

The London School of Economics and Political Science

Why do Aid Information Management Systems Fail?

**Understanding Global Diffusion of Data-Driven Development Initiatives
and Sustainability Failure in the Case of Indonesia**



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Declaration

I certify that the thesis I have presented for examination for the MPhil/PhD degree of the London School of Economics and Political Science is solely my own work other than where I have clearly indicated that it is the work of others (in which case the extent of any work carried out jointly by me and any other person is clearly identified in it).

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Abstract

Aid information management systems (AIMS) have been implemented in aid-receiving countries with the hope that they will enable donors and recipient governments to share aid information, enhance data governance and aid coordination among stakeholders. Despite the global popularity of data-driven development initiatives and heavy investment in AIMS, many systems have not fulfilled the expected outcomes. This research seeks to explain this failure from an information systems perspective.

Building on a historical overview of AIMS implementation, I first develop an understanding of how such systems evolved and how the visions of aid effectiveness norms that AIMS inscribed have changed over time alongside the shifting global aid governance. This overview clearly shows that, in many cases, AIMS did not attain the result anticipated, and often failed to reach sustainability.

I then investigate this sustainability failure, through an interpretive case study of Indonesian AIMS. I trace the change of international and domestic aid governance that shaped the unique context of AIMS in the emerging economy. Investigating the role of state actor, I argue that understanding the failure of AIMS requires a shift of attention from the process of aid management within a country to the global level. It needs to be seen as a result of macro-level events occurring in the global field of aid. In the dynamics of global power relations, the role of technology is multifaceted—a mixture of managerial and rationalizing, as well as symbolic and political roles.

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List of Abbreviations in English

A4DES	Aid for Development Effectiveness Secretariat
AAA	Accra Agenda for Action
ADB	Asian Development Bank
AIMS	Aid Information Management System
AMP	Aid Management Platform
ASEAN	Association of Southeast Asian Nations
CIS	Commonwealth of Independent States
CGI	Consultative Group on Indonesia
CSOs	Civil Society Organizations
CRS	Creditor Reporting System
DAC	Development Assistance Committee
DAD	Development Assistance Database
GDP	Gross Domestic Product
GIS	Geographic Information System
GIZ	German Corporation for International Cooperation
GOI	Government of Indonesia
GTZ	German Technical Cooperation Agency
HLF	High Level Forum (on Aid Effectiveness)
IATI	International Aid Transparency Initiative
ICT	Information and Communication Technologies
IGGI	Intergovernmental Group on Indonesia
IMF	International Monetary Fund
IR	International Relations
IS	Information System
IT	Information Technology
LICs	Low-Income Countries
MDGs	Millennium Development Goals
MDTF	Multi-Donor Trust Fund
MICs	Middle-Income Countries
MOF	Ministry of Finance
MOFA	Ministry of Foreign Affairs
NGOs	Non-Governmental Organizations
NPM	New Public Management
ODA	Official Development Assistance
OECD	Organization for Economic and Co-operation and Development
PD	Paris Declaration on Aid Effectiveness
PD Survey	Survey on Monitoring the Paris Declaration on Aid Effectiveness
RAND	Recovery Aceh-Nias Database
SDGs	Sustainable Development Goals
SSC	South-South Cooperation
SSTC	South-South and Triangular Cooperation
UN	United Nations
UNDP	United Nations Development Programme
URL	Universal Resource Locator
USD	United States Dollar

List of Abbreviations in Indonesian

Bappenas	Badan Perencanaan Pembangunan Nasional	National Development Planning Agency
BPS	Badan Pusat Statistik	National Statistics Agency
BRR Aceh-Nias	Badan Rehabilitasi dan Rekonstruksi Aceh dan Nias	Rehabilitation and Reconstruction Agency for Aceh and Nias
Musrenbang	Musyawah Perencanaan Pembangunan	Development Planning Summit
PP	Peraturan Pemerintah	Government Regulation
RPJM	Rencana Pembangunan Jangka Menengah	Medium-term Development Plan
RPJMN	Rencana Pembangunan Jangka Menengah Nasional	National Medium-term Development Plan
RPJP	Rencana Pembangunan Jangka Panjang	Long-term Development Plan
RPJPN	Rencana Pembangunan Jangka Panjang Nasional	National Long-term Development Plan
SBY	Susilo Bambang Yudhoyono	Acronym for President Yudhoyono
Setneg	Sekretariat Negara	State Secretariat
UKP4	Unit Kerja Presiden Bidang Pengawasan dan Pengendalian Pembangunan	Presidential Delivery Unit for Development Monitoring and Oversight under the second term of SBY presidency
UU	Undang-Undang	Law

Chapter 1. Introduction

1.1. Research Area and Objective of Research

This research investigates the role of information systems in recipient countries. The question of *aid effectiveness* has been raised in the international aid arena and has generated intense academic debate over the past decades (Moyo 2008; Easterly 2006; Sachs 2005; Burnside & Dollar 2004). A lack of transparency and aid coordination among stakeholders has been widely discussed as the main impediment to aid effectiveness. The story of a girl who had received the measles vaccination three times by different donor organizations after the Tsunami in Indonesia, is a clear example of aid management failure (El Pais, 2005)¹. The general consensus arising from the debate is that sharing basic aid information on ‘who is doing what and where’ is a prerequisite for better effectiveness.

Based on the plethora of research and international calls for effective aid, the donor countries of the Organization for Economic Co-operation and Development (OECD) built significant momentum and reached a major milestone – the *Paris Declaration on Aid Effectiveness* (PD) in 2005 (OECD 2005). This has been the most authoritative principle and practical road-map for improving aid quality, imposing commitments to share aid information on stakeholders and spreading aid effectiveness norms in the global field of aid.

Against this background, a number of information and communication technology (ICT) applications, commonly referred to by the generic term of aid information management systems (AIMS), have been implemented in many aid-receiving countries with the hopes of bringing donors and recipient governments together in order to open and share geo-coded aid data, and to enhance the process of information rationalization for better aid. Over the last two decades, the use of

¹ El Pais, Demasiado Dinero en Banda Aceh, April 13, 2005. quoted in Djankov, Montalvo, and Reynal-Querol (2009) "Aid with multiple personalities", *Journal of Comparative Economics* 37(2), 217-229.

information systems in aid management has been informed by the idea that new technologies (computerization, web-based, open data) not only contribute to managerial effectiveness, but also change the nature of aid governance towards *open development* (Smith & Reilly 2014). Despite the global popularity of AIMS and the rapid diffusion with considerable investment accelerated by the Paris Declaration, the vision and rhetoric inscribed by AIMS have not been translated into reality in many cases.

In spite of the abundance of ‘good practice’ studies mainly published by multinational development agencies (MDAs), little critical research has been conducted on the role of information systems in aid management. Within existing research, many studies adopt a managerial and technically rational perspective to offer normative suggestions to finding an optimal process of AIMS implementation in developing countries. This instrumental view has often been favoured by powerful donors and MDAs, who play an important role as *norm entrepreneurs*. However, information systems scholars have criticized a-contextual and universalistic views of ICT in developing countries, as well as their prioritization of developers (innovators) over adopters (imitators) in general. Addressing this gap in the literature, this study conceptualizes AIMS as a socio-technical system embedded in the global field of aid, and seeks to provide an institutional account of their diffusion and failure.

1.2. Motivation and Problem Area

Before introducing my research project, I will briefly explain my motivation for this study and elaborate on the knowledge that I would like to contribute to the broader debate. The original insight for the research question was conceived during my previous work as a computer teacher at Arusha Technical College in Tanzania from 2004 to 2007. Working closely with the local people, I realized that the most significant problem of development projects is the lack of transparency and coordination. I often observed duplicate projects being carried out by a number of donors in the small town where I lived.

I conveyed these concerns to the Innovation Labs at the World Bank, where I was involved in the ‘Open Aid Partnership’. This initiative shares aid data with other donors under a common mapping platform based on the Bank’s open data initiative, visualizing all the Bank-financed projects. The opportunity to be involved in the Partnership, as well as to work closely with local government officials gave me a unique vantage point to witness the global popularity of ICT initiatives in the hope of improving aid transparency, coordination and citizens’ participation in the development process: the idea commonly referred to as *open development* (Smith & Reilly 2014; Linders 2013).

However, it was not long until I realized that what was carried out in the field was far from what was originally expected. Information sharing based on open data initiatives became a norm that recipient governments were forced to follow. Similar to when the ‘good governance’ agenda was added to aid conditionality for developing countries in the 1990s (Santiso 2001; Nanda 2006), the new norm of data-driven development initiative put big burdens on the recipient government to report information by deadlines, and to match aid data with the donors’ data set despite the country’s limited statistical and financial capacity. More importantly, donors were not very active in sharing their aid data in many cases. This greatly undermined the sustainability of systems, which could potentially result in inefficient aid targeting and a lack of coordination.

Furthermore, the evaluation of donor-driven ICT initiatives from different stakeholders yielded contradictory results. Around 2012, the Kenya Open Data Initiative, in which I was involved, had been considered a successful model by the World Bank (World Bank 2012; World Bank 2014b). However, what I witnessed from the field was very different. In spite of the excitement when the ribbon was cut at the luxurious launching ceremony in Nairobi in 2011, it quickly lost its position as a symbolic leader in ICT innovation (Brown 2013; Oriko 2013). The Electronic Project Monitoring Information Systems (eProMIS), the AIMS implemented in Kenya, initially designed to be compatible with the Kenya Open Data Portal, had not been updated in many months. This enabled me to observe

different interpretations constructed by each stakeholder, and to question the hidden dynamics surrounding technology-based development projects embedded in complex donor-recipient relationships. The assumptions and technological feature of most other AIMS were similar to the one employed in Kenya. Thus, I became worried that these initiatives might follow suit and fade away, as yet another fad.

This was a *déjà vu* – a flashback to my days in East Africa. There were several ‘pump’ projects with considerable investment across the continent. One of the most popular donor-driven projects was ‘Play Pump’, in which children could play ‘merry-go-round’ and simultaneously have water pumped. The idea was simple, intuitive, and thus powerful. Many people were easily excited by the idea and acquiesced. People believed that implementation of this simple logic could be a cure-all for multiple problems—a lack of clean water (sanitation), a lack of electricity to run an electric pump (sustainability), women working hard to get water (gender equality), and girls not being able to attend schools because they help their mothers (education).

In spite of the promises, most pumps became problematic and the excitement faded over time. I revisited the region after four years. The pumps were replaced by yet another fancier technology, the ‘solar-thermodynamic pump² with solar panels across East African countries. I observed how the same patterns repeatedly emerged overtime: excitement over new technologies with universal ideas in development, explosive initial attention, and huge investments followed by quick diffusion across different contexts and states. Something would go wrong, create a negative cycle, and fail. However, there was no reflection either. The problems witnessed above are neither purely technological nor solely politico-economic. It is against this background that I decided to focus my thesis on the role information systems in the aid sector and to prevent yet another *déjà-vu* experience from occurring.

² <http://www.worldbank.org/en/topic/water/brief/solar-pumping>

1.3. Research Project

1.3.1. Theoretical Concepts

My study broadly addresses the research area of ICT and development (ICTD), a multidisciplinary field that integrates information systems (IS), development studies, and other relevant fields (Walsham & Sahay 2006; Avgerou 2010; Heeks 2006). More narrowly, this thesis investigates the role of AIMS in recipient countries. The study at hand conceptualizes AIMS as a socio-technical system, in which diverse stakeholders' interests and different interpretation of technology inevitably collide. Building on a practical definition by multilateral development agencies (MDAs) (UNDP 2010; OECD & UNDP 2006), for the purpose of this study I define AIMS as:

A national-level, single-window information system implemented in a given recipient country, to assist the government to manage aid effectively and bring development partners to share aid information and better coordinate.

The three main theoretical concepts developed in this thesis are *development*, *aid*, and *technology*, which I identify as being closely linked to each other. Highlighting the plurality of competing concepts of development, as well as the political nature of foreign aid, this study sheds light on the insufficient attention paid to the macro dynamics of aid in ICTD research. Special attention is paid to global aid governance, particularly the Paris Declaration on Aid Effectiveness (PD) signed in 2005, as an account of locally situated meanings and behaviours of information systems in the aid sector would only be partially-explained without investigating the influence of the global aid structure. While most of the previous empirical research has been conducted on IS adoption in the public sector of a single state, commonly referred to as e-government, there have been insufficient discussions on the role of IS in the context of international aid.

To address these gaps, this study “adopt[s] a transdisciplinary perspective, seeing their contribution as potentially important but respecting and engaging with the

perspectives from other disciplinary fields” (Walsham 2017). The conceptual framework is informed by two broad theories: *a theory of institutions*, and *a theory of technology*. Reflecting on the intellectual interplay between *sociological institutionalism* and *international relations (IR)*, I employ the constructivist IR view of *norm dynamics* as the conceptual framework for this thesis. Three analytical foci are elaborated upon: *field* (global field of aid), *norms* (aid effectiveness) and the role of *state* (recipient country) to understand the apparent *sustainability failure* of information systems (Richard Heeks 2002a). Building on this basis, my thesis aims at extending the use of socio-technical theories towards understanding information systems (IS) to the global aid sector, while simultaneously investigating IS failure in developing countries.

In this thesis, I narrowly focus on the sustainability failure of IS and conceptualize it as:

A permanent shutdown of IS, which were once implemented, used, but abandoned after a relatively short period (such as three years after the launch), without any transformation, considerable left-over innovation or thoughtful reflection, e.g. evaluation study, report for future innovation.

Existing research often conceptualizes IS failure in developing countries as a micro-situated struggle, thereby paying insufficient attention to the role of global aid institutions. This study argues that understanding the sustainability failure of IS in developing countries requires a shift in focus from the project’s local context, to the overarching macro-level dynamic in the global field of aid. The role of technology in the power dynamics of global aid relations is identified as being multi-faceted: a mixture of functional and managerial, as well as political and symbolic dimensions. Thus, the thesis contributes to the broader understanding of technology as offering socially constructed meanings and reality.

I identify two specific contexts related to this study: firstly, the context of recipient countries in which the use of information systems are socially embedded (Avgerou 2001); secondly, the context of global aid, where stakeholders’ vision and politico-economic interests unavoidably coincide beyond the state level. This study argues

that any explanation of locally situated actions and interpretations of AIMS in recipient countries would be insufficient without taking the macro level power dynamics in the global field of aid into consideration. Elaborating on the institutional change in aid governance at both the local and global level, the thesis highlights the role of the state as an agency in the changing landscape of global aid.

A summary of the key objects of study that I bring together in the research questions is presented in Table 1-1.

Object of study	Analytical focus	Theoretical link
Information systems	<i>Role:</i> What are the roles of IS in aid sector?	Socio-technical perspective: social shaping of technology (MacKenzie & Wajcman 1999), embeddedness
	<i>Failure:</i> How can sustainability failure of IS be defined?	Sustainability failure (R Heeks 2002), social shaping of IS failure (Wilson & Howcroft 2002)
Norm	<i>Norm dynamics:</i> How have norms emerged and been institutionalized in the global field?	Sociological institutionalism: institutional isomorphism (DiMaggio & Powell 1983), norm dynamics (Finnemore & Sikkink 1998)
State	<i>State's action:</i> What is the role of the states in resisting, localizing global norms; in implementing, using and abandoning IS?	IR Constructivist view: norm localization and subsidiarity (Acharya 2004; Acharya 2011)

Table 1-1. Objects of Study

1.3.2. Research Questions

My doctoral research was conducted to answer the following two key questions, which are theoretically informed by theories of institutions and theories of technology:

- *how the global diffusion of aid information management systems (AIMS) can be understood?*

- *why do AIMS often fail in sustainability?*

As summarized in Table 1-1, the following sub-questions arise:

- How has a particular norm (*aid effectiveness*), envisioned by a particular theoretical assumption (*rational-choice*) emerged, reached a tipping point (*Paris Declaration on Aid Effectiveness in 2005*) and become institutionalized in the global field (*field of aid*)?
- In this process, whose norms matter? Who has the power to drive the norms (*norm entrepreneurs*) and rules (*global aid principles*)?
- How has a particular technology (AIMS) been promoted and diffused to reproduce a set of norms, rules and symbolic meanings?
- In this process, what roles can the state (*recipient country*) play in norm resistance, localization, and subsidiarity?
- How is technology resisted, implemented, used, and abandoned by the state actors?
- In this process, how do we understand the multifaceted roles of technology?
- What implications and empirical transferability can be drawn from the case of Indonesia.

1.3.3. Research Design

In developing a research design with which to answer these questions, I have chosen a two-stage methodology to answer each question at hand. Developing methodological rigour has been an iterative process, involving continuous revisiting of the theories and data collected.

A Study of the Global Diffusion of AIMS

The first stage investigates the global adoption of AIMS over the last two decades (Section 4.3). Understanding how AIMS is adopted and locally enacted in developing countries would not be possible without taking into account the origin of AIMS, and global influences surrounding it. Thus, the thesis first seeks to understand the global diffusion of AIMS. Building on a historical overview of AIMS, it explores how norms of aid effectiveness and AIMS emerge and evolve in the global field of aid.

Following the category of the *List of the OECD Official Development Assistance (ODA) Recipient* (OECD, 2016), this study identified 80 AIMS cases implemented in 71 developing countries over the last two decades. Tracing the history of aid effectiveness norms and the global adoption of AIMS, the analysis offers an understanding of the evolution and the main rhetoric inscribed in AIMS, and how it has changed over time. The findings highlight the complexity of problems surrounding AIMS, and particularly show that in many cases, AIMS have not achieved the result expected, have often failed to reach sustainability and have consequently shut down (36 cases, 45%). This leads to the second key question: *Why do AIMS fail in sustainability in recipient countries?*

Introducing the Case Study

In the second stage, I conducted an interpretive single case study to answer the arising question. This thesis adopts an interpretive case study of an AIMS in Indonesia – the national-level aid management system, which was implemented in 2010, used, and finally abandoned in 2013. It was financially supported by the German Technical Cooperation Agency (GTZ) and managed by the Indonesian Ministry of National Development Planning (Bappenas). The Indonesian AIMS was implemented under the tenure of President Susilo Bambang Yudhoyono (SBY)'s administration (2004-2014), when domestic aid governance experienced a series of changes under the focus on 'ownership', (i.e. 2006 *Government Regulation*

No.2/2006 on the Procedures for Receiving and Forwarding Foreign Loans/Grant (PP No. 2/2006) and the dissolution in 2007 of the Consultative Group of Indonesia (CGI) in 2007, which had served as the donor coordination committee for 16 years). However, the government initiated the localization of the global norm of aid effectiveness by adopting the Jakarta Commitment in 2009. Under this Commitment, the AIMS was implemented as a tool for aid management and better coordination.

Highlighting the significance of the political and historical dimension of foreign aid that has influenced the transformation of national development policy, the case study investigates the sustainability failure of the AIMS involving multiple stakeholders at local and macro level, and their relationships in the broad global field of aid. By tracing the global aid institutions and the power dynamics of AIMS, this thesis identifies that unlike other recipient countries, Indonesia, as a state actor, has actively shaped its strategic position in the field of aid while being influenced by global aid governance, as well as effectively justifies the implementation and abandonment of the AIMS.

There are three reasons that ensure the empirical significance of the study of AIMS in Indonesia. First, while many ‘good practice’ studies by MDAs exist, there are very few in-depth studies of information systems in aid management from a socio-technical perspective. In particular, sufficient attention must be paid to the role of the state in adopting, localizing and abandoning information systems. Second, emerging economies have increasingly played an important role in the global field of aid, particularly since the 2007 financial crisis (Addison et al. 2004; Manning 2006). Indonesia has been the most important actor in the Non-Aligned Movement and has expanded its role in South-South Cooperation. Investigating the case of Indonesia thereby gives meaningful insights into understanding the role of the state as an emerging economy in the global power dynamics of aid. Third, Indonesia has implemented an AIMS twice in the recent past: the Recovery Aceh Nias Database (RAND) in 2005 for Tsunami recovery, and the Aid Information Management Systems (AIMS) in 2010, the latter being the technological object of my case study.

This setting also provides the opportunity to investigate how legacy technology influences the shaping process of the latter.

The analytical focus is three-fold. First, I have identified the major lacuna of ‘missing aid’ in ICTD research in Chapter 2 and 3. Thus, reflecting the importance of the political nature of aid, the analytical focus is on the global-level dynamics. Second, reflecting the lack of understanding on the role of the state in information systems failure, specific attention is paid to the role of the state as an agency and the historical context of embedded information systems in Chapter 7 and 8. Third, from the socio-technical perspective, I focus on the role of technology in the process of AIMS implementation and abandonment.

1.4. Thesis Outline

The thesis is organized into ten chapters: Introduction, Literature Review, Theoretical Framework, Methodology, two empirical chapters (Chapter 5 and 7 for the first main research question), Analysis (Chapter 6 and 8 for the second main research question), Discussion, and Conclusion, with several sub-chapters in each chapter.

In this **Chapter 1**, I present the motivation that inspired my work, and highlight the problem area that I have identified. Also the chapter provides a brief introduction to research questions, theoretical framework, and research design.

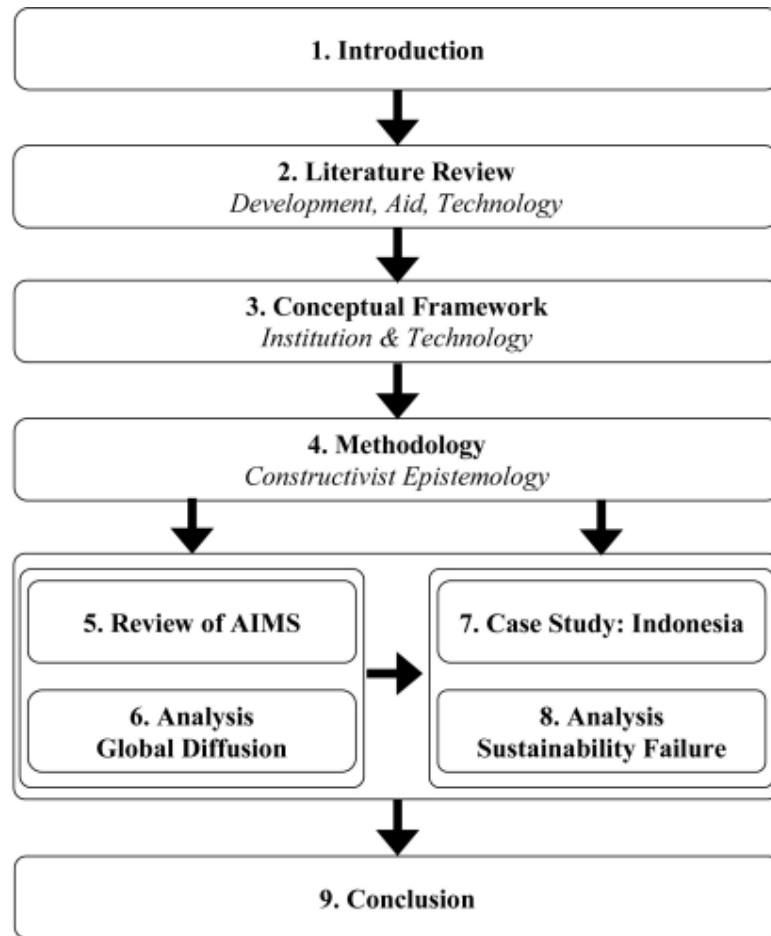


Figure 1-1. Thesis Outline

Chapter 2 positions my study in the research domain of ICTD and provides the literature review, which will constitute the theoretical background for the research inquiry. Three main concepts - development, aid and technology, as well as their theoretical linkages, are discussed. The first section briefly outlines some of the key theoretical underpinnings of the ICTD research, linking these to existing critiques of development and discussing the role of technology in development. The second part starts by introducing three major views of aid in International Relations (IR) and highlighting the constructivist approach which frames the study. Building on the review of the aid effectiveness debate, it identifies the new institutional economics approach on aid coordination as a dominant extant theory. The third section develops a focused literature review on the role of information and ICT in aid sector that can be found in ICTD research, and reviews the theoretical perspectives and underlying assumptions. Through this literature review, a research

gap is identified. The chapter concludes with a critique of insufficient attention paid to the global dynamic of aid in ICTD research, as well as the dominant technical-rational approach embedded in the development idea and international aid arena.

Chapter 3 presents the conceptual framework used in this thesis, which is informed by a theory of institutions on adopting technology in developing countries, and a theory of technology on its role in aid management in the broad context of global aid governance. The chapter first develops an extension of the concept of organizational field to the global-level. Identifying the theoretical connection between sociological institutionalism and the IR constructivist view, it highlights the significant focus on ‘norm dynamics’, and how norms diffuse and influence the behaviour of states, between norm localization and subsidiarity. The theory of technology grounded in Science and Technology Studies (STS) and Information Systems (IS), aims at deepening the understanding of the role of technology in the institutional account. Theorizing AIMS as socio-technical systems embedded in the global field of aid, where various actors’ vision and politico-economic interests inevitably collide, conceptual attention is paid to the role of technology as a theatrical construction in which interests act symbolically, thereby constructing political meaning. Combining the theoretical discussions in two domains, the chapter revisits the broad problem area of the study discussed in the previous chapter, and converts it into two main research questions.

Chapter 4 elaborates the research design in this thesis and the methodology utilized in the studies. It begins with a discussion on the constructivist epistemology which is embodied in the structure of my research, and explores the interpretivism in information systems research, applied at the level of research methods. Methodological underpinnings are described in two steps: firstly, the explanatory study of the AIMS implementations by recipient governments, second, an interpretive single case study of Indonesia’s AIMS. In both sections, the methods of data collection and analysis, as well as their limitations are discussed. Based on an interpretivist approach, combined with a constructivist epistemology, the iterative process of the research through the entire period of study is explained.

