	At what age did you drop out of school?	Enter whole number		
F11	What was the primary reason for dropping out of school?	Select one	noschool_reason	
F12	Are you enrolled in any other form of full or part time education?	Select one	yes_no	
F13	What type of educational institution are you attending?	Select one	other_education	F12 = 1
F14	Are you attending this institution full time or part time?	Select one	full_part	
F15	At what age do you expect to finish their full or part-time education?	Enter whole number		
F16	What type of school are you attending?	Select one	school_type	
F17	What grade level are you currently at?	Select one	education	
F18	What grade level do you expect to complete before leaving full time education?	Select one	education	

F19	What age do you expect to be before leaving full time education?		Enter whole number		
F20	Who in your household normally makes major decisions about your education?	*Refer to household roster and enter line number of household member.*	Enter whole number		
F21	Do you have a say in decisions about your own education?		Select one	edu_decision	
	Time allocation				
F22	Did you attend school (or other educational institution) last week?	*If it is currently term time, refer to the last 7 days. If it is currently school holidays, refer to the last week of term.*	Select one	attendance	F07 = 1 or F12 = 1
F23	Did you miss any days of school (other educational institution) in the last week (of term)?	*If it is currently term time, refer to the last 7 days. If it is currently school holidays, refer to the last week of term.Enter number of days. Put '0' if none.*	Enter whole number		F22 < 3
F24	What was the main reason for non-attendance?		Select one	absence_ reason	F22 = 3 or F23 > 0
F25	Thinking about your homework and study time outside of school hours during the last week (of term), which of the following is true?	*If it is currently term time, refer to the last 7 days. If it is currently school holidays, refer to the last week of term.*	Select one	study_time	F07 = 1 or F12 = 1
F26	What was the main reason for not having enough time to study in the last week (of term)?		Select one	absence_ reason	F25 = 2-4
F27	How many days in the last week (of term) were you able to spend at least some time studying at home/outside school hours?	*If it is currently term time, refer to the last 7 days. If it is currently school holidays, refer to the last week of term.* *Enter number of days. Put '0' if none.*	Enter whole number		F25 < 4
F28	How much time in total in the last week (of term) did you spend studying at home/outside school hours?	*If it is currently term time, refer to the last 7 days. If it is currently school holidays, refer to the last week of term.* *Enter total number of hours. Put '0' if none.*	Enter whole number		F27 > 0
	Now I would like to ask you how much time in the past week you have spent doing various work and domestic activities. For each activity I would like to know the number of days and the total number of hours.		Read only		
F29a	How many days in the past week have you spent doing **paid agricultural** work?	*Working for wage or payment in kind*	Enter whole number		
F29b	How many hours in total in the past week have you spent doing **paid agricultural** work?		Enter whole number		F29a > 0
F29c	Have you spent any time doing **paid agricultural** work in the past 12 months?		Select one	yes_no	F29a = 0
F30a	How many days in the past week have you spent doing **paid non-agricultural** work?	*Working for wage or payment in kind*	Enter whole number		
F30b	How many hours in total in the past week have you spent doing **paid non-agricultural** work?		Enter whole number		F30a > 0
F30c	Have you spent any time doing **paid-non agricultural** work in the past 12 months?		Select one	yes_no	F30a = 0
F31a	How many days in the past week have you spent doing non-agricultural **self-employed / family business** work?	*Non-agricultural family/own business*	Enter whole number		
F31b	How many hours in total in the past week have you spent doing **self-employed / family business** work?	*Non-agricultural family/own business*	Enter whole number		F31a > 0

F31c	Have you spent any time doing **self-employed / family business** work in the past 12 months?	*Non-agricultural family/own business*	Select one	yes_no	F31a = 0
F32a	How many days in the past week have you spent doing **home agricultural** work?	*Including any cultivation and tending livestock*	Enter whole number		
F32b	How many hours in total in the past week have you spent doing **home agricultural** work?	*Including any cultivation and tending livestock*	Enter whole number		F32a > 0
F32c	Have you spent any time doing **home agricultural** work in the past 12 months?	*Including any cultivation and tending livestock*	Select one	yes_no	F32a = 0
F33a	How many days in the past week have you spent doing **milling and food processing** at home?		Enter whole number		
F33b	How many hours in total in the past week have you spent doing **milling and food processing** at home?		Enter whole number		F33a > 0
F33c	Have you spent any time doing **milling and food processing** in the past 12 months?		Select one	yes_no	F33a = 0
F34a	How many days in the past week have you spent doing **handicrafts and tailoring** at home?		Enter whole number		
F34b	How many hours in total in the past week have you spent doing **handicrafts and tailoring** at home?		Enter whole number		F34a > 0
F34c	Have you spent any time doing **handicrafts and tailoring** in the past 12 months?		Select one	yes_no	F34a = 0
F35a	How many days in the past week have you spent doing **construction and major repairs** to your home?		Enter whole number		
F35b	How many hours in total in the past week have you spent doing **construction and major repairs** to your home?		Enter whole number		F35a > 0
F35c	Have you spent any time doing **construction and major repairs** in the past 12 months?		Select one	yes_no	F35a = 0
F36a	How many days in the past week have you spent fetching **water and firewood/fuel**?		Enter whole number		
F36b	How many hours in total in the past week have you spent fetching **water and firewood/fuel**?		Enter whole number		F36a > 0
F36c	Have you spent any time fetching **water and firewood/fuel**?		Select one	yes_no	F36a = 0
F37a	How many days in the past week have you spent doing **any other economic activities**?		Enter whole number		
F37b	How many hours in total in the past week have you spent doing **any other economic activities**?		Enter whole number		F37a > 0
F37c	Have you spent any time doing **any other economic activities** in the past 12 months?		Select one	yes_no	F37a = 0
F38	Read out: The total time spent doing economic activity in the past week is: [HOURS]. This is [HOURS] per day on average. Does this sound correct? If not, go back and revise the individual estimates.		Acknowledge		
	Now I would like to ask you how much time in the past week you have spent doing various domestic and care activities. For each activity I would like to know the number of days and the total number of hours.		Read only		
F39a	How many days in the past week have you spent **cooking and serving food**?		Enter whole number		

F39b	How many hours in total in the past week have you spent **cooking and serving food**?	Enter whole number	F39a > 0
F40a	How many days in the past week have you spent **cleaning and tidying the house**?	Enter whole number	
F40b	How many hours in total in the past week have you spent **cleaning and tidying the house**?	Enter whole number	F40a > 0
F41a	How many days in the past week have you spent doing **minor household repairs**?	Enter whole number	
F41b	How many hours in total in the past week have you spent doing **minor household repairs**?	Enter whole number	F41a > 0
F42a	How many days in the past week have you spent **shopping for the household**?	Enter whole number	
F42b	How many hours in total in the past week have you spent **shopping for the household**?	Enter whole number	F42a > 0
F43a	How many days in the past week have you spent **caring for elderly, sick or disabled people**?	Enter whole number	
F43b	How many hours in total in the past week have you spent **caring for elderly, sick or disabled people**?	Enter whole number	F43a > 0
F44a	How many days in the past week have you spent doing **child care**?	Enter whole number	
F44b	How many hours in total in the past week have you spent doing **child care**?	Enter whole number	F44a > 0
F45a	How many days in the past week have you spent doing **other domestic or community chores**?	Enter whole number	
F45b	How many hours in total in the past week have you spent doing **other domestic or community chores**?	Enter whole number	F45a > 0
F46	Read out: The total time spent doing domestic and care work in the past week is: [HOURS]. This is [HOURS] per day on average. Does this sound correct? If not, go back and revise the individual estimates.	Acknowledge	
F47	Read out: The total time spent doing economic and domestic and care work in the past week is: [HOURS]. This is [HOURS] per day on average. Does this sound correct? If not, go back and revise the individual estimates.	Acknowledge	
	Marriage		
	When was your marriage ceremony?	*Enter Nepali calendar date.*	Read only
F48a	Select year		Select one year
F48b	Select month		Select one month
F48c	Select day		Select one day
F51	How old is your husband/wife?		Enter whole number
F52	What is the ideal age you would like to get married?		Enter whole number B17 = 7
F53	Who in your household will be (was) primarily responsible for decisions about your marriage?	*Refer to household roster and enter line number of household member. Enter '0' if no one*	Enter whole number

F54	Will (did) you have a say in decisions about who and when to marry?		Select one	marital_ decision	
	Closing section				
	Thank you for your time and for participating in this survey. We are now going to interview other members of your household. Before we do, do you have any questions?		Read only		
F58	What is your perception of the respondent's responses during the interview?		Select one	respondent_ response	
F59	What is your perception of the veracity of the answers you received?		Select one	response_ veracity	
F60	Any other comments or observations?	*Did other people interrupt or try to participate in the interview? Was anyone present who may have affected the respondent (e.g. official, local leader, foreigner)? Any other reason that interview quality may be affected?*	Enter text		

	G. Older person questionnaire				
	To be administered to the older person where ever possible. An alternative respondent can be found if the older person is unavailable or unable to answer questions.		Read only		
	Repeat for all older persons Subject of interview, household member LINE NO.[]: [NAME], [AGE] years. **Informed consent**		Read only		
G01	Is the subject of the interview the respondent?		Select one	yes_no_only	
G01a	Enter the line number of the respondent:	*Refer to household roster and enter line number of household member.*	Enter whole number		G01 = 2
G02	Has the respondent been interviewed for an earlier module?		Select one	yes_no_only	
G03	(Read out for the new respondent) *See text in B01*		Select one	yes_no_only	G02 = 2 If no, repeat for next older person or go to end.
	Repeat for all adolescents **Role in adolescents' life**				B09 = 10-17
G04	I am now going to ask you a few questions about [NAME]. Considering [NAME]'s education, marriage, work and other important things, would you say that you have a role in major decisions about their life?		Select one	oldado_ decision	
	In the past one **month**, have you spent any of your own money on [NAME] for the following items?		Read only		
G05a	Meals, at home or outside	*Enter the amount in rupees or put '0' if none.*	Enter whole number		
G05b	Snacks, sweets and drinks	*Enter the amount in rupees or put '0' if none.*	Enter whole number		

G05c	Health care and medicine	*Enter the amount in rupees or put '0' if none.*	Enter whole number		
G05d	Clothes	*Enter the amount in rupees or put '0' if none.*	Enter whole number		
G05e	Other personal items (e.g. jewellery, cosmetics, electronics)	*Enter the amount in rupees or put '0' if none.*	Enter whole number		
	In the past one **year**, have you spent any of your own money on [NAME] for the following items?		Read only		
G06a	School fees (including entrance, exam and tuition)	*Enter the amount in rupees or put '0' if none.*	Enter whole number		
G06b	Other school items (e.g. books, uniform, stationery, transport)	*Enter the amount in rupees or put '0' if none.*	Enter whole number		
G06c	Job seeking (e.g. transport, accommodation)	*Enter the amount in rupees or put '0' if none.*	Enter whole number		
G06d	Marriage and related costs (e.g. ceremonies, dowry, clothes)	*Enter the amount in rupees or put '0' if none.*	Enter whole number		
G06e	Any other major expenditure items	*Enter the amount in rupees or put '0' if none.*	Enter whole number		
G06f	Specify other major expenditure item(s)		Enter text		G06e > 0
	Old Age Allowance				
G07	Have you heard about the government Old Age Allowance?		Select one	yes_no_only	
G08	To your knowledge, at what age are you eligible for the Old Age Allowance?	*Actual eligibility is different for Dalits and non-Dalits. If necessary, specify for the caste of the household. Put '0' if not known*	Enter whole number		
G09	Do you know how much the benefit level is for the Old age Allowance?	*If the answer is monthly, convert to a 4-monthly amount. Put '0' if not known.*	Enter whole number		
G10	Have you applied/registered for the Old Age Allowance?		Select one	yes_no_only	
G11	Why not?		Select one	not_applied	G10 = 2
G11a	Specify other reason:		Enter text		G11 = 7
	When did you apply/register for the Old Age Allowance?		Read only		
G12a	Select year		Select one	year	
G12b	Select month		Select one	month	
G13	Have you ever received any Old Age Allowance payments since registering?		Select one	yes_no_only	
G14	Why have you not received any Old Age Allowance payments?		Select one	not_received	G13 = 2
G14a	Specify reason for not receiving Old Age Allowance:		Enter text		G14 = 8
G15	How long after applying/registering did you receive the first Old Age Allowance payment?		Select one	first_payment	
G16	Do you know how often you should receive the Old Age Allowance?		Select one	frequency	
G16a	Specify other frequency:		Enter text		G16 = 6
G17	How many times in the past 12 months did you actually receive the Old Age Allowance?		Enter whole number		

G18	How much did you receive for the last payment?	*Enter amount in rupees.*	Enter whole number	
G19	How much have you received in total in the past 12 months?	*Enter amount in rupees.*	Enter whole number	
G20	Who generally collects the payment?		Select one collection	
G20a	Enter line no. of household member:	*Refer to household roster and enter line number of household member.*	Enter whole number	G20 = 2
G20b	Specify other person:		Enter text	G20 = 4
G20c	Where do you (or other person) usually collect the Old Age Allowance payment?		Select one pay_location	
G21	How long does it take you (or other person) to collect the payment and return home?		Select one travel_time	
G22	How much does it cost you to pick up the payment each time (e.g. for transport costs)?	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number	
G23	In general, are you alone able to decide how to spend the Old Age Allowance?		Select one yes_no	
G23a	Who else in the household usually decides how to use the money?	*Refer to household roster and enter line number of household member.*	Enter whole number	G23 = 2
	Considering the last payment you received, how much did you spend on the following items/uses?		Read only	
G24a	Own food items	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number	
G24b	Food items for household	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number	
G24c	Own health care	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number	
G24d	Health care for other household members	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number	
G24e	Own clothes	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number	
G24f	Clothes for other household members	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number	
G24g	Own other personal items	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number	
G24h	Other personal for other household members	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number	
G24i	Children's education	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number	
G24j	Investment / productive activities	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number	
G24k	Savings account / cooperative	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number	
G24l	Loan repayment	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number	
G24m	Wedding costs	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number	
G24n	Other social or religious events / ceremonies	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number	
G24o	Other	*Enter amount in rupees. Put '0' if nothing.*	Enter whole number	
G26	The total amount of the last Old Age Allowance payment used is Rs. [VALUE]. The total amount received was Rs. [VALUE]. Total used should not be more than total		Acknowledge	G13 = 1

	received. Any balance amount should be kept as cash. Check and adjust the amounts if necessary.				
G27	In the past 12 months, have you accessed a loan of any sort using the Old Age Allowance as collateral?		Select one	yes_no	G13 = 1
	Closing section				
	Thank you for your time and for participating in this survey. Do you have any questions?		Read only		
G30	What is your perception of the respondent's responses during the interview?		Select one	respondent_ response	
G31	What is your perception of the veracity of the answers you received?		Select one	response_ veracity	
G32	Any other comments or observations?	*Did other people interrupt or try to participate in the interview? Was anyone present who may have affected the respondent (e.g. official, local leader, foreigner)? Any other reason that interview quality may be affected?*	Enter text		

A14	Household refused to cooperate.	Acknowledge	
A15	Add any comments or observations.	Enter text	

Survey questionnaire response options

No.	Response group and option
	vdc
01	Akolawa
02	Auraiya
03	Badharwa
04	Bairiya
05	Banjaraha
06	Basantapatti
07	Basatpur
08	Bhalohiya(Pipra)
09	Bhediyahi
10	Brahmapuri
11	Dumriya(Paroha)
12	Fatuha Maheshpur
13	Gangapipara
14	Hajminiya
15	Jatahara
16	Jethrahiya
17	Jhunkhunwa
18	Jowaha(Jokaha)
19	Laxmipur (Do.)
20	Lokaha
21	Mathiya
22	Matsari
23	Mudwalawa
24	Narkatiya Guthi
25	Pacharukhi
26	Rajdevi
27	Rajpur Farhadawa
28	Rajpur Tulsi
29	Rampur Khap
30	Saruatha
31	Tejapakar
	ward
01	01
02	02
03	03
04	04
05	05
06	06
07	07
08	08
09	09
	enumerator
01	Ambika Chaudhary
02	Anita Dev
03	Basant Mallik
04	Dinesh Chaudhary
05	Jayanti Kumari Sah
06	Lata Gajurel
07	Pramila Sharma
08	Pratipata Sharma
09	Mahesh Dev
10	Sirjana Chaudhary
11	Supriya Chaudhary
	yes_no_only
01	Yes
02	No
	yes_no_dk
01	Yes
02	No
98	(don't know)
	yes_no
01	Yes
02	No
98	(don't know)
99	(refused to answer)
	language
01	Nepali
02	Maithali
03	Bhojpuri
04	Other language
	caste
100	Chhetri
101	Brahman (Hill)
102	Thakuri
103	Sanyasi
104	Brahman (Tarai)
105	Rajput
106	Kayastha
107	Nurang
200	Kami
201	Damain/Dholi
202	Sarki
203	Chamar/Harijan/Ram
204	Musahar
205	Dusadh/Paswan/Pasi
206	Tatma
207	Khatwe
208	Dhobi
209	Bantar
210	Chidimar
211	Dom
212	Gaine
213	Badi
214	Halkhor
215	Other Dalit
300	Magar
301	Tharu
302	Tamang
303	Rai
304	Gurung
305	Limbu
306	Dhanuk
307	Sherpa
308	Gharti/Bhujel
309	Kumal
310	Rajbansi
311	Sunuwar
312	Majhi
313	Danuwar
314	Chepang/Praja
315	Santhal/Satar
316	Dhagar/Jhagar
317	Gangai
318	Thami
319	Dhimal
320	Bhote
321	Yakkha
322	Darai
323	Tajpuriya
324	Thakali
325	Pahari
326	Chhantal
327	Bote
328	Brahmu/Baramu
329	Jirel
330	Adibasi/Janajati
331	Dura
332	Meche
333	Lepcha
334	Kisan
335	Raji
336	Byangsi
337	Hayu
338	Koche
339	Walung
340	Munda
341	Raute
342	Yehlmo
343	Patharkata/Kuswadiya
344	Kusunda
400	Muslim
401	Churaute
500	Newar
600	Yadav
601	Teli
602	Koiri
603	Kurmi
604	Sonar
605	Kewat
606	Baniya
607	Mallah
608	Kalwar
609	Hajam/Thakur
610	Kanu
611	Sudhi
612	Lohar
613	Nuniya
614	Kumhar
615	Haluwai
616	Badhae
617	Barae
618	Kahar
619	Lodh
620	Rajbhar
621	Bing/Binda
622	Bhediyar/Gaderi
623	Mali
624	Kamar
625	Dhunia
700	Marwadi
701	Bangali
702	Punjabi/Sikh
703	Jain
704	Other caste
	religion
01	Hindu
02	Bouddha
03	Islam
04	Christian
05	None
06	Other religion
	sex
01	Female
02	Male
03	Other gender
	residence_status
01	Current household member
02	Previous household member
	availability
01	Available for interview (either now or later)
02	Unavailable for interview
	relation
10	Wife
11	Husband
12	Mother
13	Father
14	Son
15	Daughter
16	Brother
17	Sister
20	Grandfather
21	Grandmother
22	Grandson
23	Granddaughter
24	Great-grandfather
25	Great-grandmother
26	Great-grandson
27	Great-granddaughter
28	Mother-in-law
29	Father-in-law
30	Son-in-law

31	Daughter-in-law	10	Bhaktapur	07	Israel
32	Brother-in-law	11	Bhojpur	08	Japan
33	Sister-in-law	12	Chitwan	09	Malaysia
34	Step-mother	13	Dailekh	10	Qatar
35	Step-father	14	Dandheldhura	11	Saudi Arabia
36	Step-son	15	Dang	12	South Korea
37	Step-daughter	16	Darchula	13	United Kingdom
41	Step-brother	17	Dhading	14	Other country
42	Step-sister	18	Dhankuta	98	(don't know)
43	Foster-mother	19	Dhanusha	99	(refused to answer)
44	Foster-father	20	Dolakha		**migration_reason**
45	Foster-son	21	Dolpa	01	Education
46	Foster-daughter	22	Doti	02	Employment
50	Aunt	23	Gorkha	03	Looking for work
51	Uncle	24	Gulmi	04	Visiting family / friends / holiday
52	Niece	25	Humla		
53	Nephew	26	Ilam	05	Follow family
54	Cousin	27	Jajarkot	06	Family disagreement
55	Other relative	28	Jhapa	07	Marriage
60	Not-related	29	Jumla	08	Natural disaster
98	(don't know)	30	Kailali	09	Other reason
99	(refused to answer)	31	Kalikot	98	(don't know)
	marriage	32	Kanchanpur	99	(refused to answer)
01	Married, single	33	Kapilbastu		**disability**
02	Married, poly	34	Kaski	01	None
03	Remarried	35	Kathmandu	02	Physical disability
04	Separated	36	Kavrepalanchok	03	Mental disability
05	Divorced	37	Khotang	98	(don't know)
06	Widowed	38	Lalitpur	99	(refused to answer)
07	Never married	39	Lamjung		**floor**
98	(don't know)	40	Mahottari	11	(Natural) Earth
99	(refused to answer)	41	Makwanpur	12	(Natural) Sand
	nationality	42	Manang	13	(Natural) Dung
01	Nepalese	43	Morang	14	Other natural floor
02	Indian	44	Mugu	21	(Rudimentary) Wood Planks
03	Chinese	45	Mustang		
04	Bhutanese	46	Myagdi	22	(Rudimentary) Palm / Bamboo
05	Pakistani	47	Nawalparasi		
06	Other nationality	48	Nuwakot	23	Other rudimentary floor
98	(don't know)	49	Okhaldhunga	31	(Finished) Parquet or Polished Wood
99	(refused to answer)	50	Palpa		
	education	51	Panchthar	32	(Finished) Vinyl or Asphalt Strips
00	No education	52	Parbat		
01	Preschool/kindergarten	53	Parsa	33	(Finished) Ceramic Tiles
02	Class 1	54	Pyuthan	34	(Finished) Cement
03	Class 2	55	Ramechhap	35	(Finished) Carpet
04	Class 3	56	Rasuwa	36	(Finished) Linoleum
05	Class 4	57	Rautahat	37	Other finished floor
06	Class 5	58	Rolpa		**roof**
07	Class 6	59	Rukum	11	(Natural) Roofing
08	Class 7	60	Rupandehi	12	(Natural) Thatch
09	Class 8	61	Salyan	13	(Natural) Palm Leaf
10	Class 9	62	Sankhuwasabha	14	(Natural) Sod
11	Class 10	63	Saptari	15	Other natural roof
12	SLC	64	Sarlahi	21	(Rudimentary) Rustic Mat
13	Intermediate / +2 level	65	Sindhuli	22	(Rudimentary) Wood Planks
14	Bachelor	66	Sindhupalchok		
15	Master or higher	67	Siraha	23	Other rudimentary roof
98	(don't know)	68	Solukhumbu	31	(Finished) Metal / Tin
99	(refused to answer)	69	Sunsari	32	(Finished) Wood
	destination	70	Surkhet	33	(Finished) Calamine / Cement Fibre
01	Another part of Nepal	71	Syangja		
02	Another country	72	Tanahun	34	(Finished) Ceramic Tiles
98	(don't know)	73	Taplejung	35	(Finished) Cement
99	(refused to answer)	74	Tehrathum	36	(Finished) Roofing Shingles
	district	75	Udayapur		
01	Achham	98	(don't know)	37	Other finished roof
02	Arghakhanchi	99	(refused to answer)		**wall**
03	Baglung		**country**	11	(Natural) No Walls
04	Baitadi	01	Australia	12	(Natural) Cane / Palm / Trunks
05	Bajhang	02	Bangladesh		
06	Bajura	03	Bhutan	13	(Natural) Dirt
07	Banke	04	China	14	Other natural wall
08	Bara	05	Hong Kong	21	(Rudimentary) Bamboo with mud
09	Bardiya	06	India		

322

22	(Rudimentary) Stone with mud
23	(Rudimentary) Plywood
24	(Rudimentary) Cardboard
25	(Rudimentary) Reused Wood
26	Other rudimentary wall
31	(Finished) Cement
32	(Finished) Stone with lime / Cement
33	(Finished) Bricks
34	(Finished) Cement Blocks
35	(Finished) Wood Planks / Shingles
36	Other finished wall
fuel	
11	Electricity
12	Liquefied Petroleum Gas (Lpg)
13	Natural Gas
14	Biogas
15	Kerosene
21	Coal / Lignite
22	Charcoal
23	Wood
24	Straw / Shrubs / Grass
25	Animal Dung
26	Agricultural Crop Residue
31	No food cooked in household
41	Other fuel
98	(don't know)
99	(refused to answer)
cooking	
01	In a separate room used as kitchen
02	Elsewhere in the house
03	In a separate building
04	Outdoors
05	Other place
98	(don't know)
99	(refused to answer)
house_ownership	
01	Own, with land deeds
02	Own, without land deeds
03	Rented
04	Squatting
05	Other occupancy status
98	(don't know)
99	(refused to answer)
livelihood	
01	Agriculture, livestock, fishing
02	Own business
03	Trading or selling goods
04	Work for private sector
05	Public/government sector
06	Paid housework
07	Remittances
08	Other, specify
09	None
98	(don't know)
99	(refused to answer)
income_control	
01	Person who earned it
02	A particular household member (specify)
04	Joint household decision
05	It depends what for
98	(don't know)
99	(refused to answer)
transfer_control	
01	The recipient

02	A particular household member (specify)
04	Joint household decision
05	It depends what for
98	(don't know)
99	(refused to answer)
loan_status	
01	Yes, received it
02	Yes, but was rejected
03	No
98	(don't know)
99	(refused to answer)
no_loanReason	
01	Did not need it
02	Did not have collateral
03	Facility not available
04	I don't know how to do it
05	Because of my caste
06	Other reason
98	(don't know)
99	(refused to answer)
loan_reason	
01	For health and medical expense
02	For educational expenditure
03	To meet expenditure on marriage, birth, death
04	To purchase agricultural inputs (seeds, fertilizers etc.)
05	To buy domestic animals
06	To purchase household durables
07	To buy land
08	Other reason
98	(don't know)
99	(refused to answer)
pooling	
01	Yes, all members contribute to or consume common household resources
02	No, only some members contribute to or consume common household resources
03	No, all adult members of the household live economically independently
98	(don't know)
99	(refused to answer)
separate	
01	Together with main household
02	Separately from main household
98	(don't know)
99	(refused to answer)
statement	
01	Household module review
02	Closing statement
phone	
01	Respondent's phone number
02	Alternative phone number
03	No phone number
respondent_response	
01	Fully interested and attentive during entire interview
02	Interested during most of interview
03	Interested only partially