Chapter 5 presents a summary of the findings on the implementations of AIMS over the last two decades, empirically showing their global diffusion. In preparation for the analysis in the chapters that follow, it provides a snapshot of the proliferation of AIMS across a range of recipient countries with varying economic, regional, and political contexts. The countries are categorized according to their i) economic status, ii) region, and iii) chronology. Based on the findings, the high degree of similarity among AIMS is investigated, and the commonalities discussed in relation to i) rationale and norms; ii) functionalities, and iii) target users. The findings indicate that the shared visions and norms inscribed in AIMS often result in a homogeneity in the design, technological functionality and target users across the systems. The findings also reveal the existence of two dominant service providers, and their possible influence on the homogeneity of systems and the competition in implementation is discussed.

Chapter 6 situates AIMS in the global field of aid and analyses the findings with reference to the question of their diffusion. Grounded in the institutional account of their widespread adoption, this chapter highlights the complexity and failure of many AIMS to achieve sustainability by exploring 80 cases of AIMS implementation in 71 developing countries. Using Finnemore and Sikkink's (1998) 'norm dynamic' framework, the emergence and institutionalisation of aid effectiveness norms are traced and analysed, with a discussion on the process through which AIMS were globally diffused, and norms, rules, and institutional structures of the global aid governance were reproduced. Framed by the concept of institutional isomorphism, the emerging global aid governance architecture and resultant changes in the inscribed vision of AIMS are examined in three stages of technological advancement: PC-based, web-based, and open data based. Also, a standardized implementation process, which most cases of AIMS followed, is identified. Undoubtedly, AIMS achieved global popularity and significant investments were made, however, the research demonstrates that in many instances the expected level of use and aid management, were not achieved. Based on the findings, 36 cases (46%) failed to achieve sustainability and subsequently ceased to

operate. Expanding the concept of ‘sustainability failure’ (Heeks & Kenny, 2002), attention is drawn to the need for an in-depth interpretive single case study.

In Chapter 7, the Indonesian case study is presented, and the geopolitical and economic context reviewed with specific focus on the significance of historical and political nature of foreign aid, which has been instrumental in transforming national development policy. Having provided a historical narrative of foreign aid in Indonesia, as well as an overview of Indonesia’s aid management mechanism, particularly during the tenure of President SBY (2004-2014), this chapter focuses on the technological object of empirical field work. The interpretive single case study centres on the Aid Information Management System in Indonesia – its national-level aid management system, which was implemented in 2010, used, and later abandoned in 2013. The chronological narrative of the implementation is constructed based on data collection and a general process of AIMS implementation discussed in the previous chapter.

Chapter 8 presents the data analysis of the case study. This chapter, also based on the previous three chapters, further integrates the framing of analysis and discusses it to answer the research questions. By tracing the global norm dynamics of aid effectiveness and the process of AIMS implementation, AIMS are conceptualised as a norm-supporting device. I argue that both the adoption and abandonment of AIMS can be justified by tracing the norms and power dynamics of global aid and by the ways in which Indonesia as a state, not only as a norm taker but also as an agency, strategically seeks legitimacy in this institutional change. In the dynamics of global power relations, the role of technology is multifaceted – a mixture of managerial and rationalizing, as well as symbolic and political roles. The main conclusion drawn from this analysis is that the failure of AIMS to achieve sustainability in Indonesia must be understood from a macro-level perspective with a clear appreciation of the dynamics of institutional changes in the global field of aid and the state’s strategic responses.

Chapter 9 is the concluding chapter. The chapter presents further discussion from the review of AIMS and the case study. It discusses the implications of the findings and analysis, as well as the empirical transferability that can be drawn from the case of Indonesia. It emphasizes that examining the failure of information systems requires a shift of attention from a micro-situated standpoint to the global level, as well as what roles an emerging power can play in internalizing, resisting and co-shaping norms and the aid agenda which future ICT innovations unfold. This also contributes to an extension of the existing concept of sustainability failure in the field of information systems. This chapter presents contributions that relate to ICTD research, methodology and policy, limitations incurred as well as suggestions for further study.

Chapter 2. Research Domain and Critical Literature Review

My research lies in the field of information and communication technology (ICT) and development (ICTD), a multidisciplinary area that integrates Information Systems (IS), Communication Studies and Development Studies (Avgerou 2008; Walsham & Sahay 2006; Heeks 2006; Walsham 2017). My thesis broadly addresses the role of ICT in foreign aid³ and aims to provide an understanding of the IS failure in the global field of aid. This chapter reviews the literature that has informed my thesis. The three main concepts developed in this chapter are *development*, *aid*, and *technology*, as discussed and interwoven in the four sections below:

- First, this chapter offers a brief overview of ICTD research and positions my study in the research domain.
- Second, I provide an overview of the evolution of development theory and the role of technology as according to various theoretical perspectives of development. It highlights the plurality of visions related to development and theories in ICTD. The section concludes with the recognition of the insufficient attention to the macro context, particularly concerning the role of global aid governance in ICTD research.
- Third, Section 2.3 starts by defining key terms of aid. It reviews theories of aid based on theoretical insights from International Relations (IR) with an emphasis on the importance of the political characteristics of aid. It then narrows the focus to the concept of ‘aid effectiveness’, and examines how

³ I acknowledge there is on-going debate over an appropriateness of the terms ‘foreign aid’, ‘development assistance’, ‘development cooperation’. The term ‘foreign aid’ has been criticized of its ‘donor-centric’ connotation as well as unclear distinction between development purpose and others such as military and security purpose (Breuning 2002). Recently, in particular, having the transformation of Aid Effectiveness Forum into a new international aid governance ‘Global Partnership for Effective Development Cooperation (GPEDC)’ in early 2010s, the term ‘development cooperation’ is increasingly being used by development practitioners in the field of global aid. Aid scholars, however, still mainly use ‘foreign aid’. I also found the term most appropriate in this study to explain a broad phenomenon around aid mechanism. See the Section 2.3.1 for more discussion.

the relationship between aid and development has been studied, and what the dominant extant theories in the domain are.

- Fourth, the last section discusses the role of aid information and ICT in the aid effectiveness debate. It reviews the existing studies and addresses the lacunae in the dominant technical rational perspective to be further discussed by theories of technology grounded in Information Systems (IS) and Science and Technology Studies (STS) in Chapter 3.

2.1. Information and Communication Technology and Development (ICTD)

As an established independent research domain, ICTD is concerned with the role of ICT in achieving development in general. Of course, scholars in various disciplines have discussed the potential effect of ICT in society, explaining it through such diverse angles and terms as ‘post-industrial society’ (Bell 1974), ‘information economy’ (Porat 1977) ‘the third wave’ (Toffler 1984), ‘network society’ (Castells 1996), and ‘knowledge-based economy’ (OECD 1996b), as well as the recent debate on an era of ‘data revolution’ (Mayer-Schönberger & Cukier 2013; Kitchin 2014) and the fourth industrial revolution (Schwab 2016).

Although such arguments emanate from theoretical backgrounds and perspectives, scholars identify enough shared features to consider ICT as one of the most influential factors shaping our current society. Most of the arguments, however, are criticized on two bases: *first*, their techno-optimism which often exaggerates the deterministic power of technology to bring about revolutionary social transformation and a paradigmatic shift in our society, and *second*, their Western-centric focus, which mainly draw on technological advancement in developed countries while failing to consider the contexts of developing countries. Webster’s analysis is one of the indispensable critiques of the existing social theories of an ‘information society’. He differentiates between theories which argue that there has been a departure from a previous ‘modern’ society towards a completely different world, such as Bell and Castells, and those who emphasize continuity of the

previous economic, social and institutional arrangements in the present era. He is critical of the former for its technological determinism, but relates to the latter, agreeing with Schiller (1995), who views ‘informatization’ as a consequence of the existing capitalist structure and focuses on politico-economic factors such as stratification hierarchy, market mechanism and power relationships.

Likewise, the role of ICT in international development has been widely discussed in the broad field of ICTD, which closely relates to Information Systems (IS), Human Computer Interaction (HCI), Development Studies, as well as the Engineering field. Although the terminological origin of ICTD is unclear, the Maitland Report, ‘The Missing Link: Report of the Independent Commission for World Wide Telecommunications Development’, published by International Telecommunication Union (ITU), is one of the very early discussions of ICTD (ITU 1984). Since then, such research has been referred to in slightly different terms, such as ICT4D, ICTD, information systems in developing countries (ISDC), development informatics, and most recently, digital development.

Although I use the term ICTD to refer to the academic discipline in this study, the most common term seems to be ICT4D which has been used globally⁴. Indeed, ICT4D, as an academic discipline, encompasses diverse approaches including the socio-technical perspective, which is further discussed in Chapter 3. However, the term itself has arguably been criticized for its technologically deterministic notion both in academia and in practice. Some scholars and practitioners, for example, in the biannual ICTD⁵ conference, deliberately removed ‘for’ in favour of ‘and’ which has a ‘neutral’ meaning of interaction (Merritt 2012). Also, ‘ICT4D’ does not appear in the 2016 World Development Report ‘Digital Dividends’, one of the seminal annual works in international development, and has been replaced by the concept of ‘digital development’ in other works (Heeks 2016; UNCSTD 2015).

⁴ For example, the World Summit on Information Societies (WSIS) and the United Nations Information and Communication Technologies Task Force (UN ICT TF) established in 2001.

⁵ The first conference ICTD2006 was held in UC Berkeley in USA. ICTD 2017 will be held in Pakistan in November 2017.

Apart from the terminological debate, ICTD has been a core issue in both academia and practice. In particular, such reductions in the cost of technological advancement that occurred over the last two decades have led to the global diffusion of ICTs in developing countries. One of the most remarkable changes is the phenomenal growth in the usage of mobile phones and broadband connectivity in developing countries, which reflects ICT's rapid globalization. Mobile phone subscriptions have increased dramatically in Sub-Saharan Africa, skyrocketing from below 10% in 2004 to the forecasted 73% in 2014⁶. Governments in developing countries are also increasingly connected to the Web, and are considered even more digitalised than the private sector.⁷ It is clear that ICT is now widely used in most organizations around the world.

In spite of the proliferation of ICTs and popular 'best practice' types of ICTD studies, which mainly driven by international organizations such as the World Bank, UNDP and ITU, there is still a major lacuna in theorizing concrete the link between ICT and development (Avgerou 2010; Heeks 2006; Walsham & Sahay 2006; Qureshi 2015). Critics focus primarily on two main concepts, namely *technology* and *development*. Building on Orlikowski and Iacono's compelling argument that insufficient focus on theorizing IT artefacts had been placed particularly in the field of IS, scholars have attempted to conceptualize the IT artefacts themselves in their implementation and usage (Orlikowski & Iacono 2002).

Yet another stream of critics focuses on the link between ICT and development, which is complex and multifaceted with various socio-economic and institutional factors. The gaps mainly originate from the different theoretical assumptions and foundations on development, like in what way and according to which terms

⁶ World Development Report (2016)

⁷ World Development Report (2016, p.6) "By 2014, all 193 member states of the United Nations (UN) had national websites: 101 enabled citizens to create personal online accounts, 73 to file income taxes, and 60 to register a business. For the most common core government administrative systems, 190 member states had automated financial management, 179 used such systems for customs processing, and 159 for tax management. And 148 of them had some form of digital identification, and 20 had multipurpose digital identification platforms".

development should be viewed. As Walsham and Sahay (2006) observe, a precise notion of what development implies and how ICTs can contribute to development is underemphasized in much of the existing ICTD literature. Avgerou (2010) argues that most ICTD research avoids engaging with controversies on development and calls for an active discussion on the ‘D’ in ICTD studies.

In addition to these arguments brought forward, I argue that insufficient attention has been paid to ‘aid’ in ICTD research. Foreign aid is commonly considered to be the most direct means of achieving arguably its ultimate goal, ‘development’, in developing countries. Furthermore, donors’ aid policies and international aid governance have undergone a series of institutional changes over time and based on different philosophical assumptions about development. Thus, there is an inextricable link between development and aid. Again, this research broadly addresses the role of information systems in the field of foreign aid. Accordingly, *development*, *aid*, and *technology* are closely linked to each other and discussed in this chapter.

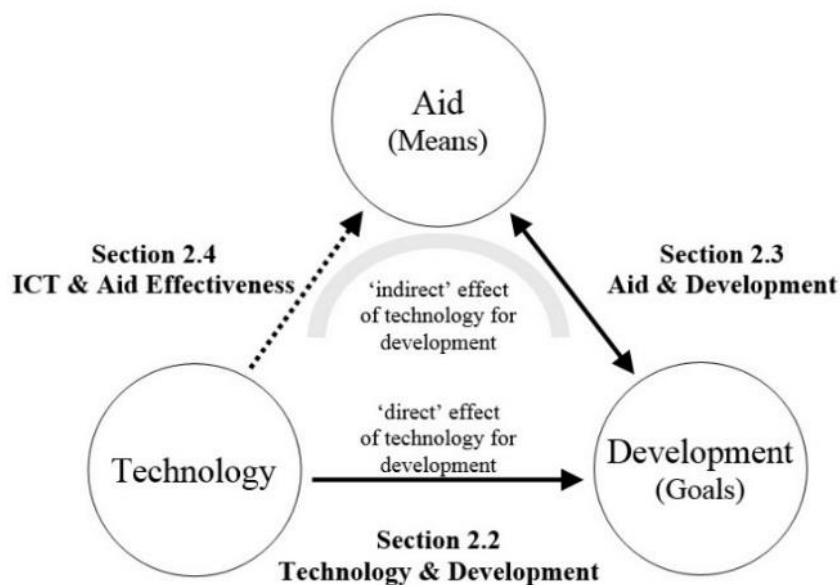


Figure 2-1. Missing ‘Aid’ in ICTD Research-Structure of the Sector’s View of ICT and Development⁸

⁸ Single arrow between ‘technology’ and ‘aid’ as well as ‘technology’ and ‘development’ is an emphasis of a dominant technological determinism in the fields. Conversely, the double arrow between ‘aid’ and ‘development’ reflects relatively balanced view between the two concepts.

Having reviewed the existing literature, the following three sections discuss the relationship between *technology and development* (2.2); *aid and development* (2.3); and *technology and aid* (effectiveness) (2.4) as illustrated in Figure 2-1. The Figure highlights ‘missing aid’, the current lacuna of ICTD research. The single arrow between ‘technology’ and ‘aid’ as well as ‘technology’ and ‘development’ is an emphasis of a dominant technological determinism in the fields. Conversely, the double arrow between ‘aid’ and ‘development’ reflects the relatively balanced view between the two concepts.

2.2. Technology and Development

2.2.1. Meaning of Development and the Role of ICT

The importance of ‘development’ in ICTD research has been acknowledged by a variety of scholars. Avgerou (2010) points out that every ICTD research makes specific theoretical assumptions about the ‘nature of the process of development’. Prakash and De’ (2007) emphasize the importance of the ‘development context’ in practice as well, as it influences the design of ICTD projects and determines the purpose they serve. However, the meaning and context of ‘development’ has been a major debate and remains a moving target. The global-historical context for development and international aid governance has been changing over time (Desai & Potter 2014). Therefore, before looking at ICTD, we need to ask the fundamental question: what is meant by ‘development’ in the first place? Building on an understanding of the various theoretical notions of development and how it has evolved over time, this section discusses how scholars view the role of ICT in different developmental frameworks.

Most development studies regard *modernization theory*, which flourished during and after World War II, as the earliest theoretical approach to development (Pieterse 2010; Leys 1996). In fact, very early discourses on development centred primarily on domestic economic growth at the national level. Although Classical Economics

discussed economic growth, the term ‘development’ was not used (Arndt 1981). Adam Smith, for example, spoke not of economic development, but of the ‘progress’ towards ‘opulence’ and ‘improvement’. After World War II, when the post-war aid programs began, the term ‘economic development’, defined as ‘growth in per capita income’, featured prominently in debates. The economist, Rostow (1960), in his influential book *The Stages of Economic Growth: A Non-Communist Manifesto*, introduces the concept of ‘stages of growth’ and describes development as a displacement of traditional society and as a linear and universal trajectory that developing countries have to follow for their economic prosperity.

Although the concept of modernization originates with ‘stratification’ and ‘functionalism’ in early sociological works, the theory has mainly been discussed in the field of Economics (Schrank 2015; Kang 2014). In this view, the study of economics was thought to be, at least normatively, separate from politics. Looking at the early structure of the UN, economics is an issue for the UN Economic and Social Council (ECOSOC) while political and security issues, on the other hand, are only insulated to a degree from the politics of the Cold War and dealt with within the Security Council and General Assembly. The situation relating to the twin organizations of Bretton Woods, namely the International Monetary Fund (IMF) and the World Bank, was similar. The Bank’s grant and loan activities remained financial, and economic matters did not take any political impact into account. These structural divides contributed to the idea that development is an apolitical matter. As the World Bank President Jim Yong Kim recently asserted “we are forbidden from engaging in politics, it is our unique stance.”⁹ This legacy still seems to resonate. Yet, the real story of national government is a little different. Even Rostow himself, in his influential role as a National Security Advisor and Counsellor of the US State Department during the Vietnam War, engaged with international political issues and applied the theoretical assumption of modernization in development policy. Development, therefore, was not only concerned with hope for economic prosperity in developing countries, but also for

⁹ At his speech, where I attended, ‘Rethinking Development Finance’ at London School of Economics (LSE) on 11 April, 2017

developed countries, for which development was viewed as a means of promoting security and achieving political gains.

Critiques of modernization also came from *dependency theory* which thrived in the Latin American and African context in the 1970s. Dependence theory sheds light on the alternative perspective that economic growth in a given developing country (periphery) depends on its position within the hierarchy and power relations of exploitative international capitalism, which is arguably driven by rich Western countries (core). Dependency theory had its shortcomings and failed to sustain its influential position; however, a couple of its insights and contributions still remain valid. First, it rejects a linear and universal progression of development, and instead perceives ‘underdeveloped’ to be a constitutive element of development (Kapoor & Kapoor 2002). Second, it influenced the conceptualization of the unity of the ‘world system’ (Wallerstein 1974), which emphasizes the structural and historical approach to development.

There are two main ideas that both *modernization theory* and *dependency theory* share. Firstly, their perspective on development is still ‘state-led’. Secondly, they share the view that technology contributes to national economic growth by promoting productivity, industrialization, and mass production. Early study of the role of technology in development also focused on its contribution to economic growth. Building on the notion of modernization, the early neo-classical economic framework formulated by Solow (1956) argued that technology can boost labour productivity and competitiveness within a market regime. The role of ICT known then as telecommunication technology in economic development was widely studied in the 1980s (Hardy 1980; Cronin et al. 1993). In particular, scholars highlighted inconsistencies between measures of investment in ICT and measures of output, popularly known as the ‘productivity paradox’ (Brynjolfsson 1993; David 2000). Despite the neoclassical orthodoxy that office automation (OA) can boost labour productivity, macroeconomic research on the relationship between computerization and productivity used empirical evidence to demonstrate that as ICT became ubiquitous, there was a massive slow-down in growth. One explanation

emphasizes the complexity in designing, implementing and maintaining IT artefacts, and argues that productivity can be particularly lower in the public sector where services are priced at cost without value added (Brown 2015; Pilat 2005).

The introduction of the '*basic needs*' approach in the 1970s was the first big shift in viewing development from a macro-economic progress to focus on poverty reduction. Over time, macro-economic growth oriented perspectives on development were often challenged. The first oil shock in 1973, followed by the food crisis and recession in African and developing countries, led the move away from national infrastructure projects towards poverty reduction projects in rural areas such as water, health, and agriculture (Moyo 2008). This constitutes a clear departure from modernization's 'trickle-down' approach. Building on this focus on micro-level poverty at the individual level, the shift led to redefining goals of development projects in international organizations, contributing to an emphasis on non-economic aspects. The famous phrase 'small is beautiful', also the title of Schumacher's book demonstrates this shift in thinking. The concept of appropriate technology emerged as a small-scale, energy efficient and contextual technological solution (Schumacher 1973; Kaplinsky 2011). With the rise of the appropriate technology movement, the focus on local context and design based on indigenous knowledge were gradually adopted. Indeed, having a very unstable economic situation as a result of two oil shocks in the 1970s, the international development field experienced an explosion of visions on development including 'basic needs', 'appropriate technology', 'sustainable development', 'gender and development' and so on.

In the 1980s, the *neoliberal* framework, also known as the Washington Consensus, became dominant in the development debate. The 'free market-led' vision emphasizes economic liberalization, which supposedly promotes greater engagement by the private sector through deregulation, privatization and a minimal role for state actors. The World Bank's Structural Adjustment Reform (SAP) forced developing countries to dramatically curtail government control over the domestic economy while reducing regulation of the private sector and opening up their

markets to multinational enterprises. ICTD projects were often part of the wider SAP and Poverty Reduction Strategy Papers (PRSPs). Practically and theoretically, ICTs were perceived to be a good tool for market efficiency and ‘good governance’, the vision intertwined with the rise of the neoliberal view and globalization. There is an underlying assumption that ICT can eliminate the cost of communication for globalization, promoting market efficiency for macroeconomic growth. This assumption, however, has been criticized within both Economics and ICTD studies. Economists criticize the lack of evidence of the effect of ICT on macro-economics; for example, Dewan and Kraemer (2000) say that “returns to capital IT investment are not significant while returns to non-IT capital investment are significant”. In addition, ICTD scholar criticizes ‘tool-and effect’ relations and highlights a particular social and organizational context in developing countries (Avgerou 2003; Walsham & Sahay 2006; Avgerou & Walsham 2000).

In spite of their alleged differences, ‘state-led’ *modernization* and ‘market-led’ *neoliberal* approaches share a common conception of development as ‘catch-up’ and ‘leapfrogging,’ which hypothesizes that developing countries can avoid an inferior, less-efficient stage of development and ‘catch-up’ with a faster economic growth rate by ‘leapfrogging’ through technological innovation (Rogers, 1962). In this view, a lot of attention is given to efficiency gains and socio-economic improvements resulting from ICT-based practice classified by Avgerou as “transfer and diffusion with progressive transformation” (Avgerou 2010). This shared conception has also been criticized due to its lack of attention to local contexts and technological determinism, an “uncritical stance towards capitalist relations of wage-labour and competition” (Burkett 2003).

Similarly, the *post-developmental* school, also influenced by dependency theory, argues that the universal concept of development can be closely linked to the emergence of neoliberalism. For example, the popular notion of ‘knowledge for development’¹⁰ mirrors the neoliberal view that information and knowledge in development can be transferred from the Western to the poor, and often has been

¹⁰ Also it is the title of World Development Report in 1998.

used to justify the search for new markets for developed economies (Narayanaswamy 2013). Escobar (2011:279) criticizes an exclusive reliance on “one knowledge systems, namely the modern Western one” in international development and calls for the supply of information and knowledge in development by the global South. Similarly, scholars call into question the Western-Northern hegemony on ICT throughout the rest of the world. Wade (2002) argues that ICTs and their international standards could lead to a ‘new form of dependency.’ ICTD scholars often criticize ‘technology transfer’ and the rationalist notion of knowledge and information for being measurable and universal as opposed to ‘situated’ (Avgerou 2003; Madon et al. 2009).

Perhaps the most influential alternative approach that challenges the neoliberal vision may be Amartya Sen’s (1999)’s *‘capabilities approach’*. Sen argues that economic development is only one of many means of achieving human development. As opposed to the utilitarian perspective, which views development as an increase in the total sum of people’s happiness, Sen’s notion of ‘development as freedom’ combines Rawls’ concept of ‘primary social goods’ and ‘utility equality’, and defines poverty as deprivation of capability. Capability in this context refers to the ability of a person to do what he/she does and envisions according to their expectations of what constitutes a valuable life. Sen’s work has been reflected in many contemporary development agendas including the launch of the Human Development Report (HDR) that is published annually by UNDP since 1990, emphasizing the ‘functionings’ suggested by Sen, including health, education and income, and the UN Millennium Development Goals (MDGs) followed by the Sustainable Development Goals (SDGs). These goals have become internationally accepted as a normative framework of development (Fukuda-Parr & Hulme 2011). This reflects important shifts in how the concept of poverty is defined, how each aid project is designed, and what the role of international community to achieve development can be. The constructivist school of thought in IR, rooted in sociological institutionalism, to be discussed in greater detail in Section 2.3.2 and 3.1, often seeks to explain the power dynamics in this change and how the new norm emerges and is institutionalized in the arena of international politics.

Sen's capability approach and human development perspective contributes three significant insights which allow for a reconceptualization of poverty and development. First, it calls for a multi-dimensional approach to development. Second, it argues that development is a "process of expanding the real freedoms people enjoy," and gives insight that views development as a process rather than as an activity. Third, Sen argues that even the income-based poverty line must differ, because contexts change across countries. However, the capability approach has been criticized for both theoretical and practical reasons, including its individualistic position and measurement challenges. To remedy its individualistic position, scholars (Evans 2002; Alkire 2002) later proposed 'collective capability' as a concept, and tried to integrate a social level of development by adopting the social capital approach (Putnam 2000). In addition, much effort has been directed towards elaborating multidimensional poverty measurement (Alkire 2002; Alkire & Foster 2008).

One of the contributions of capability approach is the shift of focus from the ICT infrastructure to its impact on socio-economic development. As previously discussed, a common underlying assumption of early ICTD research was that developing countries have a disadvantage in ICT access and suffer from a 'digital divide', which lead to a new form of inequality. The early studies conceptualised the digital divide as a narrow concept of access to information and technology, and view technology as an instrument to addressing the gap. Later, the theoretical concept of digital divide extends beyond information access to 'digital inequality' (DiMaggio & Hargittai 2001) as well as embraced the broader aspects of human development, applying ICT for social well-being, education, health, women's rights, social exclusion, and participation in democracy and social inequality (Hamel 2010; Madon et al. 2009). An example of includes Madon's (2004) work, which offers a thoughtful example of the theoretical application of the capability approach¹¹ in ICT and governance.

¹¹ To be more discussed in the following section.