04	Not interested and difficult to get sensible answers
response_veracity	
01	Very confident
02	Doubts with some responses
03	Doubts with many responses
ado_consent	
01	Agrees for adolescent to be interviewed in private
02	Agrees for adolescent to be interviewed in their presence
03	Does not agree for adolescent to be interviewed but agrees for self to be interviewed
enrollment	
01	Enrolled, current year
02	Previously enrolled
03	Never went to school
98	(don't know)
99	(refused to answer)
migration_living	
01	With relatives
02	With friends of the family
03	Husband or partner's household
04	Own or shared private accommodation
05	School boarding
06	Other living arrangement
98	(don't know)
99	(refused to answer)
noschool_reason	
01	Too expensive
02	Too far
03	Poor quality school
04	Illness / disability
05	Needed to help at home
06	Denied admission
07	Poor grades / failed exams
08	Lack of interest
09	To get married
10	Other reason
98	(don't know)
99	(refused to answer)
school_type	
01	Public
02	Private
04	Other type
98	(don't know)
99	(refused to answer)
other_education	
01	Religious school
02	Apprenticeship
03	Vocational training centre
04	Other type
98	(don't know)
99	(refused to answer)
full_part	
01	Full-time
02	Part-time
98	(don't know)
99	(refused to answer)
edu_decision	
01	Always involved in the discussion and decisions making
02	Sometimes involved in the discussion and decisions

03	Sometimes involved in the discussion but not the final decision
04	Not involved at all
98	(don't know)
99	(refused to answer)

travel_time

01	Less than 1 hour
02	1-2 hours
03	3-4 hours
04	One day
05	Two days
06	More than 2 days
98	(don't know)
99	(refused to answer)

attendance

01	Yes, last week
02	Yes, last week of term
03	No
98	(don't know)
99	(refused to answer)

absence_reason

01	At home but sick
02	At home but experiencing menstruation
03	At home but working for pay
04	Working for the family farm/business
05	Doing household work (chores) or child care
06	Family crisis
07	Lack of interest
08	Could not afford transport cost
09	Bandha
10	Away from home for other education
11	Away from home for employment
12	Away from home to look for work
13	Visiting family / friends / holiday
14	Other reason
98	(don't know)
99	(refused to answer)

study_time

01	They had enough time to study
02	They didn't have quite enough time to study as much as they wanted
03	They hardly had any time to study
04	They didn't have any time to study
98	(don't know)
99	(refused to answer)

marital_decision

01	Fully involved in the discussion and decisions making
02	Somewhat involved in the discussion and decisions
03	Somewhat involved in the discussion but not the final decision
04	Not involved at all
05	No discussion
98	(don't know)
99	(refused to answer)

exp_items

01	Food for meals
02	Snacks / drinks
03	Health care
04	Clothes
05	School / educational items
06	School fees
07	Other personal items
98	(don't know)
99	(refused to answer)

year

2074	2074
2073	2073
2072	2072
2071	2071
2070	2070
2069	2069
2068	2068
2067	2067
2066	2066
2065	2065
2064	2064
2063	2063
98	(don't know)
99	(refused to answer)

month

01	Baishakh
02	Jestha
03	Ashadh
04	Shrawan
05	Bhadra
06	Ashwin
07	Kartik
08	Mangsir
09	Poush
10	Magh
11	Falgun
12	Chaitra
98	(don't know)
99	(refused to answer)

day

01	1st
02	2nd
03	3rd
04	4th
05	5th
06	6th
07	7th
08	8th
09	9th
10	10th
11	11th
12	12th
13	13th
14	14th
15	15th
16	16th
17	17th
18	18th
19	19th
20	20th
21	21st
22	22nd
23	23rd
24	24th
25	25th
26	26th
27	27th
28	28th
29	29th
30	30th
31	31st
32	32nd
98	(don't know)
99	(refused to answer)

oldado_decision

01	Yes, I make most major decisions
02	Yes, I have a significant say
03	Yes, I have some say
04	No, I have very little say
05	No, I don't have any say
98	(don't know)
99	(refused to answer)

not_applied

01	Not old enough
02	Not eligible
03	Do not have right documents
04	Transport cost is too high
05	VDC/Ward office is too far (not enough time)
06	Do not need the money
07	Other reason
98	(don't know)
99	(refused to answer)

first_payment

01	Straight away
02	1-3 months later
03	4-6 months later
04	7-12 months later
05	More than one year
06	Still not receiving it
98	(don't know)
99	(refused to answer)

not_received

01	I was told I am not eligible
02	Did not have right documents
03	I didn't complete the registration
04	I didn't have time to collect it
05	The VDC/Ward office is too far
06	I'm too poor
07	I don't know the right people
08	Other reason
98	(don't know)
99	(refused to answer)

frequency

01	Monthly
02	Every three months
03	Every four months
04	Every six months
05	Yearly
06	Other frequency
98	(don't know)
99	(refused to answer)

pay_location

01	VDC/Ward office
02	In my village (not VDC/Ward office)
03	Bank
04	Other place
98	(don't know)
99	(refused to answer)

collection

01	Self
02	Other household member
03	Friend or neighbour
04	Other person
98	(don't know)
99	(refused to answer)

respondent

01	Same respondent
02	New respondent

Appendix 2: Terms of reference - Survey team co-supervisor

Background

A PhD candidate from the London School of Economics is undertaking a household survey in Nepal as part of the primary data collection for a thesis entitles '*Poverty, cash transfers and adolescents' lives: understanding the unintended consequences of Nepal's social pension*'. The survey will interview multiple members of up to 1,500 households in a sub-region of Rautahat district in the central Terai. The survey aims to understand the links between additional cash entering a multi-generational household and the choices that parents and other household members make in relation to the life-course circumstances of adolescents, specifically in relation to their circumstances and transitions between education, work, marriage and migration.

General responsibilities

The consultant Co-supervisor is responsible for supporting the Principle Investigator in planning and executing the survey including preparatory work such as planning logistics, translation and training; gaining access to selected communities and managing the sampling process; and oversight of the survey team in the field and delivery of the required survey outputs.

Specific tasks

Pre-survey:

- Support the PI for survey planning and identification of opportunities and risks
- Translate the survey questionnaire into Nepali
- Participate in a pre-survey trip to the field site with the PI to meet relevant district and local officials to ensure access to communities and to identify accommodation and transport options.
- Participate in the survey team training with specific responsibility for translation (English-Nepali), reviewing survey tools, ensuring enumerators understand and deliver the questionnaire to a high standard, planning and participating in the pilot in a nearby local community, and support to logistics planning.

Survey:

- Negotiate access to communities with appropriate officials at district and VDC level as well as informal local leaders.
- Support sampling and planning daily work schedule for the team.
- Ensure quality of enumeration among the team members through regular supervision, spot checks of live interviews, and review meetings.
- Identify appropriate and cost effective local transport options for the survey team to reach selected VDCs.
- Identify appropriate local accommodation for the whole team in Gaur and other towns as well as in more remote rural areas where official lodgings may not be available.

- Assess any potential risks to the project and the health and safety of the team and help maintain team morale.

Post-survey:

- Participate in a post-survey debriefing (half day) which may be held in Gaur or Kathmandu.

Timetable

- Pre-survey planning (ad-hoc meetings with PI) and questionnaire translation: as required between, 26 June - 16 July
- Pre-survey trip: 5-8 July
- Survey team training: 17-21 July
- Survey: 24 July - 3 September

Working conditions

- The work will take place in Kathmandu and Rautahat district.
- Meetings in Kathmandu will take place in any reasonable central location.
- The Co-supervisor is responsible for organising their own accommodation and subsistence while in the field for which a fixed per diem will be provided. Local accommodation may require use of informal lodgings in remote communities.
- The Co-supervisor is expected to remain in the field location for the majority of the duration of the survey, barring any personal emergency circumstances.
- Transportation from Kathmandu to and at the field site will use standard local methods including bus, motorbike and other means where necessary.

Consultant fees

- Daily rate: The consultant will be paid NRs. 2,500 per day for work undertaken. A working day is equivalent to minimum 8 hours for contributory work in Kathmandu (e.g. translation, meetings, training etc.). Working hours in the field may on occasion be up to 12 hours including travel time in any given day. Working days include travel days from/to Kathmandu.
- Bonus: A 5% bonus will be paid if certain quality standards are met (outlined below). For every half step increase from the expected overall teamwork rate of 4 questionnaires per person per day on average, an additional 5% bonus will be provided, as long as quality standards are also met.

Other benefits and conditions

- Per diem: NRs. 1,500 will be paid to cover all accommodation and subsistence costs while in the field.
- Transport costs: transport costs will be paid separately on an actual basis.
- Communication: Up to NRs. 1000 will be provided for mobile phone credit during the field work.
- Clothing and equipment: A minimum of a rain coat will be provided for local weather conditions. Other necessary clothing may be discussed and agreed. The Co-supervisor will have temporary use of a Samsung tablet for the duration of the training and field work.
- Insurance: Accident and injury insurance will be provided from Himalayan General Insurance.

Minimum work quality standards

- The survey team completes a minimum of 4 questionnaires on average per day, depending on local realities.
- The survey team overall maintains a maximum of 5% missing responses on a per question basis for all interviews.
- The Co-supervisor and all survey team members maintain basic interview principles of consistency, confidentiality and respect to others.
- Timeliness and cooperation in respect of agreed work planning and practices.

Appendix 3: Terms of Reference – Enumerator

Background
A PhD candidate from the London School of Economics is undertaking a household survey in Nepal as part of the primary data collection for a thesis entitles '*Poverty, cash transfers and adolescents' lives: understanding the unintended consequences of Nepal's social pension*'. The survey will interview multiple members of up to 1,500 households in a sub-region of Rautahat district in the central Terai. The survey aims to understand the links between additional cash entering a multi-generational household and the choices that parents and other household members make in relation to the life-course circumstances of adolescents, specifically in relation to their circumstances and transitions between education, work, marriage and migration.

General responsibilities
As a member of the survey team, the Enumerator is responsible for actively participating in the survey team training programme, contributing to survey planning and logistics, acquiring access to local communities, ensuring accurate sampling, identifying, engaging and interviewing sampled households to a high standard, and participating in survey review meetings.

Specific tasks
Pre-survey: Participate in the survey team training with specific responsibility for understanding and delivering the questionnaire to a high standard in both Nepali (from written) and Bhojpuri (live translation); participating in the pilot in a nearby local community; providing feedback on the survey tool content and translation; and contributing to planning and logistics as required.
Survey:
- Support the co-supervisor to negotiate access to communities with appropriate officials at VDC level as well as informal local leaders where necessary.
- Participate in planning daily work schedule for the team and debriefing.
- Ensuring households meet the criteria for selection, deliver questionnaires to selected households in line with good enumeration principles.
- Be an active member of the survey team and contribute other tasks as required.
Post-survey: Participate in a post-survey debriefing (half day) which may be held in Gaur or Kathmandu.

Timetable
- Survey team training: 17-21 July
- Survey: 24 July - 5 September (may finished sooner depending on pace of work).
Working conditions
- The work will take place in Kathmandu and Rautahat district.

- Enumerators are responsible for organising their own accommodation and subsistence while in the field for which a fixed per diem will be provided. Local accommodation may require use of informal lodgings in remote communities.
- Enumerators are expected to remain in the field location for the duration of the survey, barring any personal emergency circumstances.
- Transportation from Kathmandu to and at the field site will use standard local methods including bus, motorbike and other means where necessary.

Fees

- Daily rate: The enumerator will be paid NRs. 1,500 per day for work undertaken. A working day is equivalent to minimum 7 hours for contributory work in Kathmandu (e.g. translation, meetings, training etc.). Working hours in the field may be up to 12 hours including travel time in any given day. Working days include travel days from/to Kathmandu.
- Bonus: A 5% bonus will be paid if certain quality standards are met (outlined below). In addition, for every half step increase from the expected overall teamwork rate of 4 questionnaires per person per day on average an additional 5% bonus will be provided as long as quality standards are also met.

Other benefits and conditions

- Per diem: NRs. 1,500 per day will be paid to cover all accommodation and subsistence costs while in the field location.
- Transport costs: transport costs from Kathmandu to Rautahat and while in the field site will be paid separately on an actual basis.
- Communication: Up to NRs. 1,000 will be provided for mobile phone credit during the field work.
- Clothing and equipment: A minimum of a raincoat will be provided for local weather conditions. Other necessary clothing may be discussed and agreed. The Enumerator will have temporary use of a Samsung tablet for the duration of the training and field work.
- Insurance: Accident and injury insurance will be provided from Himalayan General Insurance.

Minimum work quality standards

- Minimum of 4 questionnaires on average per day, depending on local realities.
- Maintain a maximum of 5% missing responses on a per question basis for all interviews.
- Maintain basic interview principles of consistency, confidentiality and respect to others.
- Timeliness and cooperation in respect of agreed work planning and practices.

Appendix 4: Economic welfare variables from the CTALS

Asset wealth index

Following Morris et al. (2000), household asset score was derived by assigning to each item in the list of assets (g) a weight equal to the reciprocal of the proportion of the study households who owned one or more of that item (w_g), then multiplying that weight by the number of units of asset g owned by the household (f_g), and summing the product over all possible assets. Thus, for household j,

$$asset\ score = \sum_{g=1}^{G} f_{gi} \cdot w_{gi}$$

Assets used: cycle, motor vehicle, mobile phone, generator/invertor, electric fan, fridge, umbrella, TV, radio, small livestock, medium livestock, large livestock, hand tools, animal tools, power tools; (based on Morris et al. and tailored to Nepal context by SLRC).

Asset wealth score has no missing values. 3 extreme values were generated due to households having a very large number of chickens (chicken farms). These were confirmed as correct at the time of enumeration.

```
                      Asset wealth score (c07)
_____

        Percentiles      Smallest
  1%      2.247219              0
  5%      6.216302              0
 10%      8.742266              0          Obs              2,018
 25%      13.95989              0          Sum of Wgt.      2,018

 50%      22.95911                         Mean          57.75881
                        Largest            Std. Dev.     967.8236
 75%      38.82665        246.9318
 90%      60.04881         2169.63         Variance      936682.5
 95%      76.92033        12065.98         Skewness      40.58142
 99%       125.384        41744.73         Kurtosis       1719.13
```

Given the three extreme values, transformation is necessary. Histograms of the trimmed, windsorised and log transformations all look reasonable. Trimmed and windsorised versions both result in a reduction in the mean by almost 50% and an even greater reduction in the variance.

Untransformed
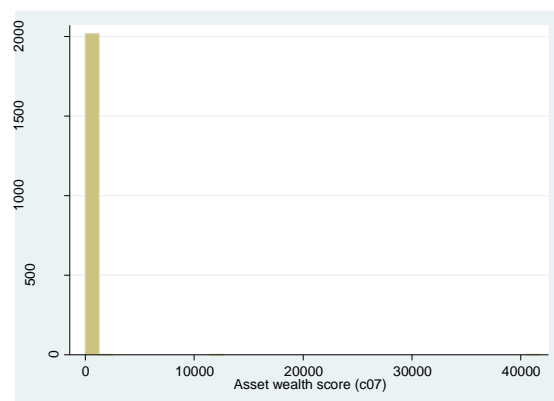
Trimmed
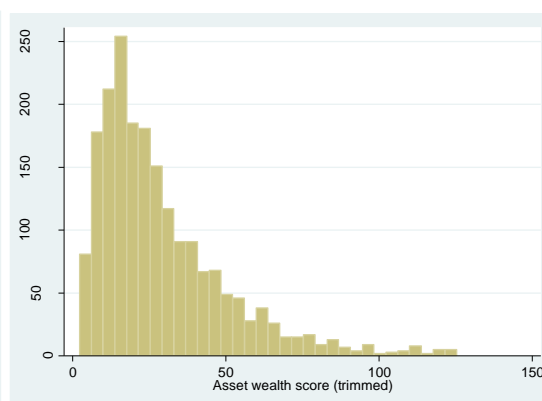
Variable	Obs	Mean	Std. Dev.	Min	Max
awscor_trm	1,981	29.10655	21.3376	2.247219	125.384

Windsorized
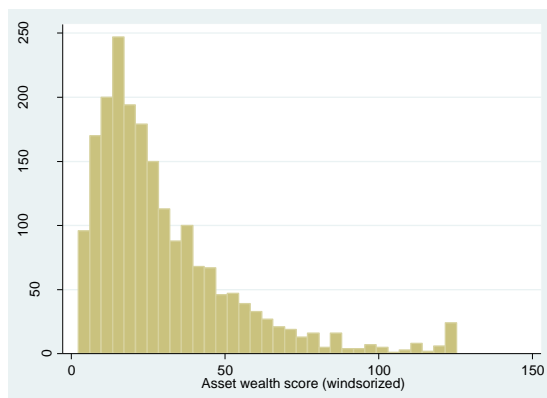
Log transformation
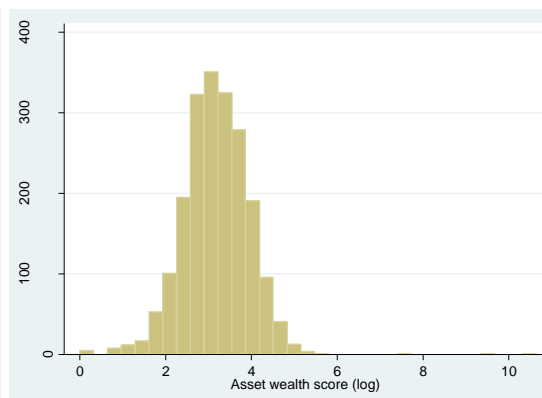
Variable	Obs	Mean	Std. Dev.	Min	Max
awscor_win	2,018	29.83447	23.33246	2.247219	125.384

Variable	Obs	Mean	Std. Dev.	Min	Max
awscor_ln	2,018	3.180984	.7792372	0	10.63935

As there is no apparent problem at the bottom end of the distribution a further option is to top-code the data. In this approach, the top three (extreme) values are capped at the next highest value. This removes the potential problem of erroneous results due to extreme values in both untransformed and log versions and better maintains the integrity of the data.
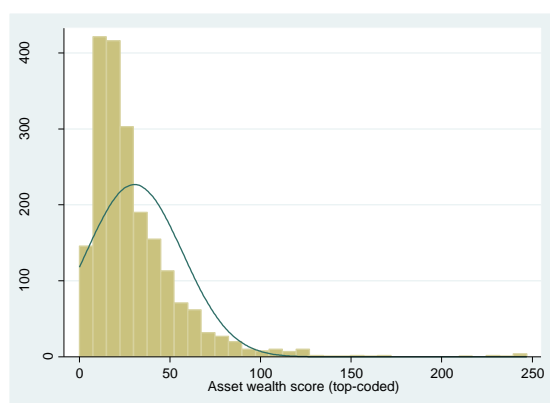
Top-coded   *Top-coded (log)*
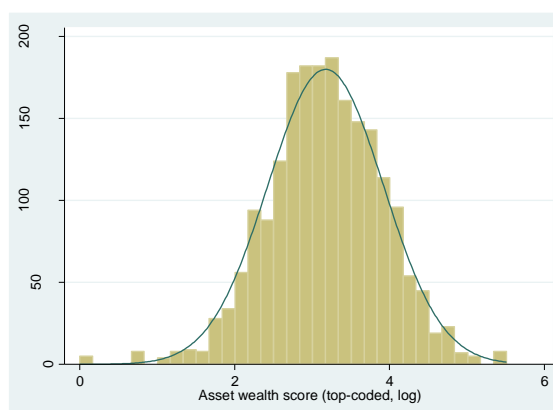
Variable	Obs	Mean	Std. Dev.	Min	Max
awscor_tc	2,018	30.3854	26.56299	0	246.9318

Variable	Obs	Mean	Std. Dev.	Min	Max
awscor_tcln	2,018	3.175444	.7473142	0	5.513154

Total household income

The CTALS asked about income from the three main livelihoods (those which provide
the most income) and separately about remittances, (informal) gifts and (formal)
transfers. Total household income in past 12 months is generated by summing estimated
income from these sources. Livelihood income estimates were obtained in three stages:
first asking what is the main, second and third livelihood type (in terms of contribution
to annual income), how many months a year income is received from that livelihood
type, and what is the average monthly income in the past year. Remittance and gift
income was obtain by asking the total value for the past year; likewise for transfer
income, but across a range of known government schemes with the option to include
other (unanticipated) transfers.

Missing values

Total household income has 7 missing values due to missing values in first livelihood
value (lh1val), third livelihood value (lh3val) and remittance (remit). These needed to
be imputed before generating total income. The general approach taken to imputing
missing values is to regress the annual value (no. of months * monthly income) for each
livelihood type that has missing values, against the maximum number of independent

variables that may plausible have some predictive power (i.e. the nature of the association is irrelevant).

Across the four livelihood sources (main, second, third and remittances), the livelihood types with missing values include remittances (3), private sector (1), agriculture (1) and paid domestic work (2). The missing cases all resulted from identification of extreme (high) values and are therefore known to be non-zero.

- As livelihood types are, in a few cases, repeated across main, second and third livelihoods and remittances, step 1 was to create a new variable for each of the livelihood types that sums any repeated instances. The income variables by type all have a distinct right skew so the log transformation is applied.

- Step 2 was to select and prepare the predictor variables. These include household roster, household size, number of bedrooms, log of asset wealth score, gift income, all expenditure items; and dummy variables for savings account status, formal loan status, informal loan status, education level of household head, caste, livelihood types 1-3.

- Step 3 was to run the regression, examine the model fit and identify any non-significant predictors. The regression was then run again excluding non-significant predictors. In all cases, there was a very marginal reduction in R^2 but the F statistic increased significantly (more or less doubled) suggesting an improved model fit.

- Step 4 was to check the correlation between the original and predicted values and to verify if the predicted values for missing cases are plausible. The lowest correlation was 0.58 for the untransformed agriculture variable, with other correlations between 0.65 and 0.74. The actual values seemed acceptable in all cases except for agriculture where the predicted value implied 16 months of income in 1 year at the reported monthly value. As such, the imputed value for this case was based on the reported monthly value times 12 months (75% of than the imputed value).

- Step 5 was to replace the missing values in the original variables for annual income value by livelihood contribution (main, second and third livelihood and remittances). It is possible that the values by livelihood type consisted of more than one reported livelihood (e.g. main and second livelihood could both be agriculture). However, none of the missing cases were of this nature. As annual income was generated from the number of months contribution times the monthly value, the

original missing data was also imputed by dividing the imputed annual value by the reported number of months or monthly income as appropriate.

A final step was required to make the order of the livelihood contributions consistent. The survey question was posed in a way to obtain the main contributing livelihood first (in terms of annual income value), followed by the second and third. However, the reported values did not always respect this order. In addition, remittance income was an option among livelihood types and was also asked separately for households that did not report remittance income as a livelihood. As such, the three main livelihood sources (their type, monthly contribution and annual value) and annual remittance income have been consolidated into four livelihood sources and reordered (where necessary) to ensure consistency in the order of overall income contribution.

Examining total household income

As mentioned above, total household income in the past 12 months is generated by summing estimated income from the main livelihood sources (including remittances), (informal) gifts and (formal) transfers.

```
            Total household income in last 12 months in NRs.
    _____

        Percentiles        Smallest
    1%       41000             9300
    5%       71000            13998
   10%       94470            14700      Obs              2,018
   25%      142000            16000      Sum of Wgt.      2,018

   50%      216000                       Mean           264917.7
                             Largest     Std. Dev.      205208.4
   75%      328500          1866000
   90%      466000          1866800      Variance       4.21e+10
   95%      607900          2313000      Skewness       4.067782
   99%     1032000          3324000      Kurtosis       39.44844
```

Total household income has a distinct right skew as expected but is less extreme than for asset wealth. Trimmed and windsorized versions have a less pronounced right skew; they do not drastically change the mean but have some effect on reducing the variance. The log transformation results in a normal distribution. In this case it may be appropriate to use the untransformed version of household income when used as a predictor, but log transformation will be necessary if used as an independent variable.