In this study, I do not adopt any particular theoretical assumption of development as a single conceptual framework to conduct research. The most important lessons that I would like to take from this short historical review of development as well as the discussion on foreign aid in the following sections, are the recognition of the plurality in development and the importance of political characteristics of development. Development is not as simple, apolitical, and innocent as it may sometimes seem to be from such slogans as ‘world free of poverty’ by the World Bank, or ‘building a better world’ by UN Global Compact. Dominant positivist approaches toward development aim for the generalizable and a-contextual account of social phenomena that is commonly discussed with economic models. However, these attempts are often oversimplifications of social realities and ignore the political and historical contexts that continuously structure the international development arena. Thus, we need to understand that development, which is still popularly recognized as economic growth, is a politically entrenched effort and historically constructed issue. Political contexts and power relationships in the global arena are inextricable from the various perspectives of development vision, policy, activities and outcomes.

Perspective		Meaning of Development	Historical Context	Aid	Role of Technology & ICT
Macro	Micro individual level				
‘Transitive’ ‘a set of activities’	‘Intransitive’ ‘a set of processes’				
Classical Economics	Marxist view				
1850 Colonial Economics		Resource management, trusteeship			Exploration of new territories
1950 Modernization (Harrod-Domar),(Rostow 1960)		Economic growth, industrialization, linear trajectory to development	Post-war, the establishment of Bretton Woods (1944), competence in the Cold War	<i>Birth of Aid</i> Marshall Plan (1948):	Mass production Increased productivity
	Dependency Theory Neo-Marxism	National auto-centric growth & capital accumulation	Rise of Third World nationalism and decolonization	<i>Institutionalization of Aid</i> OECD DAC; ODA definition	Creation of domestic product, Increased productivity and innovation in a state
	World System (Wallerstein 1974)	Poverty reduction, rural development	Oil Shock (1973, 1979) Détente	<i>Poverty reduction</i>	Alternative technology for poverty reduction, enhancing of local capacity
		Basic Needs, Alternative(Sustainability etc)			
1980		Economic growth: deregulation, privatization, liberalization, open to global market	Washington Consensus, Globalization	<i>Lost Decade of Aid</i> WB’s SAP, PRSP	Enhancing market efficiency, global competitiveness
	Neo-liberal				
1990 Good governance New-institutional Econ.(Williamson, 1985; North, 1990)		Institutional, social development	End of communism & demand on democracy Emphasis on local context	<i>Aid Fatigue</i>	ICT for new public management (NPM), transparency, government’s efficiency, delivery of services
	Post-developmental (Escobar,1985)		Reflection on neoliberal orthodoxy		ICT as a means of strengthening international capitalism
		Human Development (Sen,1999)	Human capabilities, ‘development as freedom’		Development human capabilities (education, health, participation, gender)
2000 Aid Effectiveness (Paris Declaration, 2005)		Millennium Development Goals (2000)	Rise of BRICS, MINT, Civil Society Organizations,	<i>Proliferation of Aid</i>	ICT for aid effectiveness, aid management (AIMS)
2010 Global Partnership for Development Effectiveness and Cooperation (GPDEC) (2014) Sustainable Development Goals (2015)		Inclusive development		<i>Diversity in Aid</i> Emerging power; South-South cooperation	Open Development Data for Development Digital development

Table 2-1. The Evolution of Development Theories and the Role of Technology – Developed on Pieterse (2010) and Thapa and Sabo (2014)

2.2.2. Theories in ICTD Research

Over the past few decades the multidisciplinary literature has increasingly articulated the contribution of ICT in development (Avgerou 2008; Walsham 2012; Walsham & Robey 2007; Heeks 2010). Due to the multi-disciplinary nature of ICTD, much research has been conducted based on diverse theoretical frameworks. This section provides an overview of major theories applied to ICTD research in order to map the current field and status of research, as well as situates my theoretical view within a broader stream of institutional theory.

Diffusion and Acceptance theory: In the broad field of ICTD, and also in related disciplines as Development Economics, Human Computer Interaction (HCI) and Communication Studies, positivism tends to be the dominant paradigm. This is not only the case in relation to ICTD, but is also the dominantly established situation in the broad field of information systems (IS) (Orlikowski & Baroudi 1991; Kaplan & Duchon 1988). Over the past few decades, diffusion theorists have tried to identify determinants of ICT in developing countries, based on formal econometric modelling with typical disparate variables in development economics such as income, education, health, political rights and so on (Baliamoune-Lutz 2003). The most cited theoretical approaches in this stream also include Davis' (1985) technology acceptance model (TAM). TAM and its extended version (Wixom & Todd 2005) have been widely used for proposing hypotheses for multivariate statistical analysis in ICTD research, including studies of the effect of social and organizational factors on ICT transfer in the Arab region (Al-Gahtani 2003), user adoption of a digital library in developing countries (Park et al. 2009), and citizen acceptance of e-government in Gambia (Lin et al. 2011). Rogers (1995) provides a conceptual generalization of the significant factors, with special consideration given to social and organizational contexts. His diffusion model, centred on the context of developed countries, has been developed to overcome the shortcomings of its applications in developing countries (Roman 2004). However, TAM research may underestimate continuously changing ICT environments in developing countries, as well as the socio-technical nature of technology, and has been widely criticized for its linear technical rationality and a-contextual characteristics. A significant amount of alternative interpretive ICTD research has derived from foundational works conducted via the *IFIP*

9.4 Working Group: Social Implications of Computers in Developing Countries, ICTD Conference and the Association for Information Systems (AIS) Special Interest Group on ICT and Global Development.

Institutional theory: One of the most influential theoretical contributions in development studies is new institutional economics, which emphasizes the role of rules, regulations and social and legal institutions in economic development (North 1990; Acemoglu & Robinson 2012; Williamson 1985). As opposed to economic new-institutionalism, which is based on rational-choice, sociological institutional theory focuses more on informal institutions – norms, value, and culture – and views the institution as ‘multifaceted, durable social structures, made up of symbolic elements, social activities, and material resources’ (Scott, 2001: 49). Technology is not a core emphasis in institutional theory. Much of the ICTD research, however, has ascribed to institutional theory an understanding of the issue of institutional change/reform, isomorphic mechanisms of ICT adoption, (de)institutionalization, institutional logic, and the context of developing countries (Avgerou 2002a; Alghatam & Cornford 2012; Avgerou 2004; Nicholson & Sahay 2009; Madon et al. 2009; McGrath & Maiye 2010; Avgerou & Walsham 2000). The institutional approach to be used as conceptual framework in this thesis will be discussed in more detail in Chapter 3.

Capability Approach: Although Sen himself discusses very little about the role of technology, his capability approach and the multidimensional concept of development have been considerably discussed in ICTD. It has been applied to theorize the effect of ICT on development (Kleine 2011; Kleine 2010; Zheng 2009), to examine the role of ICT in enhancing citizen participation and empowerment (Dasuki et al. 2014), the micro dynamics of e-government implementation (Madon 2004), disabilities (Toboso 2011), social exclusion (Zheng & Walsham 2008) and poverty reduction and livelihoods (Duncombe 2007; Gigler 2015). The multidimensional capability approach has been widely used as an evaluation framework of development such as the *UN Human Development Report*. Sen argues that institutions are the most fundamental mechanism for removing obstacles to freedom and attaining development. With such emphasis on institutions, Sen’s approach can be linked to the new-institutional approach (Alkire 2002; North 1990), and challenges the neoliberal orthodoxy in development (Acemoglu

& Robinson 2012; Rodrik 2007). While the utilitarian explanation used by institutional economics focused on formal institutions such as regulations, rules and markets, Madon (2004) shifts the focus away from evaluating ICT projects only on functional criteria related to access and infrastructure, placing the focus instead on nonmaterial aspects, such as social, organizational and political aspects.

Critical approach: Critical studies, often referred to as ‘critical social information systems research (CSISR)’ (Klein 2009), aim to expose hidden problems and ‘critique the status quo’ of existing structural contradictions and existing domination (Orlikowski & Baroudi 1991; Stahl 2011). It focuses on ‘what is wrong with the world rather than what is right’ (Geoff Walsham, 2005:112). Avgerou (2005:103) further argues that critical studies should keep “suspicion to instrumental reasoning”, and yield knowledge on “an alternative agenda of substantive social issues by the interplay of theory and empirical evidence”. Likewise, Orlikowski and Baroudi (1991) pointed out early that “critical researchers depart from their interpretive colleagues, in that they believe interpretation of the social world is not enough”. In addition to promoting ‘emancipation’, critical studies provide insight into the adoption of information systems and organizational change in a global context (Walsham 2001; Avgerou 2002a). Criticizing the assumption that ICT-driven globalization promotes equitable socio-economic transformation, Avgerou (2002a) sheds light on the restrictive conditions of the global socio-political order and argues that ICT innovation is embedded in a particular context and thereby shaped by a multitude of different level of institutions with conflicting incentives, structure, and histories. Attention to the macro socio-political context can be similarly found in critical ICTD research, which adopts aspects of postcolonial theory. Such research provides postcolonial critiques of ‘development’ and modernity as well as seeks the theoretical link between macro structure and the local organizational context of ICTD projects (Lin et al. 2015; Njihia 2008). Some studies belonging to the Political Economy or Development Studies domains also criticize existing power structures in international development as constituting ‘new form[s] of dependency’ (Wade 2002), with ICT being ‘the privileged technology of neoliberalism’ (Harvey 2005).

Mixed: There has been much discussion of different epistemologies - positivism and interpretivism, as well as both quantitative and qualitative methodological approaches in the IS field. In particular, there has been intense debate about whether two different perspectives can be combined in multi-methodological approaches (Mingers 2001; Venkatesh & Brown 2013). In ICTD literature, however, due to the multidisciplinary nature of the field, the adoption of mixed-methods and diverse theoretical concepts from such contributing fields as Sociology, Anthropology, Computer Science, Communication Studies and Development Studies has been encouraged (Walsham 2017). Indeed, Bass et al. (2013) suggest a combined analytical framework informed by sociological institutional theory and Sen's capability approach. Zheng and Stahl (2011) draw insights from critical theory to strengthen the theoretical link between ICT and Sen's conceptualization of human development. In addition, there have been multiple attempts to pursue mixed methods, an approach that combines quantitative and qualitative analysis. Building on Sen's capability approach, Musa (2006) proposes a modified version of TAM, and suggests ways to make ICT adoption more sustainable and beneficial in enhancing human capabilities in the Sub-Saharan Africa ICT diffusion. Jamison et al. (2013) evaluate the impact of information sharing via mobile phone on sexual health in Uganda by using randomized control trial (RCT) augmented by qualitative interviews.

Theory	Studies and ICT artefact (selected)	Level of analysis
Diffusion and TAM	Roman, 2004 (telecenter); Park et al., 2009 (Digital library); Balamoune-Lutz, 2003 (ICT in general)	Cross-national, national
Institutional theory (sociological)	Avgerou, 2002; Madon et al., 2009 (telecenter); Alghatam and Cornford, 2012(e-government)	Individual/community, national
Capability approach	Madon, 2004 (e-government); Masiero, 2014 (Food Security System); Klein 2010; Zheng, 2009; Zheng and Walsham, 2008 (framework)	Individual/community
Critical research	Avgerou, 2002; Lin et al., 2015; Njihia, 2008 (e-government); Wade, 2002; Walsham, 2001	Global/macro-historical
Actor-network theory	Andrade and Urquhart, 2010 (telecenter); Walsham and Sahay, 1999 (GIS)	Individual/community
Combined/mixed	Bass et al., 2013; Jamison et al., 2013; Musa, 2006 (m-health)	

Table 2-2. Selected Studies in ICTD Research

This section has provided snapshots of theoretical frameworks in ICTD and highlighted the plurality of ideas related to development and theories. A summary of major theoretical frameworks in ICTD research is presented in Table 2-2 above. This review confirms the use of a wide range of theories and angles of analysis in ICTD research. There is, however, an insufficient understanding of the role of global aid governance in ICTD initiatives. In particular, there seems to be a theoretical missing link between the success and failure of ICTD initiatives and the role of nation state actor in the global field of aid. This is crucially important as most ICTD initiatives have followed common goals and norms such as MDGs, SDGs, and aid effectiveness agendas, which will be introduced briefly in Section 2.3 as well as investigated in detail in Section 6.1, which often constrain and regulate ICTD projects. However, there are not so many studies looking at the ICTD initiatives from this macro perspective. Rather, in understanding ICTD initiatives, scholars have mostly focused on the micro-situational actions of individual and organizational actors and their unfolding relations with technological artefacts. This lacuna is similarly identified in the studies of IS failure in developing countries, and will be primarily discussed in Chapter 3.

2.3. Unpacking Aid: Development, Politics, and Structure

We should stop pretending aid is apolitical. (Maggie Black)¹²

In addition to the overview of the literature on ICTD in Section 2.1, this section aims to unpack the meaning of *aid*. This is vital as aid is commonly perceived as the most direct and conventional means to achieve *development*. However, the debate on the nature, motivation, role and global governance of aid is not adequately addressed in ICTD. Three main questions will be discussed in this section: *What is aid? Who gives aid and why is it given? What is the role of ICT in aid effectiveness?* To answer these questions, I will review the interdisciplinary research literature on aid with a view to ascertaining – i) the nature and motivation behind aid, ii) the effectiveness and legitimacy of aid, and iii) the role of ICT in aid. In this way, this section will demonstrate that research on aid has predominantly been conducted from an economics and political economy perspective, and to a lesser extent, over the last few decades, from an anthropology

¹² The Guardian, on 25 September 2015.

perspective. Thus, there are significant research opportunities in the study of ICT and aid in the IS discipline, especially from a socio-technical perspective.

In the first part, I provide a short history of foreign aid governance and highlight the political nature of aid. In the second part, I review the literature on the motive for aid as seen through the lens of International Relations (IR), in which several competing theories coexist based on various theoretical assumptions on the behaviour of state actors. I do not rely heavily on the IR approaches; instead I try to make a theoretical connection between the constructivism of IR and the sociological new-institutionalism to explain the global field of aid, institutions and governance in aid mechanism in Section 2.3.2 and further in Chapter 3. Following this, I move to literature on the emerging norms of ‘aid effectiveness’ and discuss the role of ICT therein. I do not seek to find which type and condition of aid can be more effective, nor do I propose another theory on how to make aid work better in ICTD projects. Rather, I identify a common underlying assumption of aid information - considered to be a prerequisite in aid coordination - as a key feature of aid effectiveness. I contend that the role of ICT has been positioned at the core of aid effectiveness debate in the existing literature and aid practice and, through this review, identify current lacunae in ICTD studies.

2.3.1. Defining Aid - *What is Aid?*

Foreign aid matters in ICTD as it has a considerable effect, either positive, negative or neutral, on the development agenda in recipient countries. What, then, does aid mean exactly? At its broadest, aid encompasses of all resources, including capital, physical goods, skills and technical know-how, which are transferred by donors to recipient countries. However, such a definition leaves many crucial questions unanswered. Who are donors and recipients? Are donors always rich and recipients poor? Is it possible for a state to be a donor and a recipient country at the same time? Is the provision of aid a voluntary or normative action? Is aid based on conditionality or coercion? What is meant by concessional aid commonly referred to as a grant, or non-concessional aid, commonly referred to as a loan? Who decides on the rules governing aid? Should states follow

them? Must we consider military assistance as aid?¹³ More narrow and restrictive definitions of foreign aid have been discussed and shaped by those who have a major role in international development, such as the OECD countries and Multilateral Development Agencies (MDAs).

Official Development Assistance (ODA) has been the most influential and widely accepted definition of foreign aid. The most substantial efforts made to develop a set of conceptual and operational definitions of what consists of aid, and what rules aid activities should follow, has been led by the OECD Development Assistance Committee (DAC)¹⁴, established in 1960. The definition of ODA suggested by DAC in 1969 and revised in 1972, never set out to define foreign aid and development finance in general (OECD 2008a). Rather, it sought only to define a particular flow of aid provided by states to states, what is referred to as, donor and recipient governments. The OECD DAC defines ODA as “those flows to countries and territories on the DAC List of ODA Recipients¹⁵ and to multilateral institutions¹⁶ which are:

- 1) provided by official agencies, including state and local governments, or by their executive agencies; and
- 2) each transaction of which
 - a. is administered with the promotion of the economic development and welfare of developing countries as its main objective, and
 - b. is concessional in character and conveys a grant element of at least 25 per cent (calculated at a rate of discount of 10 per cent).¹⁷

¹³ For more discussion on the origins of aid and definition, see Riddell (2007). The chapter 2, in particular, led me to the motivating questions above.

¹⁴ The DAC is the association of leading donor countries in OECD. As DAC members, countries commit to enact DAC guidelines and the Recommendations adopted by the DAC in formulating national aid policies. They also provide the annual submission of required official development assistance (ODA) statistics on their aid efforts and policies to be included in the Development Cooperation Report. As of 2016, the DAC has 30 members including Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, United Kingdom, United States, European Union (<http://www.oecd.org/dac/dacmembers.htm>).

¹⁵ Source: <http://www.oecd.org/dac/stats/daclist.htm>

¹⁶ Source: <http://www.oecd.org/dac/stats/annex2-procedure.htm>

¹⁷ Source: <http://www.oecd.org/dac/stats/officialdevelopmentassistancedefinitionandcoverage.htm>

The OECD defines that “the boundary of ODA has been carefully delineated in many fields, including:

- Military aid - No military equipment or services are reportable as ODA. Anti-terrorism activities are also excluded. However, the cost of using donors’ armed forces to deliver humanitarian aid is eligible.
- Peacekeeping: Most peacekeeping expenditures are excluded in line with the exclusion of military costs. However, some closely-defined developmentally relevant activities within peacekeeping operations are included.
- Nuclear energy: Reportable as ODA, provided it is for civilian purposes.
- Cultural programmes: Eligible as ODA if they build the cultural capacities of recipient countries, but one-off tours by donor country artists or sportsmen, as well as activities to promote the donors’ image and ‘soft power’, are excluded.”¹⁸ (OECD ODA: definition and coverage)

Humanitarian assistance includes funds for disaster relief and reconstruction; for example, the emergency aid response to the 2004 Indian Ocean tsunami was not a part of ODA either. Barnett (2011) demonstrates that humanitarian aid and development aid have historically drawn from different financing streams and timelines, and been managed in different organizational structures in a given country. He argues that this may be because humanitarian aid was used for emergency situations, such as natural disasters, whereas development aid was born out of colonialism.

In addition to this, the conceptual validity of ODA itself has been challenged due to the fast-changing landscape of international aid. Severino and Ray (2009) highlight ‘triple revolution’ the recent diversification of goals of aid, increased number of aid players, and mushrooming tools (policy), and thereby call for moving from the conventional measurement of ODA to its redefinition with an inclusive concept. Similarly, aid scholars point out the proliferation of new donors (Acharya et al. 2006; Burcky 2011; Knack & Smets 2012) and increased aid heterogeneity in type and modality (Mavrotas 2005). Furthermore, the emergence of new non-OECD DAC donors, such as China, Indonesia, India, Russia, and Brazil, as well as the South-South Cooperation (SSC)¹⁹, which now provides significant amounts and various types of aid across the world, are crucial challenges in the concept of ODA. In response to these criticisms, the OECD

¹⁸ Source: <http://www.oecd.org/dac/stats/officialdevelopmentassistancedefinitionandcoverage.htm>

¹⁹ This will be discussed in details from the perspective of Indonesia in Chapter 7

DAC has “continuously refined the ODA reporting rules to ensure fidelity to the definition and the greatest possible consistency among donors”²⁰ over the past decade.²¹

Against this backdrop, in this thesis, I take the term ODA as a key concept of aid. The main purpose of Indonesian AIMS, the case of this study, was managing aid data on ODA which was given by the official OCED DAC donor governments. However, the terms ‘(foreign/development) aid’ are used interchangeably to generally describe aid from all sources and types, such as foreign aid from emerging countries like China and India; direct financial support from private sector as their corporate social responsibility (CSR) strategy; and volunteer activities from charity organizations.

Similarly, finding the most relevant term for the country classification according to the degree of development, as well as finding the same for the aid-receiving countries, are both no easy task. The terms ‘the third world’, ‘the global south’, ‘developing countries’, ‘least developed countries (LDCs)’ and ‘recipient countries’ should be carefully read, as they have different conceptual origins and different underlying assumptions. Given the complex history of evolving concepts and contexts, there are definitional limitations and ambiguity in the use of these terms. Yet, they have been used interchangeably in many academic research and policy documents. Therefore, at this point, it is necessary to clarify the meaning of terms, to reflect upon the definitions of the terminologies, and to explain the justification of use and disuse terms in this study.

Developing countries: Among the terms stated above, the dichotomy of developed and developing countries has been predominantly used and accepted in both academic research and in the public. Although different organizations have often used different categories for ‘developing countries’, the term, generally refers to low and middle-income countries assessed by the World Bank in reference to countries’ Gross National Income (GNI) per capita. However, the World Bank announced their decision to stop using the term ‘developing countries’ in its *2016 World Development Indicators*, using geographical categorizations instead. Arguments against using the term ‘developing

²⁰ Source: <http://www.oecd.org/dac/stats/officialdevelopmentassistance/definitionandcoverage.htm>

²¹ For the discussion of redefining ODA, please see (Martens 2001; OECD 2013)

county' include its methodological challenge, limitations of categorization, and increased dissimilarity between developing countries.²² They differ greatly in their economy size, political institution, and historical and cultural background. More importantly, the dichotomy of developing and developed countries has implicitly been based on the outdated philosophical concept of modernization, and has contributed to the reproduction of modernization ideals.

Least developed countries (LDCs): Some scholars and practitioners seem to prefer using 'least-developed' because 'developing' arguably implies 'not yet developed'. One of the interviewees of this study, who has been in development practice for a long time, expressed reluctance to use the term as it often implicitly means 'still far from developed'. The term LDCs originates from the UN General Assembly in 1970, and its criteria have been reviewed regularly by UN ECOSOC in terms of poverty line, human development, and economic vulnerability. However, the scope of LDCs doesn't fully cover all aid-receiving countries such as middle-income recipient countries, which is the main reason that I am not going to use the term in this study.

The Third World: this term has also been widely used. With the aftermath of the Korean War (1950-1953), a new geopolitical dynamic began to emerge as the ideological, military, and politico-economic tension between the United States and the USSR commonly referred to as the Cold War. The etymology of the term can be traced to the French demographer Alfred Sauvy's article *Three worlds, one planet* (Sauvy 1952). He made an analogy between underdeveloped post-colonial states with 'the third estate' during the French Revolution, which were opposed to the clergy and aristocracy. The Asian-African Conference in Bandung, Indonesia in 1955 was an important moment for the historical significance of the term, and for the emergence of the 'power of the Third World'. Although the term is still widely used in media and practice, its academic usage has dramatically declined in recent decades (Tomlinson 2003). The main critique is that the collapse of 'the second world', along with emerging globalization, have made the term largely irrelevant (Berger 2004; Tomlinson 2003). Similarly, World Bank President Robert Zoellick, announced the end of usage of the term 'Third World', while still using

²² Source: <https://blogs.worldbank.org/opendata/should-we-continue-use-term-developing-world>

the terms ‘developing countries’ and ‘global South’ in his 2010 speech *Modernizing Multilateralism for a Multipolar World*²³:

If 1989 saw the end of the ‘Second World’ with Communism’s demise, then 2009 saw the end of what was known as the ‘Third World’: We are now in a new, fast-evolving multipolar world economy – in which some developing countries are emerging as economic powers; others are moving towards becoming additional poles of growth; and some are struggling to attain their potential within this new system – where North and South, East and West, are now points on a compass, not economic destinies.

Recipient country: Overall, I found the term ‘recipient country’ most relevant to this study. Some government officials expressed their reluctance to the use of ‘recipient’ and ‘donor’, while preferring ‘development partners’ during my interviews; I will explain this in further detail in Chapter 8. Their argument is that development can only be achieved in a horizontal, non-hierarchical structure, in a manner that is mutually accountable for all stakeholders. In this sense, they argue that the dichotomy of recipient and donor would not be appropriate because aid mechanisms should not be “*just giving aid and receiving aid as a one side game*” (Senior Officer in Bappenas).

However, I still found the term ‘recipient country’ justifiable in this study. This thesis does not directly question whether ICT can have a positive/negative impact on ‘development’, nor how ICT can enhance development. Instead, it focuses on the dynamics of the aid mechanism (aid-providing and receiving), and its influence on information systems failure. As discussed in greater detail in Section 2.2, the fundamental characteristic of aid is the flow of funds from the supply side of aid (donors) to the demand side of aid (recipient). This view often appears in the research that drew upon the concept of ‘aid market’ (Barder 2009; Djankov et al. 2009). The ‘market metaphor’, which argues that the major source of the aid problem is an imperfect market, is not always appropriate. However, it is quite “useful to recast the aid relationship as the interplay of demand and supply” in particular in a country which has a complex aid mechanism with diverse stakeholders (Abegaz 2005:437).

Furthermore, while avoiding confusion with the term ‘developing country’, using ‘recipient country’ can be more compatible with the categorization of economies. There

²³ Source: <http://www.worldbank.org/en/news/speech/2010/04/14/end-third-world>

are countries which, arguably, are considered to be a developing country but not aid-receiving country like Croatia, Romania or Russia. A country can simultaneously be a recipient country of aid, and a high income country, such as Chile and Uruguay. Others can have a ‘dual identity’ as both a recipient and an aid donor country while still being a lower-middle-income country, such as Indonesia and India. Also, there are some emerging economies that are categorized as upper-middle-income countries by the World Bank, which are still receiving aid such as Brazil, China, Mexico, and Turkey. Thus, in this study, the term ‘recipient country’ is used to describe all aid receiving countries, regardless of the size of their economies, as well as their simultaneous dual identities as both donor and recipient. In order to define ‘recipient country’, I follow the OECD DAC list of ODA recipients²⁴, which will be explained in detail in Section 4.3.2, and Section 5.1 when the data collection and findings of AIMS implementation in recipient governments are elaborated on. In addition to this, the term ‘developing country’ is also used in a limited sense to refer to broader context in general discussion of the issue of ICTD.