Untransformed
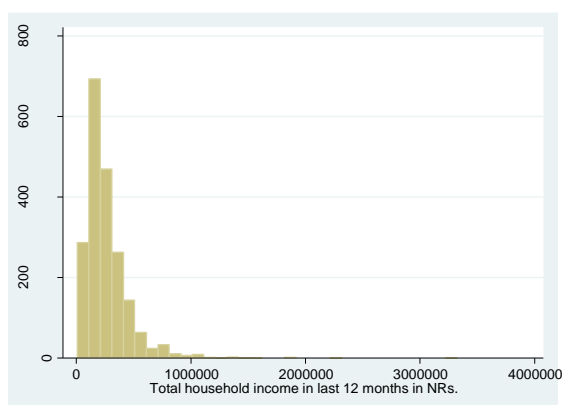
Trimmed
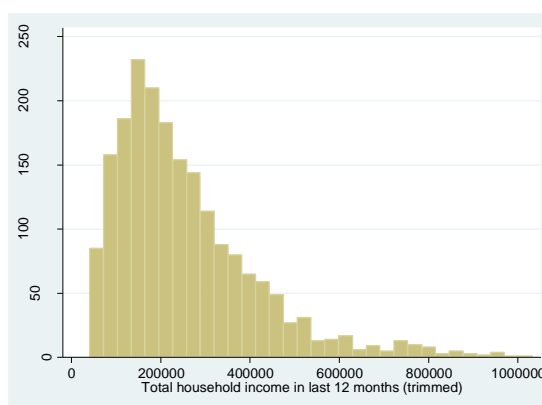
Windsorized

Log
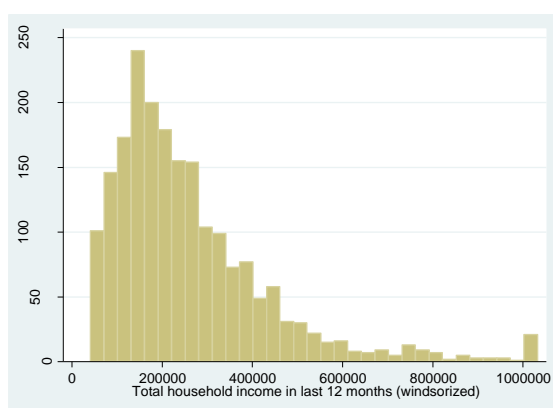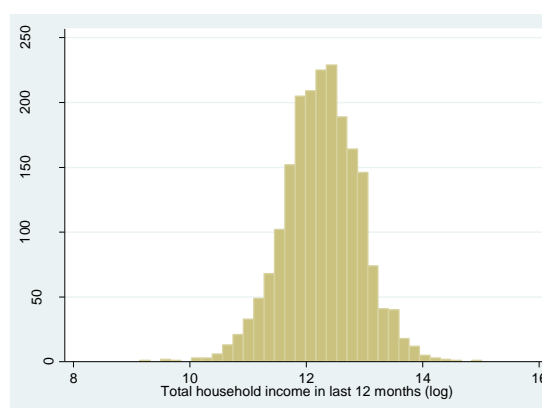
Variable	Obs	Mean	Std. Dev.	Min	Max
totinc	2,018	264917.7	205208.4	9300	3324000
totinc_trm	1,979	255340.6	159370.5	41000	1032000
totinc_win	2,018	261019.8	176888.4	41000	1032000
totinc_ln	2,018	12.27166	.6589924	9.13777	15.01668

(Partial) Household consumption/expenditure

Following Hagen-Zanker et al. (2015), rather than employ a full household consumption module, ten consumption items were selected from the NLSS III consumption module based on those that best predicted total household consumption using linear regression. Selected items include: oil/ghee, citrus fruit, meat/fish, newspapers/books, meals out, personal care, clothes, other people's marriages/births, and gifts. Average consumption was estimated for each item per month for the first 7 items and per year for the last 3 items.

Partial household consumption per year was generated by summing individual items and adjusting to the relevant time period where required. 50 missing values are generated. These will need to be imputed for individual items.

Missing values

The process for imputing values follows, more or less, that for household income. However, one major difference is that for four variables (citrus fruit, fish/meat, newspapers, meals out) it is not known whether missing values are zero or positive. In this case an initial step was taken whereby each consumption item with missing values was transformed into a binary variable and values were imputed using logistic regression. Missing values were then categorised as either zero (0) or positive (1). The remaining positive missing values were then imputed using the same approach as for household income.

All consumption items have a right skew and there are no extreme values. Missing values are found in citrus fruit (11), fish/meat (2), newspapers (28), meals out (3), clothes (1), other marriages (10), and gifts (2).

Examination of correlation coefficients between actual and predicted values shows that the predictions are relatively good with the possible exception of 'meals out' and 'gifts'. Specific predicted values for the missing cases are all plausible.

Variable	Correlation coefficient between actual and predicted values		
	Log transformation	Untransformed	Trimmed
Citrus fruit	0.57	0.21	0.61
Fish/meat	0.68	0.53	-
Newspaper	0.68	0.60	-
Meals out	0.51	0.39	0.39
Clothes	0.58	0.64	-
Marriages	0.51	0.34	0.41
Gifts	0.53	0.38	0.34

Examining partial household consumption

```
        Partial household consumption in past year in NRs.
                            (d31)
───────────────────────────────────────────────────────────
        Percentiles      Smallest
  1%        16550           9790
  5%        25500           9920
 10%        30280          10240      Obs              2,018
 25%        41440          12060      Sum of Wgt.      2,018

 50%        56550                     Mean          62343.91
                          Largest     Std. Dev.     30967.68
 75%        76000         233600
 90%       100980         241120      Variance       9.59e+08
 95%       118420         243400      Skewness       1.705805
 99%       172200         301400      Kurtosis       8.501631
```

Partial household consumption has a slight right skew, as expected, with no extreme values. The log transformation results in a normal distribution. It should be unnecessary to transform household consumption when used as a predictor but necessary to use the log transformation as an independent variable.
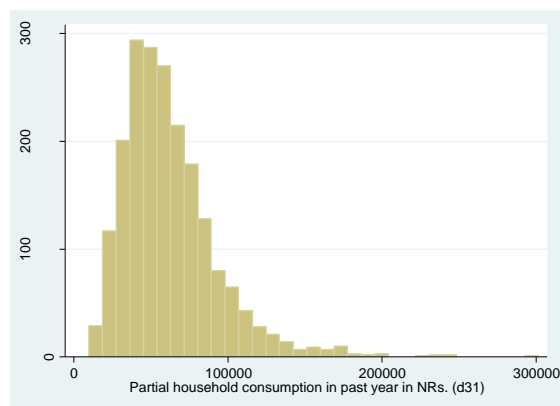
Untransformed   *Log*
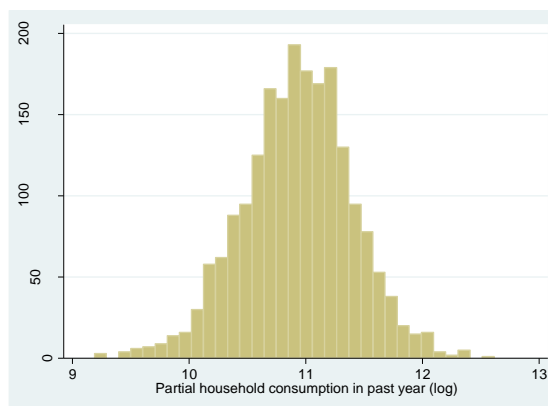
Variable	Obs	Mean	Std. Dev.	Min	Max
expyr_ln	2,018	10.92975	.4738476	9.189116	12.61619

Correlations between economic variables

Untransformed variables. The correlation coefficient for household consumption and income is 0.391. It is much higher for per capita consumption and income at 0.629. Correlations are very low with asset wealth in all configurations, likely due to three very extreme values in asset wealth score.

	expyr	totinc	awscor		pcexpyr	pcinc	pcawscor
expyr	1.0000			pcexpyr	1.0000		
totinc	0.3908	1.0000		pcinc	0.6291	1.0000	
awscor	0.0316	0.0099	1.0000	pcawscor	0.0348	0.0113	1.0000

Windsorized for asset wealth only. Using the windsorized version of asset wealth improves the correlation coefficient significantly for household consumption (0.393) and income (0.345) and for per capita consumption (0.528) and income (0.485).

	expyr	totinc	awscor~c		pcexpyr	pcinc	pcawsc~n
expyr	1.0000			pcexpyr	1.0000		
totinc	0.3908	1.0000		pcinc	0.6291	1.0000	
awscor_tc	0.3928	0.3453	1.0000	pcawscor_win	0.5279	0.4845	1.0000

All variables log transformed. Using the log transformation for all variables results in a stronger correlation for household consumption with both income and asset wealth; it remains similar for household income and asset wealth. All correlations are lower for the per capita measures.

	expyr_ln	totin~ln	awsc~cln		pcexpy~n	pcinc_ln	pcaws~ln
expyr_ln	1.0000			pcexpyr_ln	1.0000		
totinc_ln	0.4474	1.0000		pcinc_ln	0.5301	1.0000	
awscor_tcln	0.4451	0.3456	1.0000	pcawscor_t~n	0.4457	0.3975	1.0000

Appendix 5: In-depth Interview (IDI) Topic guides

Topic guide 1: OAA Recipient

Start with the OAA in general then focus on spending priorities and control; shift to role in adolescent's life, then link back to the OAA

<u>*Opening*</u>

What do you think about the OAA and why?

- How long, how often, how much do you receive?
- How well is it implemented? Why?
- How and how much does it affect your life? Why? Why not?

<u>*Use and control of OAA*</u>

In which ways do you spend the OAA and why?

- What are your spending priorities? Why?
- Do spending priorities change? When, how and why?
- If you didn't receive the OAA how would you meet these needs?

Who in the household has a say over how the OAA is used?

- How much control do they have? Why?
- Do spending priorities differ within the household? How and why? Is there disagreement?
- If you had full control how would you spend the OAA differently?
- Has receiving the OAA changed your status within the household? How?

<u>*Role in adolescent's life*</u>

Introduce timeline. Summarise and ask opinion about past and (potential) future events.

- Education level, type/amount of work, marriage timing, migration risks and opportunities

Do you have a say in important decisions about [NAME]'s life circumstances?

- How much, why, why not?
- Has this changed over recent years?
- Are there differences of opinion between household members?

Do you sometimes spend the OAA on [NAME] directly?

- In which ways? Why, why not?
- How significant is this contribution? Why?
- Does it give you more say over their lives? In which ways? Why, why not?

Does the OAA contribution to general household needs make a difference to [NAME]?

- How much / in which ways?

Topic guide 2: Parent / Guardian

Start with the adolescent's life, move to decision making and influencing factors, then focus on economic considerations and the role of the OAA.

Establishing adolescent's life-course

Introduce timeline. Summarise and ask opinion about past and (potential) future events.

- Education level, type/amount of work, marriage timing, migration risks and opportunities

Decision making about adolescent's life

Who makes most major decisions about [NAME]'s life? (Staying in/dropping out of school, getting married, migrating etc.)

- Focus first on the current situation or recent changes

- How much say do different household members have? Why?

- Were there differences of opinion between household members? Whose opinion prevailed? Why?

How was the decision made to change/stay with the current situation?

- What factors - economic, cultural, social, environmental - influenced the decision?

- What advantages and disadvantages were discussed?

- Was there one particular thing that led to the (timing of the) decision?

Would you do things differently if you could?

- How would you do things differently?

- What factors - economic, cultural, social, environmental - would need to be different?

Role of the OAA

How important were economic considerations in the decision(s)?

- If you had more or less income would you have made a difference decision?

- Why, why not?

Did the extra income from the OAA play any part in the decision?

- Why, why not?

- Was there any direct contribution to the costs? Was it significant?

- Did the OAA contribution to the household in general make any difference to [NAME]'s circumstance?

- If the OAA was not there what difference would it make, if any? Is use of the OAA contested within the household? In what circumstances?

Topic guide 3: Adolescent

Start with the adolescent's life, move to decision making and influencing factors, then focus on economic considerations and the role of the OAA.

Establishing adolescent's life-course

Introduce timeline. Summarise and ask opinion about past and (potential) future events.

- Education level, type/amount of work, marriage timing, migration risks and opportunities

Decision making about adolescent's life

Who makes most major decisions about your life? (Staying in/dropping out of school, getting married, migrating)?

- Focus first on the current situation and recent changes
- How much say do different household members – including you - have? Why?
- Were there differences of opinion between household members? Who "won"? Why?

How was the decision made to change/stay with the current situation?

- What factors (economic, cultural, social, environmental) influenced the decision?
- What advantages and disadvantages were discussed?
- Was there one particular thing that led to the (timing of the) decision?

How did you feel about the decision?

- Would you do things differently if you could? How
- What factors - economic, cultural, social, environmental - would need to be different?

Role of the OAA

Are you aware of the OAA? Can you explain what it is/how it works?

Do you think that the extra income from the OAA played any part in the decisions about your life?

- Why, why not?
- Was there any direct contribution to the costs? Was it significant?
- Does the OAA make any difference to your life in any other ways?
- Is use of the OAA income contested within the household? In what circumstances?