2.3.2. Theory of Aid –*Why Do Governments Provide Aid?*

Why do governments provide foreign aid? Foreign aid, in recent years often referred to as ‘development cooperation’, has been recognized as an international norm today. However, it did not exist prior to 1947 when the Marshall Plan, commonly considered to be the origin of foreign assistance, was created. This modern phenomenon, a peculiar behaviour of state actors to provide aid to other countries, has been a topic of intense debate in terms of its motivation, outcome and effectiveness. This section reviews why state actors provide foreign aid, and how we understand their inclination based on the three competing philosophical perspectives in the field of IR: *Realism*, *Liberalism*, and *Constructivism*.

There is a longstanding debate in social theory about whether ‘agent’ constructs ‘structure’ or whether ‘structure’ shapes ‘agent’. A solely agent/individual-centric

²⁴ The OECD DAC list of ODA recipients is available on:
<http://www.oecd.org/dac/stats/documentupload/DAC%20List%20of%20ODA%20Recipients%202014%20final.pdf>

perspective would argue that society is an aggregation of individuals involved in diverse interaction; social structures, therefore, are not real. This view has early intellectual roots and was highlighted in Thomas Hobbes' seminal work *Leviathan* (1651). On the other hand, a structure-centric view would hold that agencies are situated within the social structure, which determines the actions of individuals. This perspective is well represented in the work of Emile Durkheim. This structure and agency debate still relevant and remains much discussed in the field of IR. In short, *realism* assumes the international political system is in the Hobbesian 'state of anarchy', and puts emphasis on states as central actors in international politics, while *liberalism* highlights the 'interdependence' of states and emphasizes on international regime and cooperation. *Constructivism* criticizes the static view of the dominant IR theories, realism and liberalism, and argues that international reality is constructed by the interplay between agency and structure. These perspectives have been influenced by each other and been amended and extended to revised versions that have a shift in focus and level of analysis from their original roots. Nonetheless, it is meaningful to understand the core underlying assumptions of each approach, assessing what can be learned to form a theoretical lens to investigate states' behaviour of giving and receiving aid.

Realism: Although realist theories in IR cover a fairly wide range of perspectives, from Morgenthau's classical realism (Morgenthau 1960) to Waltz' structural realism (Waltz 2000), the basic insights of the view are well explained in Morgenthau's seminal book, *Politics Among Nations: The Struggle for Power and Peace* (1960). He defines three underlying assumptions of the realist view in IR. First, states are the most important and unitary actors in international relations. Second, there is a clear distinction between domestic and international politics. Third, international politics is "the struggle for power and peace"(Morgenthau, 1960). In this view, aid has always been a matter of politics. Morgenthau famously notes:

The problem of foreign aid is insoluble if it is considered as a self-sufficient technical enterprise of a primarily economic nature. It is soluble only if it is considered an integral part of the political policies of the giving country - which must be devised in view of the political conditions, and for its effects upon the political situation in the receiving country. In this respect, a policy of foreign aid is no different from diplomatic or military policy or propaganda. They are all weapons in the political armory of the nation (Morgenthau, 1962:309).

Realists are sceptical that international institutions such as international organizations and regimes can govern world politics, because in realist perspective, the states follow *realpolitik*. In the Cold War era, major Western donor countries established aid agencies as a ministerial level. Realism provides a useful framework to understand the competitive behaviour of the USSR and the US, which both invested large sums of money into geo-politically important countries to establish military alliances. It, however, cannot fully explain a new reality of aid in the post-Cold War world (Waltz 2000). From the perspective of realism, after the collapse of communism in the late 1980s, the tradition of giving aid should have faded away. However, reality shows that the amount of aid has increased and the international cooperation in development grown with a more ‘pro-poor’ aid agenda.

However, the realist perspective still provides insight into aid studies, which believes that foreign aid is a projection of the commercial, political and security interests of donors into the international relations domain (Alesina and Dollar 2000; Bermeo 2011; Dreher, Nunnenkamp, and Thiele 2008; Dreher, Sturm, and Vreeland 2009). Although Dunning (2004) exceptionally argues that the end of the Cold War marks a turning point in donor intent in the politics, empirical studies have shown donor’s political preferences. For example, Alesina and Dollar (2000) empirically show that donors’ aid allocations are made by diplomatic and strategic considerations including colonial histories and geo-political alliances much more than by the recipients’ economic needs.

Liberalism: Although the intellectual tradition of the liberal argument can be traced back to John Locke’s *Two Treatises of Government* (1690) and Adam Smith’s *The Wealth of Nations* (1776), liberalism in international relations theory gained prominence in the time of Détente²⁵ in the 1970s, more significantly after the end of the Cold War. Both realism and liberalism consider states as rational actors, as well as the most dominant actors in the international arena. Liberalism, however, criticizes the realist over-emphasis on power and the assumption that all states have the same goals, and exhibit similar behaviours to achieve these goals. Liberalism has contributed to aid studies in the two following perspectives.

²⁵ A French word literally meaning ‘relaxation’. It is often used in explaining a period of easing tension in the middle of Cold War in early 1970s.

First, it emphasizes the possibility of international cooperation, as well as the role of non-state actors such as international organizations, non-government organizations (NGOs), and civil societies. In this view, the 'interdependence' of states, which enables them to cooperate through negotiations and institutional arrangements, is crucial, and a fast growing aid relationship and its governance are understood in this perspective (Keohane & Nye 2001). According to Keohane and Nye (2001), the 'interdependence' perspective considers foreign aid to be an 'age-long fact of human activity, which is obvious in the increasingly globalizing and interdependent world. Democratic peace theory, which claims that democratic countries rarely or never cross swords with democratic states, also originated from liberalism (Owen 1994). The liberalist perspective argues that development cooperation is an instrument of foreign policy used by liberal states generate cooperation, greater democracy abroad and, therefore, greater security for themselves.

Second, liberalism emphasizes unique characteristics and individual behaviours of states in terms of their international relations, thus, providing a useful lens with which to focus on the political and commercial dimensions of aid in each country. Liberalism takes into account 'domestic institutional configuration', such as the political institution, public opinion, and the preference of the diverse actors within the state as important determinants of aid policy .Noël and Thérien highlight the role of political ideology in aid allocation (Noël & Thérien 1995; Thérien & Noel 2000). Similarly, Tingley (2010) investigates how a donor's domestic political and economic environment affect aid behaviours, and empirically shows that conservative governments are likely to commit fewer funds to aid than progressive governments. These can be broadly linked to previous studies which show that conservative administrations are more likely to provide larger amounts of aid to trading partners or geo-politically important countries, while liberal governments provide more need-based aid (Fleck & Kilby 2006).

Realism and liberalism as two dominant rationalist IR theories with positivist epistemology have been challenged from a wide range of perspectives. Critical perspectives, broadly influenced by the neo-Marxist view perceive foreign aid merely as the manifestations of a discourse of dominant power, arguably imperialism and

colonialism, that reproduce capitalist relations between global North and South (Ferguson 1994; Escobar 1994; Hayter 1971; Wallerstein 1974).

Constructivism: Among the alternative views, *constructivism*²⁶ may be the most cited view in recent aid studies. As I will discuss in Section 4.1, some may argue that constructivism is not a particular theory, but an epistemology (Crotty 1998). The term originates with the epistemological stance that the observer can never be completely separated from the observed, and that observations are constructed out of one's own situation, experience and bias. As an ontological approach, constructivism is concerned with understanding how shared ideas become reality (Wendt 1995). Although constructivism, in the context of IR, has been regarded as a new approach which began with Nicholas Onuf in the late 1980s, its intellectual origin can be traced to previous sociological efforts (Berger & Luckmann 1966; Hacking 1999; Sismondo 1993). Constructivism criticizes the static assumptions of traditional IR theory and emphasizes that the concept of international relations is a social construction. The concept of structuration, as developed by Giddens (1979: 5) plays a central role with regard to how agents and structures are interrelated and conditioned by each other. Thus, agents are neither completely independent from the environment within which they have been socialized, nor entirely determined by it. The corollary is that the mutual relationship between agents and structures is an ongoing process rather than a rigid one.

According to Wendt (1995:71), the constructivist view in IR provides a two-part definition of social construction. First, it reflects that 'the fundamental structures of international politics are social rather than strictly material' (1995: 71). Second, it conveys that structures do not only shape behaviour, but also fundamentally define states' identities and interests (1995: 71-2). These state's interests, as well as threats to those interests, do not exist as objective facts, but are instead socially constructed through processes of meaning-making and identity-formation. These meanings and identities are typically summarised as 'norms', or more specifically, 'constitutive norms', which comprise a set of shared ideas, including ideologies and beliefs. Constitutive norms in international development, such as poverty reduction, aid

²⁶ It relies on the sociological concept of 'social construction' and commonly referred to constructionism as well, but it will be referred to throughout this thesis as simply constructivism

effectiveness and sustainable development make a state what it is (Finnemore & Sikkink 1998). Constitutive state norms and international norms are thus the accepted standards of behaviour and ways of doing and thinking that are taken for granted (Finnemore 1996; Acharya 2004). There can also be ‘behavioural norms’, such as giving foreign aid in a particular ‘appropriate’ way, that express the state’s identity. These are coherent patterned behaviours that make sense precisely because of who the state is. In this sense, the constructivist view is the non-materialist stance of realism (Acharya 2004; Acharya 2011). That is, states are considered unitary actors in international relations but a state’s interests are not purely material.

Similar to most constructivist research in other disciplines, both the main characteristic and the primary limitation of the constructivist view is a heavy dependence on descriptive single case studies. This results from the stance of constructivist epistemology towards a non-positivist qualitative methodological approach, which most often focuses on a particular context, but thereby restrains researchers from predicting other cases.

This section has provided an overview of existing theories of aid as well as the various theories dominating the IR discourse. The literature review highlights the politico-economic nature of aid and its complexity in governance. Some scholars also emphasize that foreign aid cannot be explained without motives such as moral vision and “humane internationalism”, particularly in the case of humanitarian assistance and altruistic behaviours of Scandinavian countries and some mega-philanthropists (Lumsdaine 1993; Stokke 1989). However, it can be also understood as a way of achieving legitimacy and soft power. Indeed, foreign aid has been carried out in diverse ways, in pursuit of a number of purposes and for many different motives which have historically influenced donor decisions to allocate aid and exercise policy. Furthermore, in a changing and globalizing world in which global aid institutions and power dynamics are shifting, aid is a political object, which involves hidden geo-political and commercial motives no matter as which stakeholder – not only as traditional powerful donor countries and MDAs, but also as recipient governments.

2.3.3. Aid and Development – *How Effective is Aid?*

This following section reviews the literature on aid effectiveness, which includes several competing theories, all based on the previously discussed different development theories and assumptions. However, this section does not discuss how aid contributes to development. Similarly, it does not seek to find which type and condition of aid can be more effective, nor does it suggest another theoretical framework on how aid works more effectively in achieving development. Rather, it demonstrates that rational choice institutionalism has been a dominant assumption which is inscribed into the technological object of my research, namely AIMS. It also shows that aid information is positioned at the core of the aid effectiveness debate. Finally, it finds a common underlying assumption that aid coordination is considered to be a core component in the effectiveness of aid, and aid information is considered to be a prerequisite in aid coordination as well as in aid effectiveness.

Foreign aid has been the most direct action and the largest financial source geared toward socio-economic development and poverty alleviation in developing countries since the Marshall Plan in the era of post-World War II reconstruction. The overall international development cooperation has undergone a series of trial and error in practice and has become more sophisticated through the theoretical debates on development. In spite of over \$4.6 trillion in ODA to developing countries between 1960 and 2008, there is lack of empirical evidence demonstrating the effectiveness of foreign aid in reducing poverty and promoting economic growth (Easterly & Williamson 2011; Burnside & Dollar 2004). On the contrary, most developing countries, Sub-Saharan Africa in particular, seem to have been caught in a ‘poverty trap’.

Intense debate on whether aid contributes to development goes back decades. In particular, the end of Cold War results in a growing recognition that aid relationships between donors and recipients as well as the conventional way of aid programs, commonly known as neoliberal ‘structural adjustment programme’ (SAP) by the World Bank. The study on the relationship between aid and development is massive, but Jeffrey Sachs’ *End of Poverty*, Easterly’s *White Man’s Burden* and Dambisa Moyo’s *Dead Aid* are some of the best-known contributions to this debate. The main arguments are as

follows: Firstly, *aid supporters*, including Sachs (2005), who was heavily involved in designing the UN MDGs, argue that insufficient foreign aid is the main reason aid does not work properly, based on the neoclassical model of capital accumulation. Supporters argue that more funding is needed for developing countries to escape poverty traps. MDAs and major OECD donor countries have supported this notion, and have led ‘top-down’ or ‘donor-driven’ agendas, such as MDGs (2000), the Paris Declaration on Aid Effectiveness (2005), and SDGs (2015) (Sachs 2005; OECD 2005). Conversely, *aid critics* argue that aid has not contributed to growth in developing countries because it has been implemented in the ‘wrong way’ (Easterly & Pfutze 2008; Bauer 1984). In this regard, scholars emphasize grassroots level implementation with accountability and careful consideration of local contexts (Easterly 2006), the complex nature of aid (Ramalingam 2013), and a broken feedback loop (Nielson & Barder 2009; Wittemyer et al. 2014). Thirdly, *aid sceptics*, including Moyo (2008), add another layer to the critique, arguing that the problem is neither the non fulfilment of donors’ commitment to foreign aid nor the manner of implementation. Rather, it is the aid structure itself, where downward accountability is hard to achieve.

Although the aid debate has been the subject of significant research and controversy, most aid scholars and practitioners focus on investigating which conditions make aid more effective, rather than questioning the fundamental existential reasons for foreign aid to be needed in the first place. Approaches to aid effectiveness in the literature have been varied and derive from diverse theoretical backgrounds including anthropology, and sociological institutionalism; however, the debate on aid effectiveness has been predominantly driven by economists. The following section reviews the dominant new-institutional economics view on aid effectiveness, which is the main rationale behind the use of information systems in aid management.

New-institutional economics as a dominant perspective: While I will not take the new-institutional framework to analyse the case brought forward in this thesis, it is important to review its key arguments in order to understand the common underlying assumptions about aid effectiveness. In fact, neo-institutional economics is the dominant rationale underpinning the global adoption of AIMS. New-institutional economics framework mainly relies on ‘rational choice’ theories of the firm to support the claim aid activities

are integral to the multiple ‘principal-agent problems’ involved in diverse stakeholders in the field of international development (Martens 2005; Knack & Rahman 2007). According to proponents of this perspective, principals either donor countries or taxpayers in rich countries have contracts with agents to pursue goals they cannot directly work by themselves. Donor development agencies play a role as a principal to local or international contractors whom they hire, as well as an agent for their citizens, as shown in Figure 2-2 below. In this chain of principle and agent, donors and governments are expected to make a rational decision in maximize their benefits, while simultaneously minimizing costs (Martens 2005).

The most commonly discussed challenge in this perspective is the increased transaction costs caused by multiple principle-agent problem at different levels of stakeholder relationships as discussed above (Acharya et al. 2006; Nunnenkamp et al. 2013). According to Acharya et al. (2006:6), “there are very strong reasons to believe that, all other considerations aside, aid often underperforms because it flows through too many institutional channels. This generates high transactions costs within each recipient countries, and so reduces the effectiveness of aid.” Scholars often discuss this increased transaction costs between stakeholders may harm the effectiveness of ODA in the following perspectives: i) deteriorating aid coordination, by overlapping similar aid activities in recipient governments and duplicating aid reporting procedures, as well as, misaligning the long term national goals of government (Crola & Saulière 2011; Bigsten & Tengstam 2015), ii) letting development partners to misallocate aid activities in ways that do not align the national development priorities of recipient governments and harm the institutional capacity of governments (Dollar 2000; Collier & Dollar 2002; Svensson 2006).

Therefore, minimizing the transaction costs increased by aid fragmentation (Knack & Rahman 2007) has been a major motivation behind the establishment of the aid effectiveness agenda to be discussed in the following section. The adoption of AIMS can be understood as one of the efforts of the international aid community towards this end.

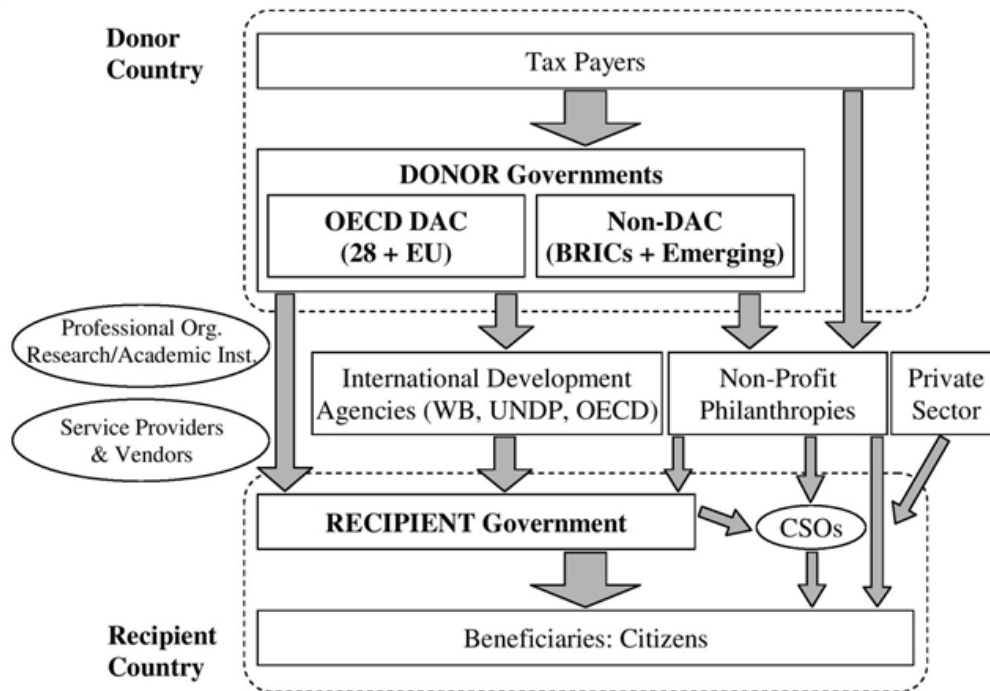


Figure 2-2. The Global Field of Aid and Stakeholders²⁷

Aid effectiveness studies: Building on the theoretical underpinnings of new-institutional economics and economic rationality, scholars have discussed the effectiveness of aid, especially with respect to the conditions in which aid effectiveness can be achieved in the following four different areas: i) *donors' politico-economic factors*, such as a proliferation in the number of donors and aid modalities including bilateral vs. multilateral and OECD DAC donors vs. new donors (Dreher et al. 2011), a lack of donor coordination, political motivation of aid, and an unwillingness to coordinate and align aid activities to the recipient government's strategy (Woods 2011), ii) *economic condition of the donor's aid policies and recipient government*, such as the composition of public expenditure (Mosley et al. 2004); social expenditure (Verschoor & Kalwij 2006); structural impediments of national industrialization (Fischer 2009); and the domestic macroeconomic policy (Burnside & Dollar 2004; Collier & Dollar 2002), iii) *social and institutional factors of recipient countries*, such as transparency and corruption (Ghosh & Kharas 2011; Burnside & Dollar 2004); ownership; aid accountability to citizens (Wenar 2011); social capital and institutions (Acemoglu &

²⁷ As explained in the List of Abbreviation in the beginning of thesis, DAC stands for Development Assistance Committee; CSOs stands for civil society organizations.

Robinson 2012); intra-governmental coordination failure (McCormick et al. 2007), and political instability. Among these, Burnside and Dollar's (1997) work may be the most cited study in aid studies, which argues that aid is effective to economic growth when governance is good. It argues that aid has a positive effect on economic development only in countries with sufficiently reformed policies and good institutions (Burnside & Dollar 2004). In sum, the mainstream of aid effectiveness studies dominantly framed by institutional economics and favoured by the MDAs including the World Bank, and the IMF have argued that 'good governance' in recipient governments are crucial to whether aid contributes to development and alleviates poverty.

Lack of coordination as an impediment to aid effectiveness: In addition to the focus on the recipient's side, there is a growing consensus that *aid coordination*, has to be improved for aid to be more effective. Lack of aid coordination is considered to be the main impediment to aid effectiveness (Woods 2011; Steinwand 2014; Lawson 2013). Aid coordination mechanisms occur at three different levels. McCormick, Mitullah, and Manga (2007) classified three levels of coordination: i) donor coordination, sometimes referred to *aid harmonization*; ii) donor-recipient coordination, commonly referred to as *aid alignment*; and 3) intra-governmental coordination.

Aid studies empirically show that a lack of coordination may undermine aid effectiveness. First, a lack of donor coordination results in a duplication of donor activities in a country (Rahman and Sawada 2012; Woods 2011). Spatial disparities may occur in aid flows, with some recipient locations being supported by multiple aid operations, while others are neglected (Woods 2011). Second, a lack of donor-recipient coordination leads to contradictory guidance at a particular project site and thereby; undermines the alignment of aid programs with the recipient country's long term national development plan (Halonen-Akatwijuka 2007; Lawson 2013). In addition, coordination failure increases the administrative burden and delivery cost to both donors and recipient government (Lawson 2013; Bigsten & Tengstam 2015), as well as constitutes a the negative long-term impact on state capacity (McCormick et al. 2007). Third, a lack of intra-government coordination may harm aid efficacy (Djankov et al. 2009) and erode institutions in recipient governments (Knack & Rahman 2007).

Based on this, what are the *impediments to aid coordination*? Firstly, scholars identify potential impediments to donor coordination such as donors' politico-economic interests in a certain aid type. For example, donors would favour the 'project approach' through which they can demonstrate visible results to taxpayers rather than 'budget support', which would contrastingly give the recipient government decision-making power (Halonen-Akatwijuka 2007); the desire for sustaining their autonomy (Uvin 1999); turf-protection and competition among donors (Kanbur et al. 1999); insufficient economic incentives and the overly expensive cost of coordination (Balogun 2005); the politicized purpose of NGOs (Barnett 2005); unbalanced power between donors and recipients (Robb 2004); and also intra-governmental politics within a recipient country (McCormick et al. 2007).

More importantly, aid scholars identify impediments to coordination by looking at changes in the landscape of international aid. The proliferation of donors (Acharya et al. 2006; Burcky 2011) are considered the most fundamental sources of impediments. Donor proliferation is commonly defined as "the increase in the number of donors giving aid to any one recipient country" (Burcky 2011). Yet another challenge is increasing aid heterogeneity, the multiplication in types of modality (i.e. project aid, program aid, budget support, technical assistance, and food aid) and in goals which may also originate from donor proliferation and a multiplication of development vision and conflicting goals (Mavrotas 2005). Empirical studies show that donor proliferation and aid heterogeneity increase complexity in development operations, making it increasingly difficult to monitor aid flows and to share aid information (Acharya et al. 2006; Knack & Smets 2012). This would increase difficulties in aid coordination and undermine the effectiveness of aid.

In summary, it is difficult to identify the concrete causes of aid ineffectiveness. Bourguignon and Sundberg (2007:316) investigate the causality between aid flows and development, asserting that "many of the questions that policy makers and economists would like to squeeze data into answering simply cannot be answered due to the complexity and 'noise' along links in the chain". Kenni (2008) points out lack of holistic approach and criticizes that aid effectiveness studies tend to find little significance between aid and development in general. It is hardly surprising that "questions of

whether, what kinds, and under what conditions aid might be said to work still remain highly contested” (Sumner and Mallett 2013:4). In spite of the dispute on aid effectiveness, there are still a couple of stances on which most aid scholars and practitioners would probably agree: i) aid information is a prerequisite for enhancing the effectiveness of aid, and ii) ICT can arguably contribute to better information management.

2.4. ICT and Aid Effectiveness

Many scholars have empirically studied ICT-enabled public sector reforms, commonly called e-government, and drawn attention to the differences between developed and developing countries in the approach to the ICT initiatives. Studies with a variety of cross-national data mainly in the Public Administration discipline provide insights on diverse contributing factors on e-government and the diffusion of ICT-enabled services (Rorissa & Demissie 2010; Relly & Sabharwal 2009; Gibbs et al. 2003). Although there is still a dominance of the technology transfer perspective, more contextualized research has been provided by ICTD scholars (Ciborra 2005; Madon 2009; Madon et al. 2009; Avgerou & Walsham 2000). Compared to e-government research in the context of developing countries, however, little research exists on the use of information systems in the international aid sector. In this section, I will review existing studies on the role of information and ICT in managing aid and enhancing aid effectiveness, in order to identify research gaps.

2.4.1. The Role of Aid Information

A common underlying assumption on the role of aid information is that of Moon and Williamson (2010:2), namely that “the comprehensive availability and accessibility of aid flow information in a timely, systematic and comparable manner” would increase transparency and allow stakeholders to coordinate better. This would support more effective delivery of aid and enable development activities to produce better results (McGee & Gaventa 2010; Ghosh & Kharas 2011).

As discussed in Figure 2-2, international aid mechanism involves key stake holders who play diverse roles in the process of aid flow at different levels :i) tax payers of donor countries, ii) donor governments, iii) intermediaries such as international development agencies, iv) recipient governments, and v) citizens of the recipient who are the beneficiaries of foreign aid. Sharing aid information on the three ‘*Ws*’ of aid flow: ‘*Who is doing what, where*’ would enable taxpayers to be informed on how their money is being used, thus encouraging taxpayers to become more supportive of foreign aid policy (Ghosh & Kharas 2011); and enable citizens to better understand aid activities and further participate in the feedback mechanism of development process (World Bank 2014b; Wenar 2011). More importantly, opening and sharing basic aid information is often considered a prerequisite for better coordination. The process of this information rationalization enables countries to more effectively manage their aid activities and avoid overlaps with other donors (Ghosh &Kharas 2011; Bigsten & Tengstam 2015), and enhances donor-recipient coordination by helping recipient governments to plan and predict their budgets better. Recipient governments thus take more ownership of the aid coordination mechanism and achieve better development outcomes, particularly in countries with higher aid dependency, and where foreign aid forms a large part of their budget.