Appendix 6: In-depth Interview (IDI) Codebooks

Final codebook

OAA expenditure	**Any reference to expenditure of OAA income including decisions _not_ to spend OAA income. If the reference to OAA expenditure is also in direct reference to a change or decision in adolescent's life-course circumstance, then use the 'life-course circumstance' code instead. This will usually be in relation to education expenditure.**
Basic needs	OAA expenditure on basic needs for living including food, clothes, medicine etc.
Education	Expenditure of the OAA on any kind of education (school, madrassa, training etc.). Only use this tag if the reference to education expenditure is _not_ in direct reference to a change in the adolescent's education circumstance. Otherwise use the 'life-course circumstance' education code.
Investment	OAA expenditure for investment in a business, work, or domestic assets such as house building. Also include references to saving the OAA.
Wedding, / social	Use of the OAA towards weddings or other social activities. It could be gifts, dowry or any other related expenditure.
Unspecified / other	Any other kind of OAA expenditure that is not in the categories above including any reference to unspecified expenditure.
Adolescent life-course circumstance	**Any reference to the current, past of future circumstance of the adolescent. It does not have to be a change (starting or stopping an activity) but could be describing a current or on-going situation.**
Education	Education could be school (government or private), madrassa or training.
Work	Work could be domestic work (chores, care work), family business, farming, or paid work.
Marriage	Any reference to past or future marriage.
Life 'in general'	Any reference to the adolescent's life in general that is not specifically about education, work, or marriage.
Migration (Additional comment tag)	All the above (education, work, marriage) could also be related to migration. If so, add an additional comment tag saying 'migration'.
Decision making	**The following sub-categories are about the decision-making process related to OAA expenditure and / or adolescent life-course circumstances. They nearly always be combined with the higher categories for 'OAA expenditure' or 'Adolescent life -course circumstance'.**
Influencing factor	Reference to any factor that influences - enables or constrains - decisions about OAA expenditure or life-course circumstance.
Individual characteristic	Age, gender, health / disability status, relation within HH (e.g. youngest, in-law), personal interest/indifference (e.g. in education)
Social status	Caste, education level of adult household members
Household economy	Income (or lack of income), assets / land, type of livelihood

OAA policy / implementation	In the case of OAA expenditure, this could relate to the policy or implementation (e.g. frequency of transfers, amount received etc.); in the case of life-course decisions, this could also refer to expenditure of the OAA itself.
Community-level factor	The social or environmental context in the community, the lack of good schools, the floods or other climate issues
Default	This is for life-course decisions only - respondents often say they do something because that is just 'what they should do' (e.g. I'm not in school so therefore I do the chores). In some way it represents social expectations.
Agency	**Reference to an individual's agency / exercise of control (who makes the decision) over OAA expenditure or a life-course decision.**
Elder	Usually the OAA recipient or their husband / wife
Adolescent	The adolescent themselves
Parent	The parents or guardian of the adolescent
Joint	If the reference is clearly to a joint family decision or with general agreement of the household.
Other	Any other person who does not fit the categories above.
Trade-off	**Reference to an explicit trade-off between types of OAA expenditure or adolescent life-course decisions.**
Purpose	The trade-off may be between the purpose of the OAA expenditure (e.g. cannot invest because we spend on food) or the purpose of the life-course option (e.g. she cannot go to school because she must work)
Beneficiary	The trade-off may be between the person who benefits from OAA expenditure (e.g. spend on grandson rather than granddaughter) or the person who is prioritised for a life-course option (e.g. we can only send one to school so we send the grandson not the granddaughter).
Other categories	
OAA and economic strategies	**This sub-category includes any reference to household strategies for economic security and how these relate to the OAA.**
Pools income	A reference to the household pooling or sharing income especially the OAA (e.g. the OAA helps manage the household, if we didn't have it we would use other income).
Doesn't pool income	A reference to the household not pooling or sharing their income. (e.g. I only use the OAA for myself, my son doesn't help me).
Asset protection	A reference to the OAA helping to protect assets, e.g. preventing the sale of grain or livestock (e.g. if I didn't have the OAA we would still manage, but I would have to sell the cow).
Loan access	A reference to the OAA facilitating access to a loan (e.g. we took a loan to pay for food and we'll pay it back when the OAA comes).
Work effort	A reference to the OAA reducing the amount of work the elder (recipient) has to do. It may be in the form of a counter-factual (a 'what-if') e.g., if I didn't receive the OAA I would have to go out and sell milk.

OAA policy / implementation	**Sometimes the respondent may talk about problems with the OAA but not in relation to expenditure or life-course circumstance. In this case, use the following codes.** If the reference is in relation to expenditure or life-course circumstance, use the 'influencing factor – OAA policy/implementation' code (e.g. we cannot use the OAA for her education because we don't know when it will come next)
Frequency	A reference to the frequency (or infrequency / delays) of the payments
Amount	A reference to the amount received.
Corruption	A reference to corruption by local officials.
Lack of knowledge	A reference to the respondent's lack of knowledge about the OAA.

Initial codebook

Label	Definition	Description	Possible sub-categories
Adolescent outcomes			
Education strategic	Reference to a strategic change in education circumstance of adolescent	Can be a positive or negative experience and include dropping out, changing institution or a deliberate decision to continue the current path; may be in the past few years or refer to a planned change	Positive, negative Drop-out, continuous, change Occurred, planned
Education time-use	Reference to the time adolescent spends doing homework / study	Can be a positive or negative experience; represent a continuous state or a change; refer to a trade-off with work or other activities	Positive, negative Continuous, change
Work strategic	Reference to a strategic change in work circumstance of the adolescent	Can be a positive or negative experience; and include continuing, starting or ending economic or domestic work; may be in the past few years or refer to a planned change	Positive, negative Paid economic, home economic, domestic chore, care work Occurred, planned
Work time-use	Reference to the time adolescent spends working	Can be a positive or negative experience; represent a continuous state or a change; may refer to a trade-off with other activities; may be in the past few years or refer to a planned change	Positive, negative Continuous, change
Migration strategic	Reference to a decision for adolescent to migrate	Can be a positive or negative experience; a temporary or permanent move; may be for education, work or other reasons; may be in the past	Positive, negative Temporary, permanent Education, work, other

		few years or refer to a planned change	Occurred, planned
Marriage strategic	Reference to a decision for adolescent to marry	Can be a positive or negative experience; may be in the past few years or refer to a planned change	Positive, negative Occurred, planned
Influencing factors			
Influence cultural	Reference to a social or cultural factor that influenced a strategic or short-term decision about adolescent's life	Can be a weak, moderate or strong influence and relate to age preference, safety / protection, school drop-out.	Weak, moderate, strong
Influence environmental	Reference to a environmental factor that influenced a strategic or short-term decision about adolescent's life	Can be a weak, moderate or strong influence and relate to change in circumstance driven by climate, natural disaster etc.	
Influence economic	Reference to a cultural factor that influenced a strategic or short-term decision about adolescent's life	Can be a weak, moderate or strong influence and relate to chronic poverty, loss of income, new livelihood or income source etc.	
Influence OAA	Reference to the OAA as an influence (or not) on strategic or short-term decision about adolescent's life	Can be a direct or indirect influence; may be prompted or unprompted; if no influence may be due to inadequacy or unreliability	Direct, indirect Prompted, unprompted Inadequate, unreliable
Decision making			
Decision parental	Reference to parental involvement in a strategic or short-term decision about adolescent's life	May be none, partial or total decision making power	None, partial, total
Decision OAA recipient	Reference to the OAA recipient's involvement in a strategic or short-term decision about adolescent's life	May be none, partial or total decision making power	
Decision adolescent	Reference to the adolescent's involvement in a strategic or short-term decision about adolescent's life	May be none, partial or total decision making power	
Decision other	Reference to another person's involvement in a strategic or short-term decision about adolescent's life	May be none, partial or total decision making power	
OAA experience and spending			

OAA adequacy	Reference to the (in)adequacy of the OAA benefit amount		
OAA reliability	Reference to the (un)reliability of the OAA		
OAA control uncontested	Reference to control of the OAA being uncontested within the household		
OAA control contested	Reference to control of the OAA being contested within the household		
OAA spending self	Reference to spending of the OAA on the recipients' own needs		
OAA spending adolescent	Reference to spending of the OAA on the adolescents needs		
OAA spending household	Reference to spending of the OAA on the households needs		

Appendix 7: LSE Research Ethics Review Form

This form should be completed for every research project that involves human participants or the use of information relating to directly identifiable individuals.

PART I – CHECKLIST
The Checklist is designed to identify the nature of any ethical issues raised by the research.
This checklist must be completed before potential participants are approached to take part in any research.

1. Name of Researcher: Nicholas Mathers

Status *(mark with an 'X' as appropriate)*	Undergraduate student		Masters student	
	Research degree student	X	Staff	
Email	n.j.mathers@lse.ac.uk	Telephone number	+977 9808797580	
Department	Social Policy			

2. Student Details if applicable

Degree programme:	MPhil/PhD Social Policy		
Supervisor's name:	Kitty Stewart Ernestina Coast	Supervisor's email:	k.j.stewart@lse.ac.uk e.coast@lse.ac.uk
Supervisor's department:	Social Policy		

3. Title of the proposal and brief abstract

Poverty, cash transfers and adolescents' lives: exploring the unintended consequences of Nepal's social pension. The research aims to understand the extent to which a non-conditional state cash transfer, in the form of Nepal's social pension, affects the status and quality of adolescent life-course circumstances and how and why these changes occur. The case study will be conducted in one District of the Central *Terai* region of Nepal and will take a mixed-methods approach involving primary research for both quantitative and qualitative components. Specifically, data collection will involve (i) a survey of 1200 multi-generational households where adolescents (10-17 years) and older people (65-75 years) cohabit and (ii) 42 in-depth interviews with parents and adolescents from households selected from the survey.

4. Funding

Is it proposed that the research will be funded? Yes If so by whom? UNICEF Nepal

	Please mark an X in the appropriate right-hand column/box	Yes	No	Not certain
5. Research that *may* need to be reviewed by an external Ethics Committee				
i	Will the study require Health Research Authority approval? *(See Note 1)*		X	
ii	Does the study involve participants lacking capacity to give informed consent? *(See Note 2)*	X		

iii	Is there any other reason why the study may need to be reviewed by another external Ethics Committee?			X
	If you have answered Yes to any of the questions in section 5, go to Part II, C (there is no need to complete the rest of the Checklist)			

PART II: Self certification and/or next steps

A If, after careful consideration, you have answered **No** to all the questions (whether you are a member of the academic staff or a student), you do not need to complete the questionnaire in Part III, unless you are subject to some external requirement that requires you to seek formal approval from the School's Research Ethics Committee. You should tick Box **A** in the **Self-Certification Section** below, sign as appropriate and submit the form to your Head of Department, Research Centre Director, or their administrations as appropriate. Occasional audits of such forms may be undertaken by the School.

B If you have answered **Yes** or **Not certain** to any of the questions in sections 6-13 of the checklist you will need to consider more fully how you plan to deal with the ethical issues raised by your research. Answering the relevant questions in the Questionnaire in Part III below may assist you. Alternatively, your own department or institute may have alternative forms or procedures to assist you. If having done so you are wholly assured that adequate safeguards in relation to the ethical issues raised can and will be put in place, you may tick **Box B** in the Self-certification Section below, sign as appropriate and submit the form to your Head of Department, Research Centre Director, or their administrations as appropriate. Occasional audits of such forms may be undertaken by the School.

C If you have answered Yes in section 5 that your research will be subject to an external ethics committee, please tick **Box C** below and send the completed Checklist (questions 1-5) to research.ethics@lse.ac.uk. You should submit your research for ethics approval to the appropriate body. Once approval is granted please send a copy of the letter of approval to research.ethics@lse.ac.uk.

Students who self-certify their research proposals should do so in consultation with their supervisors.

If you are unable to self-certify your proposed research you should in any event complete the questionnaire in Part III below and complete the **Refer to Research Ethics Committee Section** at the end of the form.

SELF-CERTIFICATION

Select A, B or C (delete as appropriate):

I have read and understood the LSE Research Ethics Policy and the questions contained in the Checklist above and confirm:

C that the research will be subject to an external ethics review

Please sign the relevant section below

Undergraduate/Taught Postgraduate Student/PhD Student	

Summary of any ethical issues identified and safeguards to be taken (expand box as necessary):

1. Survey and IDI participants will include children under the age of 18, specifically those aged between 10 and 17 years. Informed consent will be gained from the young person and their parent/guardian and additional safeguarding protocols will be followed including; (i) references taken for all interviewers; (ii) training of interviewers on research ethics and good practice for interviewing children; (iii) ensuring no contact between interviewer and interviewee in concealed/private location.

2. It may be difficult to ensure informed consent is given freely where there is significant power imbalance between interviewers and participants due to the caste system in Nepal and the real and perceived wealth/power of the Candidate. The Candidate will discuss the importance of this issue with the survey team and RAs during training and ensure that everything is done to follow protocols for gaining informed consent including reading of statements about the research, notification of rights not to participate and to decline to answer particular questions, and anonymity and confidentiality.

3. While none of the topics are considered by the Candidate to be personally sensitive enough to cause distress or harm to the participant, the research aims to identify (i) girls who have married under the legal age of 18 years, and (ii) boys and girls who are potentially engaged in illegal types of employment (involving long hours or hazardous occupations). This will require participants to report illegal activity. All protocols related to informed consent will be applied throughout the research process and participants will be clearly informed about their right to terminate the interview or decline to answer any of the questions.

I hereby confirm that I have undertaken training in research ethics in the course of my studies and/or that I have consulted and been advised by my supervisor or other expert with regard the ethical implications of my proposed research.

Student's signature:	*N Mathu*	Date:	22/04/15
Supervisor's signature:	*Katy Stut* *E. E. Coat*	Date:	22/04/15 22/04/15

By signing here the supervisor confirms that the student has been advised in relation to any ethical issues raised by her/his research; these have to the best of the supervisor's understanding been adequately addressed in the research design; and the student has been made aware of her/his responsibilities for the ethical conduct of her/his research.

Part III – QUESTIONNAIRE

The questionnaire enables you to explain how the ethical issues relating to your research will be addressed. If you are intending to submit your proposal to the Research Ethics Committee it needs to be completed in full.

1. Research aims

Poverty, cash transfers and adolescents' lives: exploring the unintended consequences of Nepal's social pension. The research aims to understand the extent to which a non-conditional state cash transfer, in the form of Nepal's social pension, affects the status and

quality of adolescent life-course circumstances and how and why these changes occur. The research asks three specific questions:

- What are the spending patterns of pension income, who controls spending decisions, and how do these vary?
- What are the effects of pension income on adolescents' schooling, work, marriage timing and migration and how does this vary?
- How is pension income factored in to household decision making about adolescents' life-course options and time use allocation?

The case study will be conducted in rural areas of one district of the Central *Terai* region of Nepal and will take a mixed-methods approach involving primary research for both quantitative and qualitative components. Specifically, data collection will involve (i) a survey of 1200 multi-generational households where adolescents (10-17 years) and older people (65-74 years) cohabit and (ii) 46 in-depth interviews (IDI) with parents and adolescents from 32 households selected form the survey.

Survey interviews will ask questions about pension income, control and spending patterns; individual household member socioeconomic characteristics; livelihoods, expenditure, transfer income and debt; adolescents education, work, migration and marital status and daily time-use allocation. IDIs will enquire about spending patterns, control of income and intra-household decision-making processes about use of income, adolescent life-course options and time-use allocation.

All interviews (survey and IDI) will be conducted with adults and children aged 10-17 years at the homes of the research participants. The household survey will be conducted by eight Nepali enumerators and one co-supervisor who will be employed by the Candidate. The IDIs will be conducted by two Nepali Research Assistants who will be employed by the Candidate. The Candidate will provide training to the data collection team and provide daily supervision throughout the data collection process including attending every interview that takes place (briefly for survey, in full for IDIs).

2. Informed consent	
i	Will potential participants be asked to give informed consent in writing and will they be asked to confirm that they have received and read the information about the study? If not, why not? *Please attach a draft information sheet and/or consent form if this has been prepared*
	Informed consent will be requested by the interviewer by reading out a written statement and marking the participants response on the questionnaire (See Appendix A and C of the full proposal, attached). Verbal consent is standard practice for other household surveys in developing countries (including MICS and DHS) where illiteracy rates are high. In addition to participant consent, parental/guardian consent will be obtained for all interviews with anyone aged under 18. At the time of the survey all participants will be asked if they are willing to participate in the IDIs.
ii	How has the study been discussed or are there plans to discuss the study with those likely to be involved, including potential participants or those who may represent their views?
	The study has been discussed with representatives of UNICEF Nepal who have some claim on representation of the interests of potential participants. There are plans to formally present the study to organisations that work with the communities from which the participants will be drawn. These organisations include UNICEF NEPAL (presentation date, 28/04/15), Ministry of Local Governance, and the local level government administrative offices (VDCs). All survey participants will be asked at the time of the survey if they are willing to participate in the IDIs.
iii	Has information (written and oral) about the study been prepared in an appropriate form and language for potential participants? At what point in the study will this information be offered? (see Annex A of the research ethics policy for links to guidance on informed consent).

	Information about the study will be given to all potential survey and IDI participants on first contact and prior to commencing the interview (See Appendix A and C of the full proposal, attached). Information has only been prepared in English at this stage but will be translated in to Nepali and other relevant local languages depending on which district is chosen.
iv	How will potential participants be informed of whether there will be adverse consequences of a decision not to participate? Or of a decision to withdraw during the course of the study?
	There will be no adverse consequences of not participating. Participants will be informed as part of the informed consent stated under questions i and iii above.
v	What provision has been made to respond to queries and problems raised by participants during the course of the study?
	Between each survey module and topic guide section, participants will be asked if they have any questions and if they are happy to continue. At the end of the interview participants will be provided contact details of the Candidate, the Nepali co-supervisor and a contact at the local government office in case of any later queries or concerns.

3. Research design and methodology

i	Where relevant, how does the research methodology justify the use of deception?
	N/a
ii	If the proposed research involves the deception of persons in vulnerable groups, can the information sought be obtained by other means?
	N/a
iii	How will data be collected and analysed during the project?
	Data will be collected through face to face interviews as part of a household survey and IDIs. Survey data will be analysed using statistical software (STATA) and qualitative interviews will be analysed using NVIVO.
iv	How have the ethical and legal dimensions of the process of collecting, analyzing and storing the data been addressed?
	Responses to household survey interviews will be noted on the pre-prepared survey questionnaire. IDI's will be recorded as a written transcript and as digital audio files. Questionnaires, transcripts and audio files will be anonymised through a unique ID and stored securely by the Candidate. Access will be limited to specific personnel (Co-Supervisor, Data Entry Officers, RAs) and at specific limited times only. Data will be entered in to electronic software (SAS, NVIVO) by the Data Entry Officers and the Candidate. All electronic copies of the data (one original, two back-up) will be stored securely (password protected) and accessible only to the Candidate.
v	What concerns have been taken into account with regard to the preparation and design of the research project? If agencies, communities or individuals are to be directly affected by the research (e.g. participants, service users, vulnerable communities or relations), what means have you devised to ensure that any harm or distress is minimized and/or that the research is sensitive to the particular needs and perspectives of those so affected?
	None beyond those stated above.
vi	Have you been able to devise a timetable of research?
	Yes

4. Ethical questions arising from the provision of incentives

i	Are any incentives being offered to participants?
	No

5. Research participants

i	Who do you identify as the participants in the project? Are other people who are not participants likely to be directly impacted by the project?
	The full survey population includes adolescents aged 10-17 years who were living in the same household two years prior to the survey as at least one older person aged 65 to 74 years, their parent(s) and any pension recipients in the household, in one district of the Central *Terai* region of Nepal. No non-participants are expected to be directly impacted by the project.
ii	What are the specific risks to research participants or third parties?
	• Informed consent may not be provided freely due to power imbalance between researcher/interviewers and research participants, particularly in the context of the Caste system. • The research will ask participants questions about illegal activities including child marriage (below the age of 18) and child and hazardous labour (involving excessive hours relative to age, and harmful occupations). While these activities are illegal in Nepali law, they are still commonly practiced and questions about these activities form a part of the government and UN-led national household surveys including DHS, MICS, LMSS and LFS. It is not anticipated that these questions will cause undue stress or harm.
iii	If the research involves pain, stress, physical or emotional risk, please detail the steps taken to minimize such effects.
	N/a

6. Confidentiality

i	What arrangements have been made to preserve confidentiality for the participants or those potentially affected, and compliance with data protection law?
	See 3.iv above

7. Dissemination

i	Will the results of the study be offered to those participants or other affected parties who wish to receive them? If so, what steps have been taken to minimize any discomfort or misrepresentation that may result at the dissemination stage.
	A written summary of the findings in Nepali will be provided to each of the VDC offices where the data collection takes place. Research participants will be informed at the time of the interview that this information will be available after a certain date.

8. Risk to researchers

i	Are there any risks to researchers? If so, please provide details.
	Minor risks related to road travel to the research site. Risk mitigation has been covered in the Field Work Risk Assessment form and will include use of reputable transport hire, seatbelts, and emergency contact procedures. Also, field work will take place during the dry season when road conditions are safest.

REFER TO RESEARCH ETHICS COMMITTEE

Approval is required by the Research Ethics Committee on one or more of the following grounds (please mark with an 'X' in the appropriate place in the right-hand column):	
a.	Significant ethical issues are raised by the research, including research characterised by one or more of the following features: (i) Research involving deception of participants, or which is conducted without their full and informed consent at the time the study is carried out or when the data is gathered, or which involves the use of confidential information.	

	(ii) Research involving more than minimal risk of harm to participants, such as:	
	o research involving vulnerable groups………………………………………………………………	…X
	o research involving personally intrusive or ethically sensitive topics……………………………	…X
	o research involving groups where permission of a gatekeeper is normally required for initial access to members……………………………………………………………………..	…X
	o research which would induce unacceptable psychological stress, anxiety or humiliation or cause more than minimal pain	
b.	The researcher wants to seek the advice of the Research Ethics Committee	
c.	External obligations (for instance, funder requirements, data access requirements) require it	X
d.	Research undertaken by a student or member of staff who has not received appropriate training or has insufficient experience in research ethics and has been unable to access appropriate advice or support.	

Appendix 8: LSE Research Ethics Committee Approval

LSE THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE ■

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United Kingdom

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www.lse.ac.uk

Research Division

Nick Mathers
Department of Social Policy

26th May 2015

Dear Nick

Re: Poverty, cash transfers and adolescents' lives: exploring the unintended consequences of Nepal's social pension

I am writing with reference to the above research proposal. The Research Ethics Committee, having considered the documentation sent, is satisfied that the ethical issues raised by the proposed research have been properly taken into account and that adequate safeguards have been put in place. I am accordingly able on behalf of the Committee to confirm our approval of the application.

I would like to take this opportunity to wish you well with your research project.
If you have any further queries, please feel free to contact Lyn Grove, Research Division.

Yours sincerely

Professor Hartley Dean
Chair of the Research Ethics Committee

cc.   Lyn Grove, Research Division

Appendix 9: Letter of introduction and support from Nepal Department of Civil Registration

नेपाल सरकार
सङ्घीय मामिला तथा स्थानीय विकास मन्त्रालय
केन्द्रीय पञ्जीकरण विभाग
बबरमहल, काठमाडौं

फोन नं- ०१४२३३८७९

पत्र संख्या: ०७३/०७४
च. नं.: ९९२४

मितिः २०७४।०३।२०

विषयः आवश्यक समन्वय सम्बन्धमा ।

जिल्ला समन्वय समितिको कार्यालय

गौर, रौतहट ।

प्रस्तुत विषयमा यस विभागमा London School of Economics and Political Science (LSE) मा शोध कार्य गरिराख्नुभएका श्री निकोलस माथर्स (Mr. Nicholas Mathers) ले दिनुभएको निवेदन अनुसार निजले रौतहट जिल्ला अन्तर्गतका ग्रामीण क्षेत्रका गाउपालिकाहरु अन्तर्गतका करिब १,५०० वटा घरपरिवारहरुमा समाजिक सुरक्षा कार्यक्रम अन्तर्गतको "वृद्ध भत्ताले परिवारको सामाजिक- आर्थिक अवस्थामा पारेको प्रभव" का सम्बन्धमा शोधकार्य गर्न घरपरिवार सर्भेक्षण गर्नु पर्ने भएकोले तथ्यांक संकलन कार्यमा खटिने निज लगायत १२ जनाको सर्भेक्षण टोलिलाई सम्बन्धित गाउपालिका अन्तर्गत तथ्यांक संकलन गर्ने कार्यमा आवश्यक सहयोग र समन्वयको लागि पत्राचार गरिदिनुहुन आदेशानुसार अनुरोध छ ।

संजय बहादुर राजलवट
शाखा अधिकृत

Appendix 10: Additional data tables

Table 9a Descriptive statistics for adolescents in OAA eligible and non-eligible households, without widows and single women (WSW)

	Elders within +/- 5 years of OAA eligibility (1)		Elder within -5 years of OAA eligibility (2)		Elder within +5 years of OAA eligibility (3)		Difference in means ((3) – (2)) (4)	
	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean diff.	S.E.
Adolescents, 10-17 years								
n	*2424*		*1190*		*1234*		*2424*	
Age	13.127	0.047	13.109	0.068	13.145	0.064	0.036	0.093
Female	0.495	0.010	0.502	0.015	0.489	0.014	-0.013	0.020
Attends mainstream school	0.567	0.010	0.525	0.014	0.607	0.014	***0.082	0.020
Public school	0.391	0.010	0.340	0.014	0.439	0.014	***0.099	0.020
Private school	0.176	0.008	0.185	0.011	0.168	0.011	-0.017	0.015
Migrated for education	0.081	0.006	0.069	0.007	0.092	0.008	**0.023	0.011
Attends religious school	0.078	0.005	0.085	0.008	0.071	0.007	-0.014	0.011
n	*2091*		*1048*		*1043*			
Domestic work (last week)	0.832	0.008	0.823	0.012	0.840	0.011	0.016	0.016
Unpaid economic work (last year)	0.701	0.010	0.709	0.014	0.692	0.014	-0.017	0.020
Paid work (last year)	0.100	0.007	0.110	0.010	0.091	0.009	-0.019	0.013
n	*2424*		*1190*		*1234*		*2424*	
Migrated for work	0.029	0.003	0.024	0.004	0.033	0.005	0.009	0.007
Married	0.073	0.005	0.074	0.008	0.073	0.007	-0.001	0.011
Migrated for marriage	0.016	0.003	0.013	0.003	0.019	0.004	0.007	0.005
Girls, 10-17 years								
n	*1200*		*597*		*603*		*1200*	
Age	13.126	0.065	13.144	0.094	13.108	0.090	-0.036	0.130
Attends mainstream school	0.530	0.014	0.477	0.020	0.582	0.020	***0.105	0.029
Public school	0.418	0.014	0.372	0.020	0.464	0.020	***0.092	0.028

Continued

Table 9a continued

	(1)		(2)		(3)		(4)	
Private school	0.112	0.009	0.106	0.013	0.118	0.013	0.012	0.018
Migrated for education	0.052	0.006	0.047	0.009	0.056	0.009	0.009	0.013
Attends religious school	0.078	0.008	0.084	0.011	0.073	0.011	-0.011	0.016
n	1084		546		538		1084	
Domestic work (last week)	0.921	0.008	0.923	0.011	0.918	0.012	-0.005	0.016
Unpaid economic work (last year)	0.755	0.013	0.755	0.018	0.755	0.019	0.000	0.026
Paid work (last year)	0.084	0.008	0.097	0.013	0.071	0.011	-0.026	0.017
n	1200		597		603		1200	
Migrated for work	-	-	-	-	-	-	-	
Married	0.113	0.009	0.111	0.013	0.114	0.013	0.004	0.018
Migrated for marriage	0.032	0.005	0.025	0.006	0.038	0.008	0.013	0.010
Boys, 10-17 years								
n	1224		593		631		1224	
Age	13.129	0.067	13.074	0.097	13.181	0.092	0.106	0.134
Attends mainstream school	0.603	0.014	0.573	0.020	0.631	0.019	**0.057	0.028
Public school	0.364	0.014	0.309	0.019	0.415	0.020	***0.107	0.027
Private school	0.239	0.012	0.265	0.018	0.216	0.016	**-0.049	0.024
Migrated for education	0.109	0.009	0.091	0.012	0.127	0.013	**0.036	0.018
Attends religious school	0.078	0.008	0.086	0.012	0.070	0.010	-0.016	0.015
n	1007		502		505		1007	
Domestic work (last week)	0.736	0.014	0.715	0.020	0.756	0.019	0.041	0.028
Unpaid economic work (last year)	0.643	0.015	0.659	0.021	0.626	0.022	-0.034	0.030
Paid work (last year)	0.118	0.010	0.124	0.015	0.113	0.014	-0.011	0.020
n	1224		593		631		1224	
Migrated for work	0.057	0.007	0.049	0.009	0.057	0.007	0.016	0.013
Married	0.035	0.005	0.037	0.008	0.033	0.007	-0.004	0.011
Migrated for marriage	-	-	-	-	-	-	-	-

Data source: CTALS 2017. Robust standard errors are used in columns (1), (2) and (3), clustered at the level of household. Column (4) indicates the statistical significance of a two-tailed t-test where * = 90%, ** = 95%, *** = 99%.