However, there are still knowledge gaps in both theory and practice since transparency by itself has limitations and achieves very little or nothing (McGee & Gaventa 2010). Transparency can only offer a basis and means for effective action, and is not a sufficient condition for coordination (Sturges 2004; Fox 2007). Kaufmann & Bellver (2005) argue that it is still poorly understood how transparency and information accessibility can affect coordination and improve the quality of aid governance. In addition, in spite of widespread of transparency and information sharing initiatives, progress has been slow (Nunnenkamp & Thiele 2010).

One area of focus in the theoretical debate is the conceptualization of information itself. In much of the aid and ICTD literature, the concept of information and knowledge is inadequately problematized (Mason, 2008; Kleine & Unwin, 2009). The direction towards information sharing and transparency is a positive progress in theory. However, three main issues remain unanswered: Who produces aid information and knowledge?

For whom? For what purpose? Does information sharing aim to support beneficiary feedback or to report to the donors and attract more funding? Scholars further criticize the dominance of knowledge production in the field of aid. Narayanaswamy (2013) points out that information is treated as an isolated entity in knowledge in the development agenda, and argues that there is significant coercion in the transfer of information from developed countries, as the knowledge producer to developing countries, who arguably suffer a paucity of knowledge. The developed countries often set the criteria for what matters as 'valuable knowledge' and what does not (Escobar, 1995). However, in the current ICTD research, there is insufficient attention to and interest in who produces and consumes aid information for what; and what the surrounding power dynamics are.

The dominant theoretical explanation from economic institutionalism is that the publication of aid data represents a classic collective action problem among stakeholders where the costs of information sharing are seen as prohibitively high in comparison to the potential benefits (Acharya et al., 2006; Knack & Smets, 2012). Aid transparency initiatives, which have received a global attention over the last decades, mainly highlight the potential benefit of information sharing in the aid sector (World Bank 1998; OECD 2012a). With this backdrop, the use of information systems in the aid sector has been widely discussed as an innovative tool for this type of process of information rationalization.

2.4.2. Information Systems in Aid Management

Although there are plenty of practical reports mainly published by MDAs, there is a lacuna in studies on the role of ICT in aid management. There are two gaps identified in the academic studies in this arena. First, similar to the gaps in e-government literature (Al-Gahtani 2003; Lin et al. 2011; Rogers 1995), there is a dominance of technical-rational assumption in which the nature of the ICT adoption is seen as intrinsically beneficial action. Second, regarding the modality of aid, most studies examine emergency recovery and humanitarian assistance as the research case, while there is a lack of understanding in the role of information systems in managing ODA such as AIMS.

As envisioned by the *New Public Management (NPM)* and the notion of ‘good governance’, ICT adoptions in the public sector in developing countries has been widely discussed as a means to achieve government efficiency (Kettani & Moulin 2014), transparency (Bertot et al. 2010; Sturges 2004), improve service quality (Jaeger & Thompson 2003; Brown 2015) and citizen participation (Avila et al. 2010; Medagila 2012). In the field of aid, the notion of good governance, has promoted the use of ICT in aid management in aid-receiving countries. Although the concept of ‘good governance’ and NPM has been increasingly challenged theoretically, the practices based on the concepts are globally institutionalized and might continue in practice (Dunleavy 2005).

Researchers have often investigated ‘good practices’ in aid management and highlighted the adoption and transfer of the technology by analysing socio-organizational factors and impediments to successful implementation. Agustina and Fahmi (2010) introduce five AIMS and compare advantages and disadvantages. Kharas (2011) compares the Pakistan Development Assistance Database and the OECD Creditor Reporting Systems (CRS). Illustrating the case of using GeoCommons in the Haiti Earthquake, he further argues that the use of information systems and geo-referencing tools at the national level greatly help government tackle the gaps in aid transparency and effectiveness. A lot of operational guidance and practical reports published by MDAs adopt an instrumental view toward the use of ICT in aid management (UNDP 2010; OECD Publishing 2015; Wittemyer et al. 2014; OECD & UNDP 2006).

These studies are mainly based on the assumption that improvement in aid management can be achieved by facilitating the process of collecting, sharing, and managing aid information by using information systems (Wittemyer et al. 2014; Linders 2013; Agustina & Fahmi 2010). Linders (2013) further highlights the role of information in aid, and discusses how development agencies leverage an emerging concept of open data to improve aid effectiveness. With the backdrop of emergence of open data, which becomes powerful as part of socio-technical assemblage (Kitchin 2014), the common underlying assumption that open data contributes to better aid governance has given rise to popularity of the concept of *open development* (Smith et al. 2011; Smith & Reilly 2014). The recent reports *A World That Counts: Mobilising the Data Revolution for*

Sustainable Development, published by UN(2014), and *Big Data in Action for Development* by the World Bank (2014) continue spreading the concept. Some pioneering ICTD scholars investigate the potential and challenge of open data in a particular field of health (Sahay 2016), education (Schalkwyk et al. 2015), big data for development (Hilbert 2016). In the field of aid effectiveness, however, there are still missing links between open data, information sharing and better coordination and effective aid. Furthermore, the concept of open development itself has been characterized by strong ambiguity and vagueness, criticized for inadequacy as a solid framework for theorizing the complexity of development process.

There is a plethora of development economics research on aid effectiveness, using quantitative data from the existing aid database and information systems such as AidData²⁸, World Bank Data Portal²⁹, the OECD Creditor Reporting Systems (CRS)³⁰ (Tierney et al. 2011; Findley et al. 2011; Powell & Michael 2011; Kilama 2016). However, these are not information systems implemented in recipient countries and managed by local governments. Also the technological object of such studies is not the information systems. Rather, they conduct empirical analysis based on data from the systems. There are very few in-depth studies on AIMS. UNDP (2010) presents multiple-case study of AIMS in three post-conflict and fragile countries. The World Bank report (Weaver et al. 2014)³¹ on the Malawi Open Aid Map is one of few examples of single case studies on AIMS. It investigates the main goals of the AIMS and discusses the challenges as well. However, such research is a type of ‘lessons learned’ study and focuses on highlighting the potential of aid mapping and AIMS as a powerful tool for decision-making in aid governance.

The second gap in literature on ICT in aid sector is that most studies explore the specific context of *disaster relief and humanitarian assistance* in a short term period, rather than ODA management in a long term and regular base³². Altay and Labonte (2014)

²⁸ Source: <http://aiddata.org>

²⁹ Source: <https://data.worldbank.org>

³⁰ Source: <https://stats.oecd.org/Index.aspx?DataSetCode=CRS1>

³¹ In a collaboration with University of Texas at Austin’s Climate Change and African Political Stability team, in collaboration with AidData, Development Gateway, the Government of Malawi

³² Discussion on the difference was summarized in Section 2.3.1.

discuss the potential and challenges of ICT in managing humanitarian aid in the 2010 Haiti earthquake. Tapia et al. (2012) conducted four cases studies of ICT enabled coordination of humanitarian action organizations, and discusses cross-organizations, cross-technology, cross-hierarchy collaboration. Saab et al. (2012) argue that coordination at the headquarters level is insufficient, and highlight the field level coordination among ICT workers. Studies mainly discuss the potential and challenge of ICT in cross-organizational (multi-agencies) and cross level (national, regional and local) coordination in humanitarian assistance.

This research stream often benefits from the scholarly works from traditional organization studies (Crowston 1997; Adler 1995). Coordination issues arise at various levels of aid management (McCormick et al. 2007). As previously discussed in Section 2.3.3, a widely accepted concept of ‘aid coordination’ in development studies mainly takes the donor-recipient dichotomy and defines three levels of coordination between stakeholders: donor coordination, intra-governmental coordination, and donor-recipient coordination. However, research in ICT in humanitarian assistance more frequently cites Malone and Crowston (1990)’s conceptualisation of coordination as “the act of managing dependencies between entities and the joint effort of entities working together towards mutually defined goals”, and perceives coordination issue from a collective view, or at hierarchical levels: macro (agency), local (community), and micro (individual) level. This perhaps reflects the nature of a high degree of urgency and contingency in humanitarian assistance.

In addition, the studies of ICT in humanitarian assistance and disaster management covers what has been discussed in traditional IS research, regarding inter-organizational alliances through ICT: a market coordination structure versus a hierarchical coordination structure (Malone 1987); maintain inter-organizational coordination through a set of practices within ‘trading zones’ (Kellogg et al. 2006); as well as interoperability and governance based on standardized ICT based platforms (Markus & Bui 2012). The main challenges discussed in the research are associated with information problems as well. Ngamassi et al. (2011) address inter-organizational coordination problems between humanitarian NGOs in using ICT, and pay more attention to conflicting mandates and organizational issues. Researchers have also

identified impediments including the criticality of data quality in disaster management and timeliness of information (Fisher & Kingma 2001); unwillingness to share information (Ngamassi et al. 2011); as well as trust and misinterpretation of information (Saab et al. 2012). Bui et al. (2000) further propose a framework to minimize these challenges and develop a global information network in humanitarian assistance and disaster management operations, by utilizing ICT.

2.4.3. Problem Area

There are two main research gaps of studies in ICT in aid management. First, alongside the proliferation of AIMS initiatives and ‘good practice’ reports published by MDAs, most academic research is grounded in a technical-rational approach and tends toward favourable evaluation on the technology. Some ICTD scholars add socio-technical dimension to the discussion. Tusiime and Byrne (2011) explore the process of implementation and institutionalisation of the Commodity Movement Processing and Analysis System (COMPAS) developed by the World Food Program (WFP) in Chad, and emphasises a context-based approach. However, there is a lack of in-depth research considering the nature of foreign aid, which is embedded in both local context, as well macro-dynamic of global context. IS implementation in recipient countries is contingent upon multiple socio-technical and institutional factors that vary across countries. Second, most research has been conducted on the inter-organizational level coordination between NGOs in the context of humanitarian assistance, not the context of ODA. There is a lack of studies of the regular-based, national-level information systems for the purpose of ODA management. A comprehensive review of AIMS implemented in recipient countries is non-existent.

2.5. Summary

In this chapter, I have provided a theoretical overview of the research domain of ICTD. This chapter aimed to unpack the relationship between the concepts of *development*, *aid* and *ICT*. Two broad research gaps were identified in this literature review. First, framed by a dominant instrumental view on the role of information systems in aid management, the literature identifies a relative lack of socio-technical perspective of information

systems in the aid sector. Significant emphasis can be placed on the political nature of aid, as well as a socio-technical view of the role of IS in aid. The second is concerned with limited ICTD research focusing the macro structure of global aid governance. ICTD initiatives and practices in developing countries are shaped by a specific ideology, norms and visions of development. The review, and in particular the constructivist perspective in IR, suggests that the role of information systems in aid should be understood with a comprehensive, holistic view and broad institutional force constituting shared visions, rationales and expectations of ICT.

So far, the literature review allowed me to position my study in the narrow domain of ICTD, information systems in aid management in developing countries. Based on the gaps identified in the domain of my study in this chapter, I provide a broad research question for this study that synthesizes the research interests discussed in this chapter:

- How is technology adopted, implemented and used by government for aid management (ODA at state-level)?

I will further synthesize the problem area through the next chapter, which will focus on *institution*, *technology*, and *global field of aid* for framework of the study, and will specifically convert them into the specific questions guiding my thesis.

Chapter 3. Conceptual Framework

Building on the literature review on development, aid and technology, and the research gaps identified in Chapter 2, this chapter explains the conceptual framework used for this study. The framework is informed by two broad theories: *a theory of institutions*, and *a theory of technology*.

A theory of institutions, informed by sociological institutionalism, discusses the way in which norms, rules and schemes produce meaning for actors' social behaviour and interact within an organizational field. Building on the discussion of the central concepts of institutional theories, the discussion is expanded to the global field of aid. A conceptual link is established between sociological institutionalism and International Relations (IR) constructivist approach with a specific focus on *norms diffusion dynamics*, as well as the state's response to global norms as *norm localization* and *subsidiarity*.

A theory of technology, grounded in Science and Technology Studies (STS) and Information Systems (IS), aims at an understanding of the role of technology in the institutional account. This thesis conceptualizes information systems as a socio-technical system and discusses different interpretations of technology according to diverse stakeholders. Through the lens of social shaping of technology, special attention is paid to information systems failure in developing countries with a particular focus on the political and symbolic roles of technology.

Combining the theoretical discussions in two domains, Section 3.3 revisits a broad problem area of the study, and converts it into two main research questions. These questions will be examined through the research framework, which will guide the analysis and interpretation of empirical findings on the review of AIMS presented in Chapters 5 and 6, as well as the Indonesian AIMS detailed in Chapters 7 and 8 respectively.

3.1. Theory of Institutions

Institutional theory is very prominent in literature and is considered through a range of diverse disciplines, including the economic tradition of rational choice institutionalism (Williamson 1985; North 1990) and historical sociology focusing on path dependency (Mahoney 2000; Stinchcombe & Skocpol 1985). In this study, institutional theory is referred to as a body of theorizing efforts, which generally take a contrasting position to the rationalist or functionalist approach to organizations, and emphasizes a social, institutional and historical context (DiMaggio & Powell 1983; Scott 2001; Thornton & Ocasio 1999; Fligstein & McAdam 2012). Building on the discussion of key concepts of institutional theory, this section identifies the theoretical link between sociological institutionalism and the constructivist approach in IR discussed in Section 2.3.2, and extends the discussion of institutional theory to the field of global aid.

3.1.1. Conceptualizing Global Field of Aid

In this section, I first conceptualize the global field based on the core concept of the organizational field in institutional theory. The concept of *organizational field* has been a primary unit in institutional theory. DiMaggio and Powell (1983:148) define fields as “those organizations which, in the aggregate, constitute a recognized area of institutional life: key suppliers, resources and product consumers, regulatory agencies, and other organizations that produce similar services or products”. The concept of organizational field is now fairly established and drawn upon in institutional theory (Currie 2011). However, there are constant attempts to improve its conceptualization, boundaries, and operationalization in institutional analysis through the suggestion of alternative perspectives.

Meyer and Scott (1991:117) offer the concept of societal sectors as “a collection of organizations operating in the same domain, as identified by the similarity of their services, products or functions, together with those organizations that critically influence the performance of focal organizations: for example, major suppliers and customers, owners and regulators, funding sources and competitors”. Scott (2004:9) emphasizes “a functionally specific arena” in an attempt to broaden the range of organizational

relationships horizontally and vertically, by defining boundaries functionally rather than geographically.

The concept of ‘strategic action field’ was developed in Economic Sociology, although it was not explicitly discussed in the field (Fligstein & McAdam 2011). The strategic action field approach argues that actors in a field always share a common understanding of ‘what is at stake’, and develop tactics and strategies to form a coalition in an attempt to attain dominant positions through both competition and cooperation. To strive for dominance, actors need to possess social skills that enable them to read others’ perceptions, promote cooperation among actors, create, contest and reproduce rules and norms in favour of their advantages. (Fligstein & McAdam 2011).

The conceptual value of the *field* is that it provides an alternative perspective, compared to the earlier passive notion of organizational environment. The concept of the field highlights that it is not just “random collections of resources and schemas, nor are they constructs defined by disembodied dimensions, such as complexity and munificence; rather, they are themselves organized” (Scott 2001:136). While environments are passively given, fields are constructed. This constructivist view of organizational field has also been applied beyond organizational studies. By offering a comprehensive literature review on organizational field over the past three decades, Wooten and Hoffman (2016:13) encourage researchers to continue to develop the concept of a field as an analytical tool and to investigate “how it is developed, which field members contribute to its development and maintenance, how it is transmitted to other actors, and how it changes over time.” One example in IR is the work by Dingwerth and Pattberg (2009), which investigates how the field of transnational rule-making organizations emerged and is institutionalized in environmental politics.

There have been efforts, however, to further conceptualize fields beyond the nation-state and extend the analytical focus from an organizational or national scale to a global level, particularly in the field of international political sociology³³ (Brenner 1999; Buchholz 2016; Sassen 2007). Connell (2007) particularly points out the limitations in simply

³³ It is also sometimes referred to international sociology, global sociology and sociology of globalization.

scaling up existing concepts such as field, power and governance, which are rooted in Western societies. Other scholarly efforts to find the missing theoretical link between national and global fields includes ‘glocalization’ (Robertson 1995), ‘norm localization’ and ‘norm subsidiarity’ (Acharya 2004; Acharya 2011), which will be introduced and further discussed in Section 3.1.3. Buchholz (2016) has insightfully summarized these scholarly efforts and suggested ‘relative vertical autonomy’ between macro and meso-level properties and relations of global field structure. This analytical framework may be useful to understand the mechanisms of aid delivery involving diverse stakeholders at different levels, which Figure 2-2 illustrates.

It may be difficult to theorize the nature of a global field and to suggest a completely new conceptualization in the framework of this thesis. However, the significance of understanding the relationship between the national and global levels is highlighted in a way that can reflect the interdependence between them, as well as can avoid simple dualisms between the two levels. In this regard, the IR constructivist view discussed in Section 2.3.2 provides valuable insights as it opposes the static assumption of the structure-agent relationship, and conceptualizes the structures of the global field as social, rather than strictly material.

Keeping in mind that organizational fields are arenas within which there are similar actors, this study conceptualizes the field of aid as a highly established field, where the relationships between diverse stakeholders including states and multi development agencies (MDAs) are subject to historically evolved aid norms, governance, tensions and cultural dispositions, which jointly define a distinctive organizational field (DiMaggio & Powell 1983).

As further developed in Figure 2-2 and illustrated in Figure 3-1, the global field of aid has all the key characteristics of a ‘recognized area of institutional life’ with a constellation of stakeholders performing similar functions, but with differentiated roles and levels of practice. It includes key *suppliers* (typically donors), *resources* (financial, technical, in-kind aid, and knowledge), *product consumers* (recipients), *regulatory agencies* (typically MDAs, rule-making organizations), and *other organizations* (CSOs, media, professional communities) that produce similar services, products or *functions*

related to aid (DiMaggio & Powell 1983; Meyer & Scott 1991). These actors share norms and a ‘common meaning system’, perceive each other as peers, and frequently interact with each other. Similar to Scott’s (2001:136) views of fields “as a collection of contextual factors or conditions affecting organization structures or processes”, the behaviours of actors are influenced by both the domestic and global contexts in which they are embedded. Also, the global aid institutions are shaped by these key stakeholders, as well as the power relationships between them.

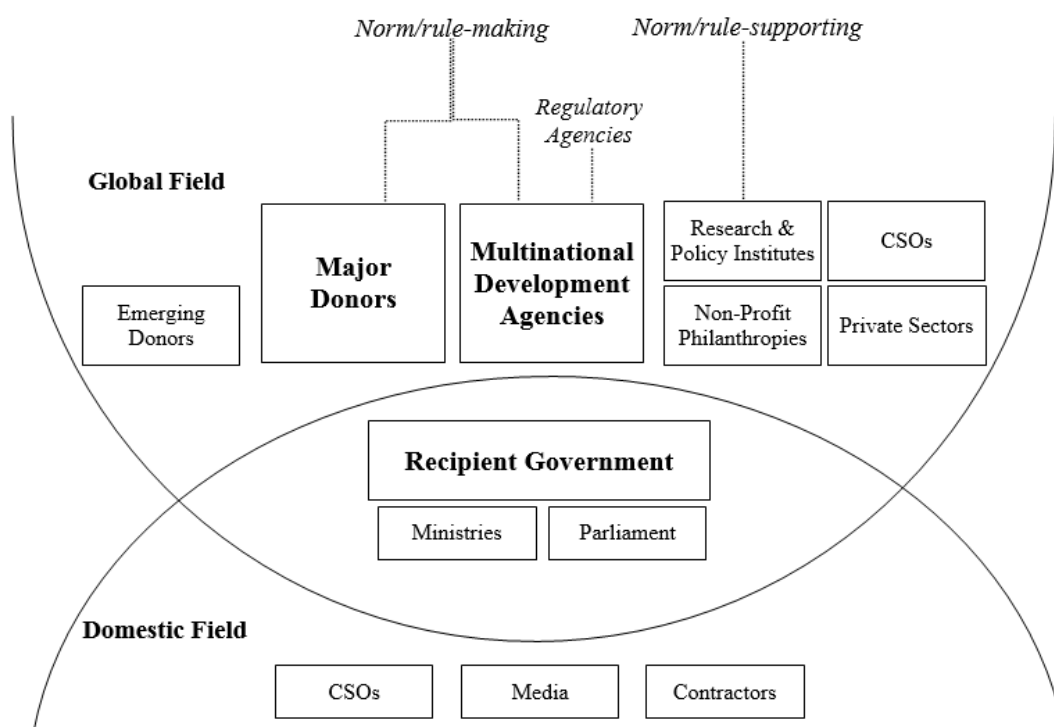


Figure 3-1. The Global Field of Aid and Stakeholders
(Developed on Figure 2-2)

3.1.2. Institutional Perspective: Isomorphism and Institutional Change

Institutional Isomorphism: Scholars tend to agree that the field shapes the behaviour of its members, once the organizational field is established. In the seminal work by DiMaggio and Powell (1983), the authors seek to account for why organizations in the same field often experience significant similarities and become ‘isomorphic’. The three-fold concept of institutional isomorphism they propose –*coercive, normative, and*

mimetic – has been widely applied in investigating the diffusion of a particular policy and a practice. These mechanisms could influence organizations in their similarities with peers and in gaining institutional legitimacy (DiMaggio & Powell 1983).

Coercive isomorphism implies that an organization adopts a particular structure and practice due to formal and informal external pressures from other influential organizations on which they are dependent. Such pressures could be perceived as persuasion, force, or invitation to dominant collusion. For instance, inter-governmental mandate, regulation, or trade and finance dependence are sources of coercive pressures. In the field of aid, recipient governments that have either entered into an agreement or endorsed an international aid agenda could be more cooperative with the rules. Those countries that are more reliant on aid might follow the aid standards and goals set by the international aid community more than other governments. As discussed in Chapter 2, diverse ‘good governance’ initiatives directly or indirectly involve NPM principles as a prerequisite, which act as aid conditionality (Ciborra & Navarra 2005; Santiso 2001).

Normative pressure primarily stems from the norms of a professional community. It influences organizations by advising and disseminating knowledge. Academics, technical experts, and the media are often in the position to influence recipient governments to endorse widely accepted norms of aid agendas. For example, developing countries receiving consultancy and technical assistance from leading aid experts or agencies are more likely to follow ready-made solutions and to adopt structures and practices suggested by these professionals. In the field of aid, as previously discussed, MDAs are often considered to be a source of normative pressure across recipient countries and helped to spread global norms (Finnemore 1993).

Mimetic isomorphism is encouraged and tends to take place when there is a high degree of competition or uncertainty in the field. Organizations tend to copy structures and practices that are considered legitimate, regardless of their functional and managerial efficiency. In Scott's (2001) explanation, the cognitive pillar of institutionalization is a process of imitating similar organizations in the same field that are regarded as more successful. The rapid diffusion of AIMS after the international endorsement of aid transparency initiatives such as the Paris Declaration and current trends favouring

openness among developing countries, can be understood as the result of mimetic isomorphism. In addition, regional competition between aid-receiving countries could be a source of mimetic pressure.

The seminal works by Meyer and Rowan (1977) and DiMaggio and Powell (1983) became one of the most cited studies in sociology and has greatly influenced subsequent research in the related disciplines. These early works on institutional theory, however, has been criticized for paying heavy attention to stability, homogeneity, and isomorphism while ignoring institutional change and organizational heterogeneity (Oliver 1991; Thornton & Ocasio 2005).

Institutional Change: Institutional accounts of organizations' behaviour, such as through the lens of the various isomorphic forms, provide a basis for understanding that taken-for-granted norms, regulation, and uncertainty might force organizations to adopt similar practices, and hinder them from pursuing rational strategic choice (Dimaggio & Powell 1991). However, such accounts pay less attention to the significant role of power and organizations' interests in the process of institutionalization. Rather, they emphasize institutionalization as an outcome rather than a process.

To overcome these limitations, institutional theorists have been addressing issues pertaining to the organizations' resistance to institutional pressure and institutional change. Conceptualizing institutional logics, Thornton and Ocasio (1999) explain that organizational forms and practices are legitimated by the "socially constructed, historical patterns of material practices, assumptions and values, beliefs, and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality." If two or more institutional logics are adapted to the same forms or practices, then the institutional logics conflict with each other, and this may lead to institutional change. The notion of institutional logic emphasizes that organizations are not passive enough to adopt taken-for-granted institutional structures, rather perform strategically with their diverse interpretations of rationality embedded in a given context (Thornton & Ocasio 2005; Townley 1997). This notion of institutional logic has similarity to a couple of other concepts, such as Weber's rationality (Kalberg 1980), Kuhn's paradigm, conceptions of control (Fligstein &

McAdam 2012), and cognitive prior (Acharya 2010). Among these, through the IR constructivist lens, Acharya (2010:21) suggests '*cognitive prior*' to explain "an existing set of ideas, belief systems, and norms, which determine and condition an individual or social group's receptivity to new norms."

Contingency views in institutional change aim to address the situations where established institutional structures become unstable and the possibility of a de-institutionalisation process is real (Deroy & Clegg 2015; Lawrence et al. 2010). Institutional structures are reproduced by the actors who accept the set of norms, rules, and cultural understandings as the dominant logic of institutions in the field while collectively changing the structures through active actions (Scott 2008; Giddens 1987; Greenwood & Hinings 2010). In this view, institutional change occurs in situations in which certain events take place and cannot be interpreted and categorized by applying the existing dominant logic of institutional structures. The incapability of codifying these events by the dominant institutions usually leads to two divergent consequences: either the actors improvise a new set of codes that become recognized and accepted as the legitimate means of understanding and enacting, or the actors find alternative codification schemes that potentially destabilize the dominant institutional logic. Events are defined as scenarios that are 'not known, unexpected, and unwelcomed by the dominant institutions (Bartley & Schneiberg 2002; Greenwood et al. 2011). When events take place and become knowable by actors in the field of practice, the flexibility of interpreting the meanings of events and the following rhetorical, discursive movements to establish the one legitimate means of understanding among other alternatives, becomes the source of institutional change.

Once the corresponding relationship between the dominant institutional logic and the emerging practical scenarios is, what Meyer and Rowan referred to as *decoupled*, the alternative possibility of codification becomes open and accessible to actors' practical knowledge, which means the dynamics of competing for legitimacy of reasoning (institutional logic) is established (Meyer & Rowan 1977a). The legitimacy of institutional logic is challenged, as actors gain alternative, competing means of interpretation to justify and prescribe a different logic of actions and relationship-building.

3.1.3. Insights from the Institutional Approach in International Relations

Before I illustrate the analytical framework, which is informed by the IR constructivist view, I identify the intellectual resonance between the sociological institutionalism and IR constructivist theories. Scholarly works in the field of IR, inspired by sociological institutionalism are discussed. In particular, I revisit the aid effectiveness debate in Section 2.3.3, where the dominant rational-choice theory was identified, and introduce the institutional approach to aid effectiveness.

World Society Perspective: The sociological institutional perspective often appears in IR literature. Finnemore's (1996) work provides a comprehensive overview of sociological institutionalism and its implications for the study of international political economy. He criticizes the '*disciplinary isolation*' in the field of IR and calls for attention to the sociological institutionalist view, which he describes as "a powerful set of arguments about the role of norms and culture in international life that pose direct challenges to realist and liberal theories in political science" (Finnemore, 1996: p.2).

Institutional theory emphasizes the importance of informal institutions such as norms, values and cultural aspects of organizational fields in determining the structure and activity/behaviour of organizations. Fields exert both material and resource constraints related to competitive efficiency on individual organizations, in rational choice institutionalist terms, as well as societal expectations of conformity with external normative and cultural standards. The intellectual resonance between organizational sociology and IR was initiated by sociologist John Meyer in the late 1970s.

Meyer conceptualized the *World Society*³⁴ perspective, which combines a sociological perspective for the analysis of norm and culture in the global community theory (Meyer et al. 1997; Meyer 1980), and the classical view on *state identity* as being constructed, as propagated by constructivists in IR (Wendt 1995; Katzenstein 1997). The concept of world society is a critique of the realist IR theories, which consider the state as an

³⁴ Initially, he suggested the concept of *world polity*. Reflecting the limitations of its heavy attention to isomorphism, and embracing the issue of globalization, the *World Polity School* further developed the concept of *world society*. The scholarly group is also known as the *Stanford School* (Buhari-Gulmez 2010).

egoistic actor in a controllable international environment. However, the state, which is both internally and externally sovereign, as well as its constructed roles is still at the core of this concept as well as its analysis (Meyer et al. 1997). This is also closely linked to the constructivist IR view. This institutional perspective raised questions that the realist IR scholars then dominating the debate could not fully explain: *why do states globally adopt very similar institutions and policies in spite of significant differences in socio-political and economic conditions as well as cultural and historical diversities?*

The main critique of the realist view was the paradoxical behaviour of states. World Society scholars argue that it may be explained by the concept of world society/polity, which is ontologically prior to states (Buhari-Gulmez 2010). Their works, in particular those on the emergence of NGOs and international social movements, are greatly influenced by the institutional understanding of the embeddedness of the organizations in a wider cultural environment, as well as the constructed nature of agency and the ritual character of action (Meyer & Rowan 1977b).

Conceptualizing Aid Effectiveness through the Institutional Lens: As stated at the beginning of this chapter, throughout this thesis I refer to institutional theory as a sociological new institutionalism, which stands in opposition to rational choice institutionalism. In Section 2.3.3, the new-institutional economic analysis was identified as the extant dominant theory of aid effectiveness. However, there have been efforts to investigate the issue of aid effectiveness and complex dynamics of aid mechanisms from institutional perspectives. The institutional approach highlights the ambiguous mandates and the different interpretations from stakeholders in a given field, which are the outcomes of contradictory pressures (Thornton & Ocasio 2005; Babb 2003). As discussed in Chapter 2, particularly in the complex field of aid with a proliferation of actors, as well as fragmented aid activities, organizational legitimacy can be obtained from diverse sources.

The concept of *legitimacy* has been essential to sociological organizational studies. Meyer and Rowan (1977) argue that organizations pursue legitimating external institutions on which they rely, rather than simply achieving organizational effectiveness. Scott (2008) identifies three central elements of institutions within an

organizational field: regulative, normative, and cognitive social systems, and explains legitimacy within three dimensions. While organizations try to sustain different types of legitimacy, they can acquire membership, approval, and resources. This leads them to continue to exist and to hold power in the field. Suchman (1995:574) further develops the notion that “legitimacy is a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, beliefs and definitions”. This provides the assumption that organizational legitimacy is a socially constructed reality, which can be redefined in accordance with changing norms, rules, and other informal and formal institutions in the field. For example, the behaviour of state actors, including recipient government and donor agencies, is shaped by this need for legitimacy in the field of aid. Pressure to endorse global norms like poverty reduction, and to participate in the internationally agreed development agenda often structures the behaviour of actors in the field. In this process, ambiguous mandates between the symbolically adopted agenda, which satisfies other stakeholders, and action ‘on the ground’ are often found in organizations (Meyer and Rowan, 1977).

Meyer and Rowan (1977) described this *decoupling* process as an organizational situation of inevitable discrepancy, in which compliance with social expectations can be symbolic rather than substantive, leaving the original practices largely unchanged. *Decoupling* occurs because of what organizations actually do and what organizations ought to do in formal structures, which only serve as symbols (Scott, 1987, p. 507). State policy change is often a direct response to an international mandate, which cannot be simply understood as cognitively rational or functional. In this situation, international agreements, domestic commitment to them, and policy action documents of globally accepted norms such as aid effectiveness, are often interpretable in diverse and sometimes even contradictory ways. Gulrajani (2014) explains:

The contradictions between development-policy goals like poverty reduction, neo-liberal economic policies and neo-conservative foreign policy might also contribute to significant slippage (Cooke, 2003; Murphy, 2008). Donor nations have naturally glossed over such inconsistencies with the use of diplomatic buzzwords, unrealistic policies and a proliferation of new strategies and solutions, all in their bid to maintain support and legitimacy from multiple quarters (Cornwall and Brock, 2005; Quarles van Ufford, 1988).

This is reminiscent of the previously discussed constructivist approach in IR. The constructivist view takes an account of state actors' behaviour deriving from a diversified perspective about aid, development and national interests. Scholars study the manner in which international norms and dynamics strongly influence state actors' behaviour. Both donor agencies and recipient governments are embedded within the multiple levels of environments including global, regional, and domestic field, where diverse stakeholders contest, negotiate and collaborate each other. Global aid institutions, including aid norms and rules, define the behaviours of states embedded in their domestic governance due to the states' pursuit of legitimacy in the global field. In spite of its suffering from the 2007 financial crisis, for example, South Korea joined the OECD DAC, a rich donor's club, becoming a donor of global aid community, which serves as a visible symbol of national strength. Likewise, the commitment of a recipient government to be a part of global efforts on poverty reduction as an emerging donor, for example, Indonesia's efforts in the South-South Cooperation (SSC) are a powerful symbol of a legitimate member, same as a 'good government' of aid receiving countries.

Constructivist view in IR: The constructivist approach in IR theory has been inspired by sociological institutionalism (Finnemore 1996). As discussed in Section 2.3.3, it contends with the realist and liberalist views, and criticizes them as being too rigid. The constructivist lens has been regarded as an approach based on two assumptions: i) agents/states are situated in a setting that is material and social, with relatively more emphasis on the latter characteristic, and ii) this setting influences how agents or states perceive their own interests (Checkel 1998). Essentially, constructivists tend to place significance on the interaction between agents and structures, which is likely dictated by norms (Wendt 1999). In general, norms have been defined as "a standard of appropriate behaviour for actors with a given identity" (Finnemore & Sikkink 1998). Norms provide rules and guidance to determine behaviours and they are generated as actors pursue their respective interests and disseminate ideas in networks and organizational settings (Collins 2013).

Constructivists perceive that agents/states and structures/international norms interact, and interpret norms as "collective understandings that make behavioural claims on actors" (Checkel, 1998: 327-328). Rather than considering norms as mere rules that

regulate behaviour, constructivists tend to perceive norms as defining elements in actors' identities (Checkel, 1998). With a significant focus on norms during the last two decades, there has been growing interest in examining how norms diffuse and influence the behaviour of states at the international level (Landolt, 2004; Park, 2006).

3.1.4. Norms Dynamics and Global Politics

Building on the discussion on the theoretical link between sociological institutionalism and IR theories in the previous section, the constructivist framework is hereby proposed to investigate the questions that have come up in this thesis:

- *How do global norms emerge, how are they diffused and institutionalized in the global field? (Norm diffusion)*
- *How do the states vary in adopting the norms? (Norm localization)*
- *How do the states challenge the global norms and contribute to institutional change in the global field? (Norm subsidiarity)*

In the previous section, I discussed how sociological institutionalism has influenced the field of IR, in particular, the constructivist IR view. The following section highlights what the constructivist approach can offer when it comes to institutional thinking. It provides useful analytical frameworks in four ways:

- capturing the trans-national dynamics of stakeholders in the global field (Buchholz 2016).
- emphasizing the role of global norms and its social construction – *how norms emerge, are diffused and institutionalized* (Finnemore & Sikkink 1998; Acharya 2004).
- focusing on the role of state as a unit of analysis and the heterogeneity of the state's behaviour – *how states adopt norms differently*.
- investigating institutional change in the global field – *how states challenge the global norms and contribute to institutional change*.

Norm Dynamics: How and why particular global norms were being adopted by an increasing number of state actors and finally diffused across the globe has been one of main research areas in the field of IR (Finnemore and Sikkink 1998; Risse et al. 1999; Checkel 2002). Norms are in general perceived as standards of behaviour of actors based on intersubjective validity (Finnemore 1996). Scholarly efforts on norm diffusion process have provided useful frameworks to understand a process of social construction of norms, and ways in which state actors socialize in international community.

In organizational sociology, scholars have offered a critique of conventional institutional theory. Hasselbladh & Kallinikos (2000:700) point out:

neo-institutionalism bypass the central issue of the social construction of rationalization, which it treats in terms of structural isomorphism, i.e. diffusion of the same or similar structural patterns across populations of organizations. (...)

The constructive nature of norms, ideas, technology and rationalization cannot be ignored as Kallinikos & Hasselbladh (2000) argue:

Questions such as how some ideas or techniques achieve a remarkable visibility while others fail to do so, or why some administrative patterns or objects diffuse relatively unchanged while others are renegotiated and reinterpreted to a degree that makes them hardly recognizable (profit centres in public organizations) cannot be answered by standard versions of neo-institutionalism.

It is crucial to investigate how norms are constructed, emerge and are institutionalized, and why a particular norm is diffused, while other norms fail in the international arena. Answering these questions can be achieved by adopting constructivist lens from IR. Finnemore and Sikkink (1998), building on the constructivist view, provide the most influential and frequently cited analytical framework to investigate norm dynamics and political change in the international field. While their study focuses on the “norm’s life cycle” and rules related to women’s rights and the laws of war, the framework has been applied to diverse area including studies on international politics in Southeast Asian countries (Acharya 2004; Poole 2013; Stubbs 2008).

Finnemore and Sikkink (1998), in their seminal paper ‘*Norm dynamics and political change*’, present a three-stage model of the norm diffusion process:

- i) **Norm emergence**: Norm leaders arise and frame their issue to reach a broader audience by using existing international institutions. The new norm begins to attain domestic and international attention that culminates in a *tipping point* at which there is a critical mass of state actors embracing the norm.
- ii) **Norm cascade** stage is “characterized more by a dynamic of imitation as the norm leaders attempt to socialize other states to become norm followers” (Ibid: 895), and in which the norm diffused through the international field. Although there is no significant domestic coalition advocating for the adoption of an international norm, states adopt it in response to the combination of international pressure “for conformity, desire to enhance international legitimation, and the desire of state leaders to enhance their self-esteem” (Ibid:895).
- iii) **Norm internalization**: when the norm becomes taken-for-granted and influences behaviours of the state change at the end of norm cascade, norm internalization occurs in the state. In this final stage, the norm is “no longer a matter of broad public debate (Ibid: 895).”

Stage	1. Norm emergence	2. Norm cascade	3. Norm internalization
Actors	Norm entrepreneurs with organizational platforms	States, international organizations, networks	Law, professions, bureaucracy
Motives	Altruism, empathy, ideational commitment	Legitimacy, reputation, esteem	Conformity
Dominant mechanisms	Persuasion	Socialization, institutionalization, demonstration	Habit, institutionalization

Table 3-1. Stages of Norms (Finnemore and Sikkink, 1998)

*Norm entrepreneurs*³⁵ are the most important actors who persuade other actors to adopt norms particularly during the first and second stage. However, norm entrepreneurs, their motivation and means of influence may vary at each stage, as shown in Table 3-1. Completion of the ‘norm’s life cycle’ is not an inevitable process. Scholars in other disciplines have developed a number of concepts that seem rather compatible with Finnemore and Sikkink’s notion of norm entrepreneurs, including ‘meaning manager or meaning architect’ (Lessig 1995), ‘idea brokers’ (Smith 1993), ‘policy entrepreneurs’ (Kingdon 1084), ‘transfer entrepreneurs’ (Dolowitz & Marsh 1996), ‘institutional entrepreneurs’ (Beckert 1999), which all share the emphasis on institutional change.

However, compared to the aforementioned terms, the concept of norm entrepreneurs focuses more on trans-national issues. In the global field of aid, MDAs play a significant role in the spread of norms. Finnemore (1993), using a famous metaphor, describes “international organization[s] as teachers of norms”. Acharya (2010) further argues that international organizations act as ‘rule-makers and innovators’, beyond ‘teachers of norms’:

They initiate the demand for new norms and provide an initial crucial setting within which norm entrepreneurs persuade others to accept them (...) International institutions are also the arena for judging the success and failure of norm diffusion, which can be ascertained from changes to their own institutional design and apparatus (...) (Acharya, 2010:24)

In summary, Finnemore and Sikkink’s conceptual framework highlights the dynamic mechanism of how a certain norm is diffused and provides an understanding that exceeds a linear view. In this thesis, the framework helps to investigate the following questions:

- *How has the aid effectiveness norm, envisioned by a particular rational-choice institutional economics model, acquired international visibility and been institutionalized in the global field aid?*
- *How has a particular technology, AIMS, been promoted and diffused to reproduce the norm of aid effectiveness?*

³⁵ The term, norm leader is also used interchangeably in their studies.

- *In this process, whose norms matter? Who has power to drive the norms?*

However, the Finnemore and Sikkink's norm diffusion model have been criticized due to its structure-centric view as well as its inability to understand micro-level diffusion within a particular state actor. IR Constructivist scholars have further offered a refined explanation of the norm diffusion in various contexts as well as put more attention to the role of state in resisting, adopting and internalizing international norms (Keck and Sikkink 1998; Acharya 2004; 2011; 2013; Zimmerman 2016).

In the process of norm diffusion, it is important to address *what roles states play*, and *how states respond differently*? One limitation of institutional analysis addressed in previous sections is a general view of organizations operating in the same field as being homogenous and singular actors. Institutions are often expected to persist over time, but are subject to change as well (Beckert 1999; Thornton & Ocasio 1999). The constructivist IR view addresses this concern. Finnemore (1996) argues that "common global norms may create similar structures and push both people and states toward similar behaviour at given times. However, if the body of international norms is not completely congruent, then those isomorphisms will not be stable". Finnemore (1996:342) further asserts that "isomorphism is not homogeneity; it does not create identical behaviour outcomes". The norm dynamics discussed in the previous section, however, largely focus on transnational agents, particularly powerful actors in the global field. The focus is also on the processes that shape norm diffusion at the international system level, rather than the role of norm-takers, which are in general states (Acharya 2004).

Norm localization and subsidiarity: The constructivist approach further helps to understand institutional change taking place in the international arena, and provides an analytical lens to investigate the role of the state in the process (Wendt 1995; Finnemore 2008; Buhari-Gulmez 2010). Acharya suggests the concept of *norm localization* (Acharya, 2004, 2011, 2013), defined as "the active construction of foreign ideas by local actors, which results in the former developing significant *congruence* with local beliefs and practices" (Acharya, 2004: 245). For transnational or international norms to

be localized, they should be compatible with *cognitive prior*³⁶ in a region or state. Norm localization requires local or regional stakeholders to actively borrow and reconstruct international, outside norms (Capie 2012). Paying attention to localization offers a shift away from the focus on global norm entrepreneurs – often external to the norm targets – to local or regional agents and norm-takers, typically those in the Global South (Capie 2008; Capie 2012). Examples of studies that adopted notions of norm localization include studies in the context of Southeast Asian countries (Capie, 2008, 2012; Collins, 2013; Kraft, 2012; Rüländ, 2009).

As opposed to *norm localization*, Acharya (Acharya 2011) further suggests the concept of *norm subsidiarity*, which he defines as “a process whereby local actors create rules with a view to preserve their autonomy from dominance, neglect, violation, or abuse by more powerful central actors” (Acharya, 2011:95). The concept originates from the common notion of subsidiarity referring “a principle of locating governance at the lowest possible level – that closest to the individuals and groups affected by the rules and decisions adopted and enforced” (Slaughter 2004:34). Subsidiarity “encourages and authorizes (local) autonomy” (Acharya, 2011:97).

Although local actors are ‘imported norm’-takers in localization, Acharya argues that localization is also the “active construction (through discourse, framing, grafting, and cultural selection) of foreign ideas by local actors, which results in the latter developing significant congruence with local beliefs and practices” (Acharya 2004:245). By contrast, in subsidiarity, local actors can perform as norm-rejecters and may export locally created norms. Both concepts highlight the role of local agencies including state actors.

³⁶ In Section 3.1.2, I found conceptual similarity of cognitive prior with other notions of institutional logic, rationality, conceptions of control.

	Norm localization	Norm subsidiarity
Vector	Inward-looking	Outward-looking:
Role of State	Always norm-takers	Norm rejecters and/or norm-takers
Norms focus	Global norms are imported for local use (Acharya 2004)	Local agents may reject global norms, and export or universalize locally constructed norms (Acharya 2011)
Analytical focus	The process of reshaping existing beliefs, practices and foreign norms in the local context; making foreign norms consistent with a local cognitive prior (Acharya, 2011:98)	Relations between local actors and external powers (Acharya 2011)
Related research (Southeast Asian context)	Capie, 2008, 2012; Collins, 2013; Kraft, 2012; Rüländ, 2009	Democracy (Tomsa 2017), security (Katsumata 2011; Capie 2008), humanitarianism (Bellamy & Beeson 2010; Capie 2012), human rights (Katsumata 2009), health, HIV/AIDS (Collins 2013)

Table 3-2. Summarizing Key Concepts of Norm Localization and Norm Subsidiarity

However, the concept of norm subsidiarity does not pay sufficient attention to investigate how the subsidiary norm constructed by local agents can challenge the existing dominant transnational norm, and lead to the possibility of institutional change in the global field, which will be investigated further in this study. The concept of institutional entrepreneurs, from organizational sociology, provides a useful lens to bridge this gap (Garud et al. 2002; Greenwood & Suddaby 2006; Beckert 1999), as it responds to the question of how it is possible that organizations can change from “isomorphized regimes” within a field (Clegg 2010). By conceptualizing local actors which construct subsidiary norms as institutional entrepreneurs, further investigation can be conducted on, how the local actors can actively engage in shaping the global-level institution, and restructure global organizational field by negotiating, challenging the existing norms, and creating subsidiary norms.

Building on the synthesizing of analytical concepts informed by the constructivist view in IR, and institutional theories from sociology, the conceptual framework of this thesis is constructed in order to answer the following questions:

- *How has the transnational norm (aid effectiveness) been internalized, sometime ignored or resisted, and negotiated by states?*
- *Whether the norm is localized or resisted, and replaced by states?*
- *What role do subsidiary norms play in the global field; and what role can states play as institutional entrepreneur?*
- *In this process, how has norm-supporting technology been resisted, adopted, and abandoned by the states?*

The conceptual framework will be further synthesized and illustrated in Section 3.3, as well as focused on addressing the main thesis questions.

3.2. Theory of Technology

So far, I have detailed the theory of institutions, and identified the theoretical link with the constructivist IR framework. It conceptualizes the global field of aid, and explains the process of global norms diffusion and the varied responses of states to the norms and technology that inscribes the norms. This thesis explores the role of AIMS by investigating their global diffusion, as well as their sustainability failure in the context of recipient countries. Now I move on to the theory of technology, which conceptualizes information systems as socio-technical systems embedded in a domestic and global context.

3.2.1. Socio-Technical Perspective

Bearing in mind the research gaps identified in Chapter 2, I positioned my study in the domain of ICTD, with the sub-focus of the use of information systems in the aid sector. Although the research directly investigating AIMS is limited, I extend the literature review to a wide range of research of ICT in aid management including the context of humanitarian assistance, e-governance, and non-academic research mainly conducted

by MDAs. I highlighted the technical rational, a-contextual perspective, which focuses ICT as tools for achieving aid effectiveness within the new institutional economics approach as the dominant research trend.

Technological Determinism in the Aid Field: Before I discuss the socio-technical perspective in information systems research, I would like to highlight the pervasive technological determinism in the aid sector. As discussed in Section 2.2.1, there has been continuous scholarly debate on the view of development and the role of technology in achieving a varied understanding and concept of development. I did not adopt any particular theory of development, nor did I support any assumption on how technology could better lead development. However, it should be highlighted that the view of technology as an innovative ‘tool’ for accelerating development has been dominant in development theories and practice, in spite of the plurality in development and the political nature of aid. Although modernization theory and dependency theory contend with each other, they share the linear assumption that technology transfer would greatly help state-led development. The technological deterministic view as a theoretical approach has become outdated in the field of STS, information systems and science of knowledge (Smith & Merritt Roe 1998; Bijker 2010). However, this does not necessarily imply that such a perspective does not exist in current development discourses and practices (Cherlet 2014).

Former American President John F. Kennedy referenced the Marshall Plan, which is commonly considered as the origin of foreign aid, in his *Special Message to the Congress on Foreign Aid*, on 22 March 1961:

This [Marshall Plan] was followed by Point 4-an effort to make *scientific and technological advances* available to the people of developing nations. These new nations need *aid in loans and technical assistance* just as we in the northern half of the world drew successively on one another's capital and know-how as we moved into industrialization and regular growth.

(J.F. Kennedy, US President, 1961)

Even after fifty years, an almost identical view of technology can be identified in one of the most influential reports in the aid field, the World Development Report published by the World Bank:

Knowledge is like light. Weightless and intangible, it can easily travel the world, enlightening the lives of people everywhere. Yet billions of people still live in the darkness of poverty (...) Poor countries and poor people differ from industrial ones not only because they have less capital but because they have less knowledge (...) Communicating knowledge involves taking advantage of new information and communications technology.

(World Bank, Knowledge for Development, 1998)

As briefly introduced in the beginning of this thesis, the optimism and the unconditional belief in the ‘magic’ of technology developed by the global North is a view that continues to exist in the discussion on AIMS. The former World Bank President, Robert Zoellick expresses his excitement therein:

Imagine this: A parent in a village, with a laptop or mobile device, can access aid information in real time through geo-mapping platform. She can see which schools have feeding programs and which go without (...) She can see how funds are spent, and learn about the purpose, cost and results of each (...) She can upload her own data and mobilize the community to demand more targeted donor programs.

(Robert Zoellick, World Bank, 2012)

In the global arena, technology is often considered as a ‘good and simple tool’ that can transfer development knowledge from the global North to the South. As discussed in Section 2.2.1, the post-developmentalism school considers the entire knowledge system in international development as a dependency on Western hegemony (Narayanaswamy, 2013; Kleine & Unwin, 2009). As argued by Cherlet (2014:15) the “technological deterministic view ignores the intense co-evolution of technology and society, whereas the epistemic determinism ideology ignores that all knowledge is situated and embedded in its particular social context.” Although the debate on epistemic determinism in the global field of aid is not a core question of this thesis, I take on their concern about the dominance of the deterministic view and top-down approach in the aid field, as well as the proposed notion that knowledge is ‘situated’ or ‘socially embedded’.

Such dominance of deterministic views in the development discourse and aid practices has influenced the research seeking cases of ‘good practice’ in the transfer and adopting of technology (Al-Gahtani 2003; Lin et al. 2011; Rogers 1995). This calls for an alternative approach reflecting what STS scholars have brought to the theoretical lens of technology, which unpacks the socio-political and cultural forces in which technology

interacts. Building on this, I adopt sociological institutionalism as a broad theoretical umbrella in investigating the aid effectiveness norm and the AIMS diffusion in the global field of aid. This needs a more inclusive approach taking into consideration the social, political nature of technology, rather than only focusing on technical and economic rationality.

Framing AIMS as Socio-technical Systems: Although the abovementioned deterministic view of technology is often favoured by MDAs, there exists a more nuanced approach which conceives an ICT innovation as being locally and socially constructed. This thesis follows the socio-technical tradition of information systems and therein develops the conceptual framework (Avgerou 2002b; Walsham 1993; Hirschheim et al. 1996). As discussed in the introductory chapter, it would be a mistake to approach the complexity of the challenges that surround information systems in developing countries only from a technology acceptance perspective, or solely from a social deterministic view (Walsham & Sahay 2006; Avgerou 2010). Particularly the global field of aid, in which different stakeholders' politico-economic interests exist at diverse levels, is subject to socially constructed and historically evolved norms, rules, and culture. Therefore AIMS are *inextricably* linked to the relationships with global aid norms, rules of use, as well as participation by different levels of human stakeholders.