Table 11a Descriptive statistics and regression results for sample verification and balance with full sample[†]

	Descriptive statistics (1)		OAA eligible in HH (OE) (2)		OAA eligible is female (OEF) (3)		OAA eligible female and male (OEFM) (4)	
	Mean	S.E.	β_1	S.E.	β_2	S.E.	β_3	S.E.
Elder receives OAA income	0.349	0.012	***0.570	0.028	**0.094	0.039	***0.238	0.056
Household attributes								
Household size[††]	9.899	0.152	-0.549	0.419	0.623	0.553	-1.081	0.976
No. of adolescent girls	1.104	0.027	0.014	0.086	-0.023	0.120	-0.138	0.167
No. of adolescent boys	1.129	0.032	0.053	0.080	-0.115	0.128	0.084	0.170
Household head has education	0.215	0.011	**-0.069	0.031	***0.121	0.046	-0.089	0.062
Ethnicity and caste								
Brahmin / Chhetri	0.041	0.005	-0.013	0.013	0.005	0.021	-0.024	0.026
Dalit	0.125	0.008	***0.328	0.012	***-0.066	0.015	***0.124	0.024
Muslim	0.376	0.012	***-0.174	0.035	0.053	0.050	**-0.200	0.071
Terai/Madhesi	0.441	0.013	***-0.144	0.035	0.014	0.051	0.108	0.071
Janajati / other	0.017	0.003	0.003	0.009	-0.006	0.013	-0.008	0.014
Location								
VDC								
Akolawa	0.110	0.008	-0.030	0.024	0.022	0.036	**-0.095	0.046
Bairiya	0.061	0.007	-0.013	0.020	-0.030	0.027	**-0.064	0.032
Basatpur	0.042	0.005	0.007	0.015	-0.021	0.021	0.024	0.032
Brahmapuri	0.065	0.006	***0.047	0.017	-0.017	0.023	0.031	0.033
Fatuha Maheshpur	0.056	0.006	-0.001	0.019	0.019	0.028	-0.043	0.033
Jhunkhunwa	0.097	0.007	**0.057	0.023	0.001	0.031	0.012	0.046

Continued

Table 11a continued

Laxmipur Belbichwa	0.057	0.006	0.019	0.017	-0.003	0.027	0.056	0.043
Mudwalawa	0.068	0.006	0.003	0.018	0.014	0.026	-0.008	0.034
Pipra Bagwanpur	0.077	0.007	-0.029	0.021	-0.001	0.027	0.034	0.042
Rajdevi	0.074	0.006	0.015	0.019	**0.045	0.023	-0.007	0.037
Rajpur Farhadwa	0.148	0.009	***-0.085	0.027	0.049	0.039	-0.031	0.064
Rajpur Tusli	0.066	0.006	-0.001	0.019	-0.025	0.026	0.031	0.033
Saruatha	0.078	0.006	0.011	0.020	**-0.053	0.027	0.058	0.042
Adolescent attributes								
Age	13.131	0.035	**0.240	0.107	-0.124	0.145	0.272	0.217
Female	0.491	0.008	-0.003	0.025	-0.003	0.034	-0.013	0.051

Data source: CTALS 2017. [†] Including households with widows and single women, n=3437. Robust standard errors are used throughout, clustered at the level of household. Statistical significance is indicated by * = 90%, ** = 95%, *** = 99%. All regressions include a third order polynomial of the age of the oldest elder within bandwidth age; and dummy variables for the presence of an elder male and an elder female and male in the household and the presence of an elder above bandwidth age. [††]Household size includes both current household members and recent out-migrants.

Table 12a Results from equation (3) indicating the effects of a difference in timing of receipt of the OAA on adolescent life-course circumstances with full sample[†]

	Elder male (EM) (1)		Elder female and male (EFM) (2)		OAA eligible male (OE) (3)		OAA eligible female (OE+OEF) (4)		OAA eligible couple (OE+OEF+OEFM) (5)		Adj. R^2
	α_1	S.E.	α_2	S.E.	β_1	S.E.	$\beta_1+\beta_2$	S.E.	$\beta_1+\beta_2+\beta_3$	S.E.	
Adolescents, 10-17 years											
Attends mainstream school	-0.012	0.026	0.004	0.032	0.024	0.031	0.019	0.029	0.027	0.050	0.378
Public school	-0.025	0.027	**-0.070	0.034	**0.088	0.035	0.021	0.032	0.083	0.057	0.209
Private school	0.013	0.024	**0.075	0.031	**-0.064	0.026	-0.002	0.027	-0.057	0.047	0.121
Migrated for education	0.014	0.018	**0.067	0.027	0.010	0.021	0.025	0.022	**-0.070	0.030	0.030
Attends religious school	0.024	0.015	**0.045	0.022	-0.018	0.019	*0.029	0.017	-0.020	0.030	0.152
Domestic work (last week)	-0.023	0.024	-0.037	0.029	0.023	0.027	0.005	0.027	0.038	0.041	0.029
Unpaid economic work (last year)	0.019	0.030	0.003	0.040	-0.014	0.035	-0.009	0.036	-0.015	0.062	0.055
Paid work (last year)	0.025	0.018	0.021	0.023	**-0.044	0.022	-0.025	0.020	-0.037	0.036	0.078
Migrated for work	0.001	0.008	-0.008	0.011	0.006	0.011	0.009	0.010	-0.003	0.015	0.058
Married	0.008	0.012	0.008	0.015	*0.024	0.014	**0.030	0.015	0.027	0.025	0.163
Migrated for marriage	-0.004	0.006	-0.006	0.007	**0.016	0.007	0.009	0.007	*0.025	0.014	0.064
Girls, 10-17 years											
Attends mainstream school	-0.024	0.035	0.014	0.044	**0.081	0.041	0.030	0.039	0.079	0.065	0.393
Public school	-0.050	0.035	-0.053	0.046	**0.100	0.045	0.012	0.041	**0.147	0.075	0.247
Private school	0.026	0.026	*0.067	0.036	-0.019	0.029	0.018	0.029	-0.069	0.045	0.105
Migrated for education	0.023	0.019	**0.071	0.030	-0.001	0.023	0.027	0.024	**-0.069	0.031	0.046
Attends religious school	0.026	0.020	0.045	0.030	-0.029	0.027	0.030	0.023	-0.015	0.041	0.158
Domestic work (last week)	-0.014	0.021	-0.033	0.027	-0.003	0.027	0.003	0.027	0.000	0.044	0.016
Unpaid economic work (last year)	0.026	0.039	0.019	0.049	-0.010	0.045	0.007	0.047	-0.018	0.073	0.058

Continued

Table 12a continued

Paid work (last year)	0.027	0.024	0.007	0.027	**-0.074	0.030	-0.039	0.027	-0.047	0.047	0.060
Migrated for work	-	-	-	-	-	-	-	-	-	-	-
Married	-0.006	0.021	-0.022	0.024	0.038	0.024	0.029	0.024	0.036	0.041	0.255
Migrated for marriage	-0.009	0.012	-0.014	0.013	**0.035	0.014	0.015	0.014	*0.045	0.026	0.145
Boys, 10-17 years											
Attends mainstream school	0.003	0.031	-0.001	0.041	-0.035	0.040	0.005	0.037	-0.020	0.068	0.373
Public school	-0.005	0.034	**-0.104	0.042	*0.078	0.044	0.026	0.043	0.038	0.070	0.186
Private school	0.008	0.035	*0.102	0.043	***-0.113	0.039	-0.021	0.041	-0.058	0.072	0.152
Migrated for education	0.007	0.028	0.067	0.038	0.022	0.031	0.024	0.031	-0.070	0.046	0.024
Attends religious school	0.022	0.019	*0.048	0.027	-0.006	0.022	0.029	0.020	-0.036	0.036	0.152
Domestic work (last week)	-0.040	0.039	-0.062	0.051	0.049	0.044	0.000	0.045	0.088	0.067	0.055
Unpaid economic work (last year)	0.009	0.041	-0.043	0.056	-0.026	0.051	-0.040	0.050	-0.007	0.084	0.056
Paid work (last year)	0.025	0.025	0.044	0.035	-0.018	0.032	-0.007	0.030	-0.035	0.051	0.109
Migrated for work	0.001	0.015	-0.005	0.021	0.015	0.021	0.022	0.020	0.006	0.029	0.105
Married	0.017	0.011	0.025	0.016	0.012	0.014	**0.028	0.014	0.010	0.021	0.094
Migrated for marriage	-	-	-	-	-	-	-	-	-	-	-

Data source: CTALS 2017 [†]Full sample including households with widows and single women, n=3437 for all adolescents, n=1689 for girls and n=1748 for boys; for work participation variables, n=2975, 1531 and 1748, respectively. Robust standard errors are used throughout, clustered at the level of household. Statistical significance is indicated by * = 90%, ** = 95%, *** = 99%. All regressions include a third order polynomial of the age of the oldest elder and of the adolescent; and dummy variables for the presence of an elder above bandwidth age, education of household head, ethnicity/caste group, and VDC.

Table 18a Results from equation (3) indicating the effects of a difference in timing of receipt of the OAA on household income, expenditure and loans with full sample[†]

	Elder male (EM) (1)		Elder female and male (EFM) (2)		OAA eligible male (OE) (3)		OAA eligible female (OE+OEF) (4)		OAA eligible couple (OE+OEF+OEFM) (5)		Adj. R2
	α_1	S.E.	α_2	S.E.	β_1	S.E.	$\beta_1+\beta_2$	S.E.	$\beta_1+\beta_2+\beta_3$	S.E.	
All adolescents, 10-17 years											
Household income (log)	0.037	0.050	**0.122	0.062	*0.109	0.056	**0.139	0.060	*0.174	0.096	0.113
Household expenditure [partial] (log)	**0.083	0.038	**0.103	0.046	0.015	0.043	0.046	0.048	0.002	0.064	0.097
Adolescent education expenditure (log)	0.128	0.259	0.370	0.341	-0.188	0.315	0.377	0.313	0.025	0.512	0.233
Recent loan value (log)[††]	1.371	0.984	1.475	1.217	-1.491	1.128	1.468	1.170	-0.256	1.831	0.010
Girls, 10-17 years											
Household income (log)	0.071	0.058	**0.180	0.073	*0.125	0.069	**0.161	0.070	0.138	0.111	0.132
Household expenditure [partial] (log)	**0.100	0.043	***0.160	0.053	0.030	0.050	0.036	0.053	-0.038	0.076	0.115
Adolescent education expenditure (log)	0.185	0.347	0.691	0.447	-0.219	0.410	0.157	0.411	0.393	0.618	0.238
Recent loan value (log)[††]	-0.247	1.136	0.291	1.425	-1.043	1.359	1.308	1.349	-0.938	2.183	0.013
Boys, 10-17 years											
Household income (log)	0.012	0.060	0.071	0.076	0.090	0.066	0.117	0.072	*0.203	0.120	0.095
Household expenditure [partial] (log)	0.070	0.047	0.043	0.057	-0.001	0.052	0.051	0.059	0.034	0.080	0.086
Adolescent education expenditure (log)	0.084	0.321	0.103	0.452	-0.158	0.397	0.554	0.388	-0.444	0.746	0.237
Recent loan value (log)[††]	**2.962	1.204	*2.556	1.484	-1.699	1.353	1.834	1.415	0.768	2.231	0.011

Data source: CTALS 2017 [†]Full sample including households with widows and single women, n=3437 for all adolescents, n=1689 for girls and n=1748 for boys. Robust standard errors are used throughout, clustered at the level of household. Statistical significance is indicated by * = 90%, ** = 95%, *** = 99%. All regressions include a third order polynomial of the age of the oldest elder and of the adolescent; and dummy variables for the presence of an elder above bandwidth age, education of household head, caste group, and VDC. [††]The Tobit model is used to account for the large number of households with zero values; coefficients represent change in the latent variable; the pseudo R^2 is given.