This study conceptualizes AIMS as a socio-technical system in which different factors and interests collide, ranging from social, cultural, and political to economic. The socio-technical premise on information systems includes the mutual constitution of people and technology (Leonardi & Barley 2010), and the contextual embeddedness and situatedness of technology (Orlikowski 1991; Avgerou 2001). Based on these common premises, socio-technical approaches in IS research differ from the dominant 'technical-rational', 'instrumental' or 'tool' view in several ways. Primarily, the technical-rational view places excessive emphasis on the technological aspects where contrastingly, in socio-technical approaches more attention is paid to social and political roles and structures. Secondly, while dominant views seeks generalization and best practices, socio-technical approaches focus on context – oftentimes, as context can be viewed as matrices of people, technology, history, and geo-political location, this is not simple to investigate (Avgerou 2001). Thirdly, the linear and simplified rationale is denied by the

socio-technical perspective – rather, such approaches seek to reveal the complexity and hidden dynamics involved in designing, implementing and using technology, as well as the unexpected outcomes of information systems.

Increasingly, institutional analysis has been informed by this socio-technical perspective, and has been applied to the study of IS (Walsham 1993; Orlikowski 1992; Avgerou 2002a; Mignerat & Rivard 2009). By conceptualising ICT initiatives as socially embedded actions, based epistemologically on the *social constructionist* view, an important research stream has been formed which deviates from the dominating a-contextual and a-political view (Avgerou 2001). Building on this, Orlikowski & Iacono, (2002) further develop and conceptualize technology as an *embedded system* which is shaped by a particular context, and also influences its dynamics and trajectories. This ensemble view of technology comes from the limitations identified in three dominant views; i) the ‘tool’ view: technology is seen an object for achieving certain goals; ii) the proxy view: technology is not a focus but is discussed for some other economic and social criteria, and iii) the nominal view: technology is simply under the name of some other objects.

This new and comprehensive perspective of technology as an *embedded system* has been widely adopted, particularly in the field of ICTD. In ICTD studies, the institutional perspective is discussed within the broad perspective of the social embeddedness approach, which argues the role of ICT has to be considered in the local context of a developing country. The social embeddedness perspective challenges the underlying assumptions of one of the dominant ‘transfer and diffusion’ perspectives, as being misleading and oversimplifying (Avgerou 2008; Avgerou 2001). In fact, Avgerou (2003) argues that the tool-and-effect association of ICT and development can be misleading and emphasizes a context-embedded process that is entangled with institutions in a developing country. More nuanced research, based on case studies in the context of developing countries, which reflect global changes, have been studied in depth (Qureshi 2013; Walsham 2001; Avgerou 2002a). For example Avgerou (2001) argues that technology is not necessarily transferred or diffused to a developing country; rather, the country conceives technological innovation according to locally determined features and their own perspectives.

ICTD research based on the social embeddedness approach builds on social theories such as the sociological perspective, which also includes institutional theory (Bass et al. 2013; Avgerou 2002a), economic sociology (Li 2014), structuration theory, as well as the STS perspective through actor network theory (Puri & Sahay 2003; Walsham & Sahay 1999). It tends to broaden the research arena to address “conceptual relationships such as technology/society, agency/structure and technical reasoning/institutional” (Avgerou 2010:4).

As discussed in Section 2.3, there is a continuing mainstream of deterministic treatments of information systems, prioritising the study of ICT effects as a shortcut to achieving NPM principles including government efficiency, and improving aid transparency and effectiveness (Linders 2013; Tierney et al. 2011; Synergy International Systems 2014; Weaver et al. 2014). Studies with a variety of cross-national data, mainly conducted in the discipline of Public Administration, provide insights on diverse contributing factors on e-government and the diffusion of ICT-enabled services (Rorissa & Demissie 2010; Relly & Sabharwal 2009; Gibbs et al. 2003). Despite this, public sector reforms following NPM are the dominant perspective, which tend to oversimplify the inherent complexities of ICT adoption in aid mechanisms, and overlook its broader consequences.

3.2.2. Social Shaping Nature of Information Systems

The *social shaping of technology (SST)* has been widely accepted and utilized in IS research. It embraces an extensive scope of research that intertwines technological evolution with socio-political agenda (MacKenzie & Wajcman 1999). Within SST, technology can be interpreted and reshaped ‘in situ’ by users (Orlikowski 1992; MacKenzie & Wajcman 1999). Jørgensen et al. (2009:80) argue that SST is promising in the areas of “technology where visions are manifold, societal interests conflicting, and applications and markets are non-existing or still under construction” such as the area of emerging high technologies and the field where the interests of diverse actors collide. The open data initiatives and the popularity of the ‘open development’ concept (Linders 2013; Smith & Reilly 2013), as well as the global popularity of AIMS in the global field

of aid, are arenas in which the complexities of diverse stakeholders' interests inevitably collide. Thereby, SST becomes a useful lens for further analysis.

The intellectual origin of the SST is a critique of technological determinism in the STS discipline. STS scholars criticize the deterministic perspective that framed the conceptualization of technology, which took it for granted and assumed that; i) the nature of technology and the directionality of change are pre-determined and unproblematic; and ii) technology has a necessary and determinate 'impact' on society (Williams & Edge, 1996). More concretely, this perspective implies that there is a relationship of causality between technological change as an independent variable, and social and organizational change as dependent variables. However, this view frequently overlooks difficulties in implementing technologies and their failures to deliver predicted outcomes. STS scholars, contrasting this, pursue a broad range of theoretical views to focus on the interplay between technology and society. They argue that technology does not evolve following an inner logic, but it is a social product, so that the 'black-box' of technology must be opened (Winner 1993). Two of the most prominent theoretical approaches of STS are first, the *social construction of technology (SCOT)*, which focuses on the social interactions during the design and development of technology and relevant social groups (Pinch & Bijker 1984; Bijker et al. 1987); and second, the SST which draws on concepts of configuration and trajectories in response to the question on the notion of 'closure' in SCOT (MacKenzie & Wajcman 1999).

SCOT scholars, in general, conceive technology as not determining human action, but as being socially constructed by humans. The enabling and constraining effects of technological artefacts are viewed as *interpretive* practices in a particular context. The stages in which this happens include 'interpretive flexibility', 'stabilization', when relevant social groups engage, and 'closure' when the technological contents of the artefact, are linked to the social by assigning certain meanings to the technological artefact (Pinch & Bijker 1984). However, when it comes to closure, SCOT has been criticized due to its privileging of the 'design stage' over the 'use stage'. The possibilities of interpretive flexibility may be recurrent and endless (MacKenzie & Wajcman 1999; Jørgensen et al. 2009). Despite this, it is important to not ignore the potential that lies within reinterpreting technology at a different time, and a different stage, as well as in

reference to a different group of users. Through this process of reinterpretation, it can be found that the role of technology may in fact be different from the one initially assigned to it.

Social shaping of technology (SST) researchers re-theorize the concept of design and development of technology by using concepts of 'configuration'. This means that technology developers can only preconfigure the technological artefact that continues to be re-configured beyond its initial design stage in the local site of use. SST conceptualizes users as agents of technological change (MacKenzie & Wajcman 1999) and emphasises its political aspects in the process of 'configuration'. Within the perspective of SST, the concept of *interpretative flexibility* remains valid. Each interpretation is produced by developers, designers, funders, users and non-users. The interpretation is influenced not only by the situated context within which it occurs, but also by the content, logic and roles of the artefact itself. These constitute particular underlying meanings, including meaning about success, failure, and to whom this applies. Thus, to understand how technology is embedded, shaped and utilized in society, it is crucial to understand how different groups view and interpret technological artefacts.

A further contribution of the SST approach is, in the perspective of SST, "*technology also shapes outcomes by shaping later technologies*" (Dutton, 2014:183). A 'legacy technology' enables or constrains people at different stages of design, implementation, use and diffusion by shaping later technologies.

[O]nce a technology is in place, it will influence future developments by making it easier to carry on in a similar path or direction. This is not only a technical path, but also one that has been adapted to institutions and users in ways that make technical change all the more difficult since change requires an alternation of the practices of institutions and users, which involves social as well as technical innovation.

Having established the different ways in which technology can be contextually viewed and having introduced the predominant theories which underline the complexity of technological constructivism, it makes sense to move from theoretical approaches to the symbolic role of technology. Sociological institutionalists have challenged the validity of rational choice in decision-making (Hirscheheim & Newman 1991; Wagner et al.

2002; Hirschman 1982; Eoyang 1983). It has been argued that policy and technology are often adopted as a rationalized myth and symbol in managerial decision-making. Organizations may symbolically adopt technology and policy practices in order to comply with external environments and to achieve social legitimacy. Often, formal structures and visible symbols of compliance are intentionally created in an effort to re-interpret compliance, showing the impact of symbolic meaning of technology.

Considering the methodological benefits of SST as providing a comprehensive, systems embedded approach to understanding technology, the SST approach appears particularly useful for the purpose of this thesis. From the perspective of SST, understanding norms, rules, and aid governance in the global field of aid are significant in the justification and de-construction of how a particular technology has developed, who drives its diffusion, and who benefits from usage. Framing technology through an SST perspective is useful as a multiplicity of interpretations about AIMS can be approached, thereby avoiding the linear, straightforward answers oftentimes found by the dominant approaches. Also, the symbolic meanings of technology and its interpreted roles can vary depending on different stakeholders, and can be taken into account.

3.2.3. Information Systems Failure in Developing Countries

The socio-technical perspective is also of use when it comes to interpreting information systems failure in the context of developing countries. Persistent efforts have been made to understand information systems failure in the academic field of Information Systems (Hitt & Brynjolfsson 1996; Lyytinen & Hirschheim 1987; Markus 1983; Wilson & Howcroft 2002). Particular attention has been paid to a high rate of failure i) in the public sector (Berman & Tettey 2001; Heeks 2004), and ii) in the context of developing countries (Richard Heeks 2002b; Sahay & Avgerou 2002).

Avgerou and Walsham (2000:1)'s statement "successful examples of computerisation can be found, but frustrating stories of systems which failed to fulfil their initial promise are more frequent" in the context of developing countries, remains valid. The evaluation conducted by the Independent Evaluation Group (IEG) of the World Bank indicates that more than 70% of its ICT projects supporting public sector governance have experienced

substantial delay and cancellation (Independent Evaluation Group 2011). Similarly, Heeks' (2003) estimates that 35% of e-government projects in developing countries can be considered total failures, while 50% are partial failures, and only 15% are successes.

With this in mind, a lot of ICTD research has been conducted into explaining the epidemic failure of ICT in developing countries (Baark & Heeks 1999; Braa & Hedberg 2001; Masiero 2016b; Richard Heeks 2002b; Braa et al. 2004). However, there exist two main concerns that must be further addressed in the existing literature conceptualizing IS failure, namely: i) the social shaping nature of failure, ii) a lack of attention to the 'macro' dynamics. Again, the socio-technical perspective shows merit in its consideration of socially constructed phenomena, and complexity.

3.2.3.1. Social Shaping Nature of IS Failure

Ascription of failure or success is socially constructed, thus there is no distinctive boundary in defining it as an evaluation process; further its criteria rely on individual perspectives and subjectivity (Wilson & Howcroft 2002; Bartis & Mitev 2008). The notion of social shaping is still valid to understanding the nature of conceptualizing failure and success. Wilson and Howcroft (2002) study various perceptions of failure from the project, system, and user perspectives to discuss that in the existing literature. Based on the premise of the social shaping of technology, they argue that it is important, in understanding information systems failure, to conceive it as a process in a particular context. Since failure and success are related to interpretive flexibility and relevant social groups, there is no distinctive boundary in the definitions; also, any ascription should be understood as a complex social process rather than as a linear outcome of technology. Power dynamics among relevant social groups may contribute to the legitimization of particular views in this process as well. Thus, attention has to be paid to who has the power to decide failure, and from whose perspective.

In the context of developing countries, the concern about IS failure can be intensified due to additional pressures for success, over-optimistic hope for the role of technology, and the high opportunity costs of ICT investment (Avgerou, 2008). Furthermore, as discussed in the previous chapter, paradigms of development policy are subject to

frequent revision, particularly in the ICTD initiatives where new visions and fads continuously emerge and disappear (Kleine & Unwin 2009). Given such frequent policy revisions, as well as the complexity of context, in which diverse local and international stakeholders are vested with differing interests, performance and the way it is evaluated is likely to be socially constructed. Thereby, norms and established rules determine the 'rights and wrongs' of performance and conduct.

Measurement, Indicators and Rankings in Global Governance: In the global field of aid, monitoring and evaluation with the use of indicators and indexes for assessing success and failure has been increasing rapidly (Davis et al. 2012). Measuring the performance of public organizations and use of indicators in measurement have become widely accepted features. Monitoring and evaluation frameworks and indicators for measurement are often developed by rule-making organizations such as MDAs, powerful NGOs and think tanks. These phenomena have two important characteristics. First, such measurement has been globally diffused beyond the borders of state, and has become internationally standardized. Thus, it reflects the power dynamics of global governance. Second, quantification by using diverse indicators has been pertinent. There has been growing preference for quantification and statistical analysis over qualitative and subjective analysis. In the global field of aid, monitoring and evaluation systems on government performance, particularly on transparency (Williams 2015), development outcomes (Michener 2015), and governance (K. E. Davis et al. 2012) have expanded rapidly. Considering this, attention needs to be paid to: What is the nature of measurement and indicators? Who creates, drives, and promote such measurement? What is the effect of participating in measurements and using indicators, or alternatively not participating? Is it better performance or better legitimacy that is being achieved in the field? These questions can be answered by investigating the nature of the measurements and indicators in question.

Many scholarly efforts have been made to theorize measurements and indicators as social processes. The relevance of a social object as constructed by quantification, as well as theories of the nature of statistical practice, categorization, and standardization, have been widely examined from the perspective of STS (Espeland & Sauder 2007; Porter 1995; Bowker & Star 1999). For example Hacking (1990) investigates the birth

of statistical analysis. Additionally, Espeland & Sauder (2007:1) suggest the concept of *reactivity*, noting that “people change their behaviour in reaction to being evaluated, observed, or measured”. This is reminiscent of Bentham’s panopticon. The constructive nature and social consequence of indicators and rankings should be highlighted. Tracing the processes of measuring, indexing, ranking, categorizing and kind-making offers insight into understanding power dynamics in particular forms of knowledge, norms and rules produced in the global field. A diffusion of measurements and indicators and their institutionalization require states to be monitored, which may push political leaders toward accepting the norms behind the indicators (Davis et al., 2012). ‘Naming and shaming’ is often used as a popular strategy to enforce international norms and rules (Hafner-Burton 2008). Thus, it is also fundamental in the global field of aid, to consider which measurements and indicators, driven by whom, are more powerful than others, and why this may be the case; further, the question arises in which circumstances and to which state ‘naming and shaming’ would ultimately lead or not lead to an advocacy result. The constructivist lens borrowed from IR helps in conceptualizing how measurements and indicators are created and promoted, and how they influence the behaviour of states.

3.2.3.2. Missing ‘Macro Dynamics of Aid’ in IS Failure in Developing Countries

Similar to the constructivist approach, ICTD scholars often take into consideration the socio-cultural realities of local context. This is associated with the theorizing efforts to understand the local context of ICT innovations and how they are socially embedded in context (Avgerou & Walsham, 2000; Avgerou, 2001), constituting a growing body of knowledge to address the gap between system design and local contingency (Avgerou, 2002a; Bada, 2002; Benbasat & Weber, 1996; Braa, Monteiro, & Sahay, 2004). As discussed above, many studies have been conducted to explain IS failure in the context of developing countries. One of the main challenges, according to Heeks (2002), can be described as the problem of the “design-reality” gap. Scholars argue that the origin of the problem of failure lies in the gap between the professional knowledge of IS development and the actual settings of organizational practice (Richard Heeks 2002a; Masiero 2016b; Avgerou 2008). These arguments still apply with greater cogency to

Lyytinen and Hirschheim (1987)'s analysis of IS failure and their categorization of types of failure, namely process, interaction and expectation failure.

Consequently, IS failure in the field of ICTD has predominantly been framed as a micro-situated struggle to bring together multiple stakeholders and to generate a contingent fit between local use and the dominant logic of international aid institutions (R Heeks 2002; Nicholson et al. 2000; Krishna et al. 2006; Braa & Hedberg 2001). Such explanatory accounts mostly focus on the project-level or domestic context of a developing country, in which the state coordinates multiple local interpretations and objectives. State actors, in this context, are widely seen as the indispensable intermediary translating and coordinating the expectations and actions of diverse local actors at the government, municipal, community, and individual levels within the recipient country (Evans 1992; Al-Jaghoub & Westrup 2003; Braa et al. 2004).

As stated in the previous chapter, there is insufficient attention to the macro-level dynamics in the global field of aid in ICTD research. Indeed, foreign aid is an established field dominated by states, where the relationship between donor and recipient countries is subject to the historically-evolved rules, governance, tensions, and cultural dispositions, which jointly define a distinctive organizational field of state actors and MDAs. The successes or failures of information systems have rarely been explained by examining the role of the state embedded in the global field of aid.

In addition, only very little literature seems to exist on how ICTD initiatives influence aid policy and international aid regimes, which furthermore shows a significant gap in ICTD studies. Foreign aid has arguably been most instrumental when it comes to socio-economic development. Therefore, the inextricable connection between aid and development cannot be denied. Nonetheless, most ICTD initiatives follow the goals, norms and rules set out by the international aid regime, which constrain and regulates participant behaviour. The identification of this very research gap is crucial in studying AIMS, which are designed to manage aid and institute global aid principles signed by member states and MDAs. Building on the literature review in Chapter 2 and the recognition of the fact that there is insufficient attention to global context of aid and the role of state in ICTD, the conceptualization of AIMS failure will be presented in the

following section. The framework is based on insights drawn from the concept of sustainability failure in order to provide further guidance in answering the main research questions.

3.3. Analytical Framework

This thesis seeks to answer the following two key questions:

- *How can we understand the global diffusion of AIMS?*
- *Why do AIMS fail in sustainability?*

As discussed in this chapter, the conceptual framework consists of two theories: the theory of institutions, and the theory of technology, which are synthesized to frame my research. Before presenting the analytical framework, this section conceptualizes the key concepts of the study.

Conceptualizing AIMS: Before conceptualizing AIMS failure, it is necessary to review a common definition of AIMS again, and to redefine it in a more systematic way for application to the analysis in this thesis. As briefly introduced in Chapter 1, based on a plethora of research on aid effectiveness premised on the new-institutional economic approach, a number of ICT applications commonly referred to as AIMS have been developed and implemented.

AIMS is a generic term. Although there are a few defining concepts suggested by MDAs, there is no clear definition of AIMS. Studies on information systems in aid management, as I discussed in Section 2.4.2, have not yet reached a general consensus on conceptualizing AIMS. In the literature, ‘AIMS’, ‘aid management platform’³⁷, ‘development assistance database’³⁸ and more recently ‘open aid platform’ co-exist and are concurrently used in a confusing manner. This perhaps results from the lack of

³⁷ This is also a brand name of a particular AIMS by an AIMS provider, named Development Gateway, which I will further discuss in Section 5.3.

³⁸ This is also a brand name of a particular AIMS by an AIMS provider, named Synergy International, which I will further discuss in Section 5.3.

academic research on AIMS, as well as from the practical focus of AIMS driven by MDAs. AIMS research is often viewed as an applied field with significant focus on the practice practice and application of information systems rather than on the philosophical foundation and theory building behind it. Thus, the research may be subjected to vague concepts. However, a-theoretical approaches can easily fail even to provide important practical recommendations. The conceptualization of AIMS thus needs to be explicitly articulated to explain how AIMS can be academically differentiated from other systems.

I will begin with a commonly accepted practical definition of AIMS by the OECD. The report *'Role of Aid Information Management Systems in Implementing the Paris Declaration on Aid Effectiveness at the Country Level'* by the OECD DAC Working Party on Aid Effectiveness provides the most often cited definition of AIMS. It defines AIMS as "IT applications, usually databases, which record and process information about development initiatives and related aid flows in a given country" (OECD & UNDP 2006).

UNDP (2010:1) provides a more articulated definition:

- AIMS are software applications that record and process information about development activities and related aid flows in a given country, in order to assist the recipient country in managing the aid it receives. (...) AIMS thus fulfil two purposes at the same time:
- AIMS strengthen a government's capacity to plan, implement, monitor and evaluate the use of public resources; and
 - AIMS enable aid coordination, information-sharing, and domestic and mutual accountability.

This explanation has proliferated and has appeared on project documents and AIMS websites in many cases of AIMS implementation (Synergy International Systems, 2009; Techno Vista, 2015).

Although the expectations and technological functionalities of AIMS might slightly vary, the common characteristics of AIMS can be identified. Through this study, I define AIMS as:

A national-level, single-window information system implemented in a given recipient country, to assist the government to manage aid effectively and bring development partners to share aid information and better coordinate.

To avoid confusion, I note that many donor countries and international development agencies have recently developed aid tracking platforms in order to increase transparency of their aid activities. However, information systems which have been developed and implemented in donor countries and MDAs are not categorized as AIMS³⁹. One of the main objectives of donor's information systems is 'upward accountability' to their tax payers and donors, contrary to AIMS implemented in recipient countries.

Conceptualizing Sustainability Failure: As discussed above and keeping in mind the present theoretical lens of 'design-reality gaps', scholars have found that well-implemented information systems often fail to meet stakeholders' expectations in developing countries (Richard Heeks 2002a; Heeks 2003) . Masiero (2016) further develops the notion with the recognition of complex causal chains encompassing institutional, historical, cultural and organizational gaps. The outcome of these gaps is often associated with what Heeks (2002) referred to as "sustainability failure."

Heeks points out the lack of studies focusing on the long term sustainability of ICT initiatives in developing countries, and suggests *sustainability failure* as part of the concept of "partial failure" in which main goals are not achieved, or produce significantly undesirable outcomes (Heeks 2002; Heeks, Mundy, and Salazar 1999). Heeks (2002) referred to sustainability failure as situations where the information system initiative "at first succeeds but is then abandoned after a year or so".

Building on Heeks' proposition, Kumar & Best (2006:11) propose five principal modes of the sustainability failure model:

- Financial/economic sustainability failure, e.g. a donor supported program loses its funding after some fixed period of operation and has to shut down.

³⁹ Active cases of donor's practice include Development Tracker by UK DFID (<https://devtracker.dfid.gov.uk>), Open Aid by Swedish International Development Cooperation (SIDA) (<http://openaid.se>), Open Aid Italia by Italian Development Cooperation (<http://openaid.esteri.it>). For more details, please see Section 6.2.3. and Table 6-2.

- Cultural/social sustainability failure, e.g. some social group within the community gains a benefit from the intervention but some others are hurt. This tension is not tenable over time and results in the subsequent sustainability failure.
- Technological sustainability failure, e.g. the field hardware and software fail to track upgrades to the equipment within the central government offices and thus, over time, their ability to network degrades and fails.
- Political/institutional sustainability failure. e.g. the relevant local institutional leaders leave the critical organization and without larger institutional structures in place the project fails.
- Environmental sustainability failure, e.g. a project that sources a large number of PC's without plans for their eventual disposal or reuse when they reach the end of their effective life.

ICTD scholars investigate the issue of 'sustainability failure' in different contexts including e-government in India (Kumar & Best 2006), Malaysian public e-services (Sutan et al. 2013), and rural telecentres in India (Best & Kumar 2008). Such studies make an effort to find critical failure factors including people, cultural, organizational, and managerial ones in a particular context.

However, this concept has some limitations including its broadness of scope, which tries to include almost every possibility of IS failure (Lyytinen & Hirschheim 1987; Paul 1999; Bartis & Mitev 2008), and its project-level focus. State actors in this context, are widely seen as the indispensable intermediary only when it comes to translating and coordinating multiple stakeholders' expectations and actions (Evans 1992; Al-Jaghoub & Westrup 2003; Braa et al. 2004). Understanding how states function can help to explain information systems failure in the global aid context, particularly in cases where the main sources of institutional change lie at the global-level, rather than in the domestic context (Ramalingam 2013; Moyo 2008).

Much of the disuse of these information systems must be explained by tracing the change in power relations, ideologies, and institutional arrangements among the donors and international organizations, which are normally beyond the influence of organizational, domestic institutional matters dealt with by state actors in developing countries. Contingency in the field of international development has rarely been accounted for or theorised in the ICTD literature to explain system failure.

In addition to this, existing theories of information systems failure do not differentiate between the non-use of information systems in combination with online presence and possible cooperating agencies, and the cases of AIMS which have been shut down. In addition to the aim of understanding the global diffusion and failure of AIMS, this thesis further investigates how we theorize sustainability failure of information systems, and the role technology can play in the process of failure.

Recognizing that the ascription of failure is socially constructed and diversified, in this study, sustainability of AIMS is defined as a narrow concept:

A permanent shutdown of IS, which were once implemented, used, but abandoned after a relatively short period (such as three years after the launch), without any transformation, considerable left-over innovation or thoughtful reflection, (e.g. evaluation study, report for future innovation)

Together with the AIMS definition, sustainability failure can now be used as guidance in the creation of a conceptual framework for the further course of research.

Analytical Framework: This section summarizes an analytical framework which is applied to the studies at hand and to the two main research questions, which then leads to the discussion of the research design in the next chapter. First, based on the discussion in the previous two chapters, key concepts utilized in this thesis are re-defined and summarized for the purpose of clarification. They will provide the pillars constructing the research design.

Based on the clear definition of the key concepts, it is possible to integrate the concepts into a broader research design which allows for the in-depth investigation of the issues presented. This works by integrating the institutional approach into the global field of aid, as shown in Figure 3-2. Through the combination of the view of social shaping of technology, a comprehensive approach into analysing the role of AIMS is developed.

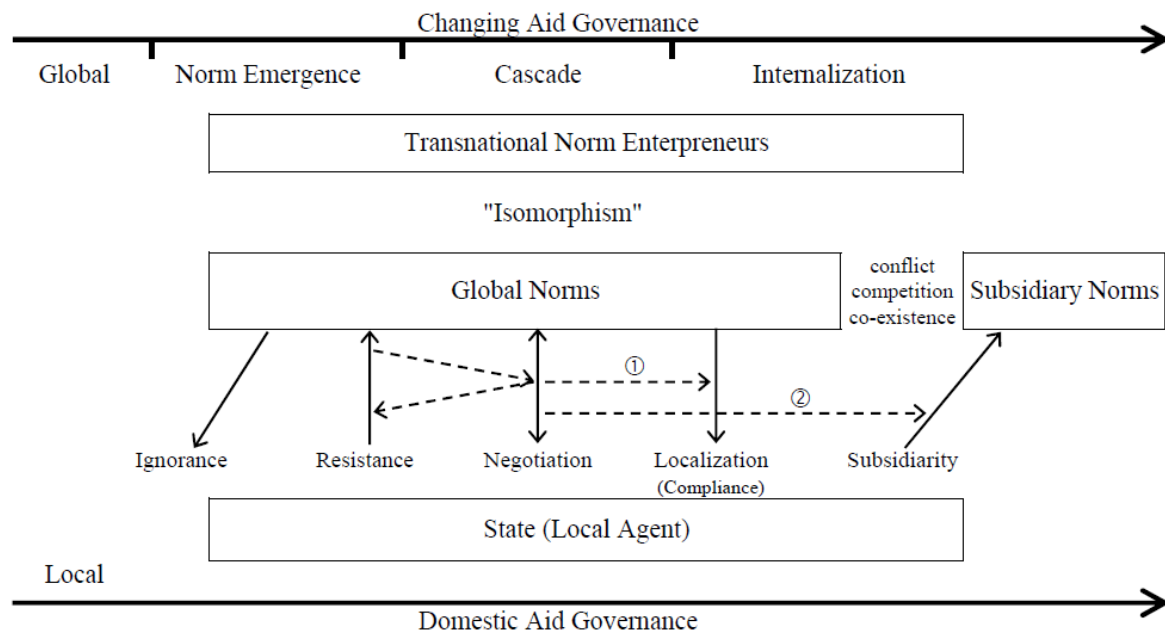
Concept	Definition by author	Related sections
AIMS	Socio-technical information systems implemented in a given recipient country, to assist the government to manage aid effectively and bring development partners together to share aid information and better coordinate.	3.2.1 5.1 5.2 5.3 6.2
Global field of aid	An established field as a recognized inter-national area of institutional life with key <i>suppliers</i> (typically donors), <i>resources</i> (financial, technical, in-kind aid, and knowledge), <i>product consumers</i> (recipients), <i>regulatory agencies</i> (typically MDAs, also referred to as rule-making organizations), and <i>other organizations</i> (CSOs, media, professional communities, and other rule-supporting organizations) that produce similar services, products or <i>functions</i> related to aid (developed on (DiMaggio & Powell 1983; Meyer & Scott 1991)).	2.3.3 3.1.1 6.1
Sustainability failure (IS)	A permanent shutdown of IS, which were once implemented, used, but abandoned after a relatively short period (such as three years after the launch), without any transformation, considerable left-over innovation or thoughtful reflection (e.g. evaluation study, report for future innovation)	3.2.3 4.3.3 6.3
Super-norm	A grand norm as a superordinate concept, which is a set of interrelated norms (for example, ‘aid effectiveness’ is a super-norm of ‘aid transparency’, ‘aid coordination’, ‘aid alignment’, ‘aid harmonization’, etc).	2.4 3.1.4 6.1
Global aid institution	Through the thesis, I use the following terms interchangeably: global aid institution, structure, governance and regime. I view the notion of aid agenda, norms, policy, practice, and mechanisms as subordinate concepts of aid institution. Global/international/foreign aid community and, industry are used synonymously with the global field of aid.	3.1.1 6.1

Table 3-3. Key Concepts Defined in This Study

There are two fields in which the recipient state is embedded, namely the domestic and the global field. Changing aid governance has been shown to often take place on a global level and in three steps: norm emergence, cascade, and internalisation. Building on Finnemore and Sikkink’s (1998) norm dynamics, global norms are expected to diffuse following the three stages discussed in Section 3.1.4 – norm emergence, cascade and internalization. The diffusion of norms and norm supporting technology takes place through the process of three isomorphic mechanisms – coercive, normative and mimetic in the global field, discussed in Section 3.1.2. In this process, transnational norm

entrepreneurs play an important role in convincing other members to become norm followers (norm-takers) in the field of aid.

Entering into the phase of internalization, local agents, typically the states, takes different actions characterized by ignorance, resistance, negotiation and compliance. Global norms and practice (technology) can be ignored, resisted and negotiated by the states. Norm localization or subsidiarity may occur after such a process. Localization is the active construction and interpretation of external norms by local agents. In some cases, norm subsidiarity occurs where local agents reject accepting the external norms and may export locally created norms. The localization and subsidiarity can occur subsequently during different time periods. For example, negotiation and collaboration between the global structure and local agent may lead to localization and subsequently subsidiarity, and vice versa. As discussed in this chapter, the conceptual framework which integrates the institutional approach on norms (aid effectiveness) and technology (AIMS) in the global field of aid is illustrated in Figure 3-2.



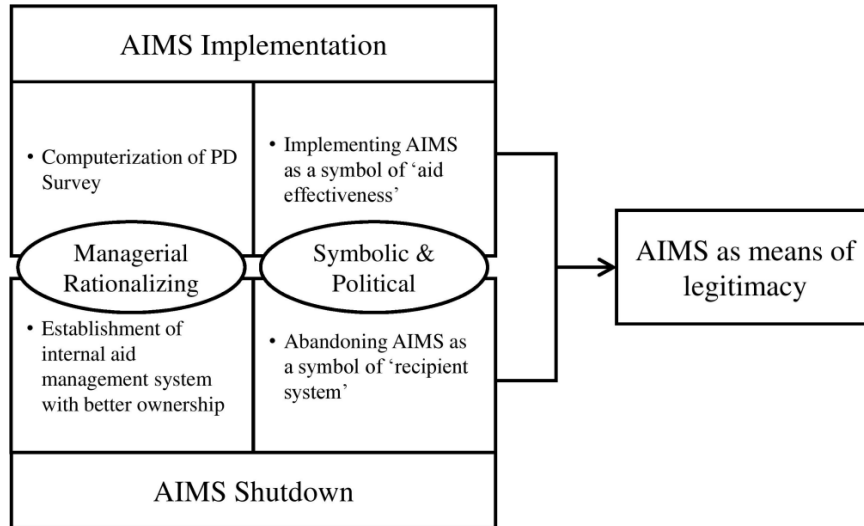


Figure 3-2. Conceptual Framework
(Developed by Author)

3.4. Summary

In this chapter, I have explained the conceptual framework informing the research at hand. The conceptual framework is constructed by synthesizing two theoretical domains: on the one hand the theory of institutions, which conceptualizes the global aid field as an established field, and explains norms dynamics and isomorphic pressure in the field. On the other hand, the theory of technology, which conceptualizes AIMS as socio-technical systems embedded in a particular domestic and the global field and explains information systems failure and the role of technology.

Chapter 4. Methodology

In this chapter I will present the research design and methodological structure I have followed to answer my research questions. In my literature review, I problematized my research area and positioned it both in the domain of ICTD and, more specifically, in the use of information systems in the global field of aid. Building on insight from the explorative pilot study on the AIMS in Kenya, I then started my investigation of the global diffusion of AIMS. Two questions emerged:

- How can we understand the global diffusion of AIMS?
- Why do AIMS fail to achieve sustainability?

In developing a research design with which to answer these questions, I have chosen a two-stage methodology. The first stage involves an explanatory study investigating the global adoption of AIMS. In the second stage, I conducted an interpretive single case study to examine the sustainability failure of AIMS. Developing methodological rigor has been an iterative process, involving continuously revisiting theories and the data I collected.

The research design is logically connected to the theoretical perspective I discussed in the previous chapter, and is led by an epistemology I will explain in this chapter. Crotty (1998) articulates the four fundamental elements of social science research as: i) epistemology; ii) theoretical perspective; iii) methodology; and iv) methods. Whether epistemological discussion can be clearly differentiated from what Crotty calls theoretical perspective may be debatable. However, his articulation of the research scheme is useful for explaining the methodological reasoning shown in Figure 4-1, the stages of which I will detail in the following sections as follows:

- First, I briefly elaborate the epistemological assumptions, in particular social constructivism (Section 4.1), as well as interpretivism (Section 4.2)

As discussed in Chapter 3, there are two main research questions in this thesis, each of which I presented above. The latter question, which asks why AIMS fails to achieve sustainability, cannot be studied without answering the initial question about the origin of AIMS and how we should understand its global diffusion. Methodologies and methods for investigating each of these questions are discussed in Section 4.3 and 4.4 respectively:

- Section 4.3 first presents implications of the explorative pilot study. It then focuses on the explanatory study of AIMS implementations, and describes data collection methods, data sources and analysis strategy.
- Section 4.4 illustrates the overall strategy of the interpretive case study used in this thesis. It justifies the case selection and explain the methods for data collection. It also explains the data analysis used.
- Finally, in sections 4.5 and 4.6. I discuss research quality criteria and research ethics respectively.

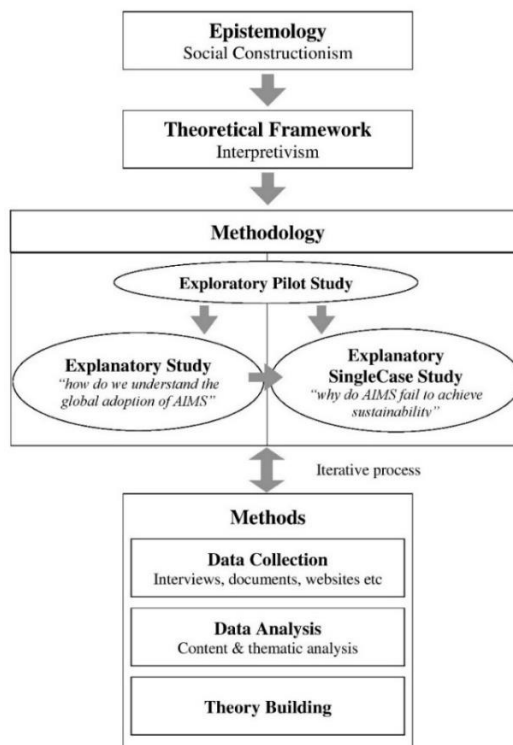


Figure 4-1. Structuring Research Procedure - Author's Development on Crotty's (1998:5)

4.1. Epistemology: Social Constructivism

It is crucial to justify why I use a certain methodology, how I collect empirical data, and how I have interpreted these data when developing my own conclusion (Crotty 1998). ICTD researchers call for methodological rigour and diversity in research on ICT interventions in the public sector (Heeks and Bailur 2007; Walsham 2017; Yildiz 2007). More importantly, the researcher must clarify the underlying philosophical assumptions that have led to the use of a particular research design and methodology. Notably, IS research is an applied field of social science that has concentrated more on the practice or application of information systems than on its philosophical foundations (Garcia & Quek 1997). For this reason, IS researchers have called for an awareness of the epistemological and methodological foundation for strong discussion about the underlying premise of new challenges in IS research (Orlikowski 1991; Mingers 2001; Porra et al. 2014). Due to recent phenomena, such as open data (Kitchin 2014), big data (Floridi 2012), social media and digital artefact (Kallinikos et al. 2013), new epistemological challenges have also emerged in the ICTD research domain.

Epistemology is an inquiry into the nature of knowledge: how reality can be known. There are two main reasons that I lean towards social constructivism. *Firstly*, as Crotty (1998) argues, epistemology should be based on ‘real-life’ experiences and problems, as well as on what the researcher seeks to address and answer. As I briefly noted in the introduction chapter, my research question originates from issues that arose during my previous working experiences. *Secondly*, the dominance of positivism in the field of IS that I identified in the literature review has guided this study to an interpretive approach that has its roots in social construction of reality.

My epistemological turn towards social constructivism was instantaneous, but occurred over time. It probably started in my college days when I majored in Chemical Engineering. As an engineering student, my belief in rational, scientific, and mechanistic processes of knowledge acquisition matched the modern science courses I studied.

*Laplace's demon*⁴⁰ was still possible to me, for example, as I firmly subscribed to the Cartesian idea of the world.

As it turns out, my epistemological turn was triggered by the quantum mechanics class I took. According to orthodoxy in quantum mechanics⁴¹, observational activities by the researcher on the observable would change the reality of the observable. This is completely opposite to classical physics, which argues that physical quantities represented by mathematical equations are wholly independent of human observations. It was quite challenging for me to accept that physical quantities are not determined independently of observation, but rather are determined in part by the process of measurement itself. Furthermore, Heisenberg's *uncertainty principle* asserts that physical quantities are predicted not by clear-cut laws but only by statistical probabilities by which a particular measurement may co-produce the result.

I maybe did not fully understand all the details of quantum mechanics, but I realized that it was quite different from how I intuitively thought about the world. Nobel laureate in Physics, Niels Bohr, famously mentioned that “for those who are not shocked when they first come across quantum theory cannot possibly have understood it”. I probably still could not completely understand the theoretical implications of quantum mechanics. Nonetheless it caused me to question determinism and objectivism, which makes a strict distinction between the observer (subject) and what's observed (object), and made me more interested in both the significance of uncertainty and the inevitable limits of precise measurement. The fundamental implication – that the object can never be entirely separated from the subject – is the epistemological position of social constructivism in social science research. It is a primary assumption of the interpretive perspective, which views reality and our knowledge as social products and, therefore, “incapable of being understood independent from the social actors that construct and make sense of the reality” (Orlikowski and Baroudi 1991).

⁴⁰ Laplace's demon is the articulation of scientific determinism by Pierre-Simon Laplace, published in 1814. It describes a determinism in classical (Newton's) mechanics, if the 'Demon' knows the precise values of atom including location and momentum, its past and future values for any given time can be calculated.

⁴¹ I refer to the Copenhagen interpretation by Werner Heisenberg and Niels Bohr, which still remains as the most accepted theory in Physics.

Constructivist approaches, however, have also raised concerns. For example, scholars have criticized an absolute subjectivism that views everything as socially constructed. Kallinikos (2004) points out that the constructionist epistemology may lead to extremes. According to Hacking (1999), there are various types and degree of constructivism. *Universal constructivism* is based on the belief of pure constructivism and those phenomena that are socially constructed. Sismondo (1993) differentiates between *radical constructivism* and *mild constructivism*, claiming that criticisms made by realists are directed only towards the former, which denies physical reality. He ultimately defends a more moderate view, which says that knowledge is socially constructed but is still mediated through the interpretations of social actors and their relations with the world. Picking up on this idea, Crotty (1998:63) similarly argues that social constructivism in epistemology is “at once realist and relativist” and can be compatible with realism in ontology.

4.2. Theoretical Perspective

As Crotty illustrates, the epistemology is fundamental in devising the theoretical perspectives, through which the study is further informed. The interpretivist world view is based on the assumption that regardless of whether reality is objective or socially constructed, accessing it is possible only through a social construction including language, shared meanings and consciousness. In other words, interpretivism seeks to understand the human situation through meanings, intentions and actions (Orlikowski & Baroudi, 1991; Walsham, 2006). Walsham (2006), for example, argues that the interpretive perspective is premised on the assumption that an understanding of social processes cannot be acquired by hypothetical deductions, but rather only by directly experiencing what generates these social processes.

The literature review in Chapter 2 identified some of the limitations of positivist research in information systems in international aid, where different political and economic interests and institutional logics of various stakeholders inevitably collide. There cannot be simple answers to questions about what has to be measured, how, and from whose perspective. Rather than being measured, therefore, the failure of information systems in foreign aid is best understood as a complex socio-technical process – one that is

enacted by a combination of different stakeholders and technological components. In the field of IS, researchers have encountered complex and intertwined social phenomena caused by the rapid development of technologies and their diffusion. This has resulted in a growing emphasis on interpretivism (Walsham 1995).

Given this complexity, my research needs to be supported by a ‘thick description’ of occurrences related to the emergence of AIMS. These involve multiple social actors including development partners, recipient governments, and international organizations. By thoroughly investigating these diverse social groups, their interpretation on AIMS will help us better understand the multifaceted roles of information systems and the underlying causes of IS failure. Furthermore, deep examination of the contextual realities in a domestic and national-level setting is needed to understand how political, historical and ideological factors interplay differently in a recipient country.

In summary, interpretivism, premised on mild constructivism, will shape the methodological structure of my research. The questions that guide my thesis, centred on interpretation of technology, are inscribed in a social constructionist view in epistemology, in which reality is neither observable nor discovered as objective and universal truth. The reality is rather constructed by people in their cognition and in a particular context and is investigated by researchers based on their conceptualization and theorization.

4.3. Methodology Part 1. Review of AIMS

Methodology can only bring us reflective understanding of the means which have demonstrated their value in practice by raising them to the level of explicit consciousness; it is no more the precondition of fruitful intellectual work than the knowledge of anatomy is the precondition for ‘correct’ walking.

(Weber 1949:115)

Methodology is neither a tool nor is it anatomical knowledge consciously used by a researcher. As Weber argues above, discussion on methodology needs to be reflective and valuable in practice. To gain insights on the implementation of AIMS in recipient countries, I first conducted pilot study before I began with the main case study. The pilot

study helped in shaping the research questions and led to the interpretive single case study of the Indonesian AIMS.

4.3.1. Explorative Pilot Study

The first step of research was a pilot study. It was an exploratory and formative step helping me develop relevant questions and conceptually clarify the research design (Yin 2009). The pilot study was conducted during my doctoral coursework in November 2013 and as part of my preparations for an upgrade examination in December 2014. The AIMS implemented in Kenya, also known as 'e-ProMIS' (Electronic Project Monitoring Information System)⁴², was chosen as a pilot study for the following reasons:

- Yin (2014) argues that 'convenience, access and geographic proximity' can be regarded as the main criteria for selecting a pilot case. As discussed in the thesis introduction, I participated in the Open Aid Map (OAM) project, which visualizes the locations of aid activities on a common mapping platform for better aid coordination. The project was launched in 2012 in a close collaboration with e-ProMIS team. This setting gave me good access to data and potential interviewees.
- As Walsham (2006) emphasizes, good social skills and local language fluency are important for gaining closer access to the site and carrying out better field research. I was quite confident that I would be able to conduct more comprehensive research leveraging my Swahili skills.
- As briefly discussed in the introduction chapter, the evaluation of Kenyan AIMS, e-ProMIS was significantly divergent.

For pilot study, I conducted three 30-60 minute semi-structured interviews on Skype: with a government official who was involved in the e-ProMIS project, and two others from the World Bank and a donor agency.

⁴² <http://e-promis.treasury.go.ke/e-promis/>

During the pilot study stage, two themes emerged. First, the findings show that there are often contradictory perceptions of whether the information system succeeds or fails. While the World Bank and other MDAs considered Kenya as a best practice (Kenei 2012; World Bank 2012), voices in the field evaluate and interpret the AIMS differently:

ICT is oversold. This is not a matter of technology (...) I am quite sceptical with new tools like crowd sourcing for citizen's feedback; you can try a direct communication with citizens. But actually we don't get meaningful feedback from it.

(Interview with a government officer in Kenya)

The findings do not show sufficient evidence that AIMS and the Kenya Open Data initiative have been used for better coordination among stakeholders. It seems very unlikely that beneficiaries produce or use such aid data on the system and demand local government or donors to improve aid coordination. Thus, the following sub-questions arise: *does AIMS achieve aid effectiveness in accordance with the inscribed visions? If not, why does AIMS fail in achieving the expected outcomes? If it is a failure, in whose perspective?*

The second theme that arises here is, *who drives this technology and this idea of information sharing in the aid sector? Is it driven by the recipient countries or by a particular technological innovation?* As discussed in Chapter 2, the rationales of AIMS have been favoured by major donors and MDAs, in particular, the OECD, UNDP and the World Bank. Also MDAs often have financially supported the implementation of AIMS. This might contribute to isomorphic pressures of adopting AIMS in recipient governments.

On the basis of the conceptual framework for unpacking AIMS implementation, the first part of this explanatory study will investigate how the global adoption of AIMS can be understood.

4.3.2. Study of AIMS Diffusion and Data Collection

This section describes the methodological approach adopted in my explanatory study investigating the global diffusion of AIMS. I started data collection on the cases of AIMS implementation in recipient countries.

The first stage of data collection was conducted, mainly for the period January to April 2015, by searching for relevant quantitative and qualitative document data on cases of AIMS in recipient countries. In these searches, I used keywords on Google and Google Scholar. I searched archival data by combining the key words ‘aid information management systems’, ‘aid management platform’, ‘open aid’, ‘development assistance database’, ‘donor assistance database’ with the names of the countries in the List of the OECD ODA Recipient⁴³. As discussed in Section 3.3, although many donor agencies and MDAs have recently developed their own information systems that track aid flows in order to increase transparency and accountability in their aid activities, the data collection for this study excludes such cases. Also, information systems for aid management at the regional and sectoral levels were also excluded, as the focus of this study is on aid management at the national-level. The data that I collected in this stage are mainly secondary sources comprising the following:

- official AIMS project documents, user manuals, administrative guides, business process documents, and power point presentations that are normally published by recipient governments and service providers;
- AIMS related reports and documents published by international organizations⁴⁴;
- media and existing academic literature; and
- AIMS websites

Blog articles, incomplete documents, and data whose source could not be clearly identified were rejected.

The second stage for additional data collection was conducted after May 2015. This was facilitated by my previous network from the World Bank, as well as by my

⁴³ OECD DAC list of ODA recipients is available on:

<http://www.oecd.org/dac/stats/documentupload/DAC%20List%20of%20ODA%20Recipients%202014%20final.pdf>

⁴⁴ In particular, OECD Paris Declaration Country Reports, OECD Survey on Monitoring the Paris Declaration Reports, Role of AIMS implementing the Paris Declaration on Aid Effectiveness at the Country Level are very resourceful

participation in the 3rd International Open Data Conference (IODC), which was hosted by the International Development Research Center (IDRC) and the World Bank, and held in Ottawa, Canada, in May 2015⁴⁵. The subsequent International Aid Transparency Initiative (IATI) Tag Meeting, held in June, was also a good opportunity to meet aid experts from international organizations and governments as well as AIMS developers.⁴⁶

I directly questioned government officials (mainly from the Finance Ministry or Foreign Ministry) from 21 recipient countries. To ascertain whether the country currently has or previously had an AIMS, their officials were contacted via informal conversation during these two events or by email after informal conversation. Primarily during the period from August 2015 to February 2016, in order to collect further data on AIMS diffusion, I conducted 14 semi-structured interviews with four government officials in recipient countries (Philippines, Rwanda, Mozambique, Kyrgyz Republic)⁴⁷, six aid experts in donor agencies (two in donor agencies and four in MDAs excluding one in Indonesia), three AIMS providers, and one from a development NGO. Additionally, a limited number of speeches by political leaders in recipient governments, as well as senior policy makers in donor agencies, were collected for analysis as a primary data source. The data collected and data sources are detailed in Appendix 3.

The original data collected in the first and the second stage, particularly from AIMS websites, were continuously revisited during the analysis stage to form interpretations through an iterative process. This took place mainly from November to December 2016, and also in July 2017 for final URL check-up. The data collected are summarized in Figure 5-1. Moreover, new data from different sources were added to the existing data set during the analysis to cross-check and ensure that statements were properly applied. Some URLs are no longer accessible, but the screenshots archived by web.archive.org are collected as references. The date when the last screenshot was taken, however, should not be mistaken as the last day of the AIMS.

⁴⁵ <https://internationalopendataconfer2015.sched.com/list/descriptions/>

⁴⁶ <http://www.aidtransparency.net/technicaladvisorygroup/tag-meetings/tag-meeting-may-2015>

⁴⁷ This excludes Indonesia case, which I will discuss mainly in Section 4.4.

	2014	2015												2016												2017							
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	
Pilot study																																	
Explanatory Study of AIMS																																	
Case selection																																	
Single Case Study (Indonesia)																																	

F = Field Visit U = URL Check

Figure 4-2. Research Timeline

4.3.3. Data Analysis

Criteria of Selecting Cases: Data collection identified 80 cases of AIMS either currently or previously being used in 71 countries during the period from 1996 to 2015. The first part of data analysis in this study involved evaluating data from secondary sources. Scott (1990) suggests useful guidelines for assessing the quality of social research evidence, including documents. *Authenticity* is concerned with whether the evidence is genuine and of unquestionable origin. *Credibility* asks about its possibility of error and distortion. *Representativeness* questions whether the evidence is typical. Lastly, *meaning* assesses the clarity and comprehensiveness of the evidence.

There are a few more cases of AIMS implemented during this period, but not enlisted due to the lack of data quality and therefore not discovered during the research. Building on Scott’s criteria, the main consideration for selecting a case that I followed was:

- documentation from the recipient country’s government declaring AIMS implementation
- documentation from funding institution (UNDP, EU, GTZ, etc)
- documentation from provider or confirmation of implementation
- URL address, apart from being accessible or not

With the exception of the early AIMS adopted in the late 1990s, most cases identified in the data collection stage met these criteria, while few cases did not meet them. These include:

- AIMS implementation was only mentioned by other data sources published by a third party (Egypt and Syria).
- AIMS related documents such as feasibility studies were found, but the actual implementation has not yet occurred (Ghana and Swaziland).
- A plan to implement AIMS was identified through semi-structured interview, but the actual implementation has not yet occurred (Indonesia and Vietnam).
- There are cases of AIMS implementation that I identified very recently. However, as I was in the final stage of analysis, I was not able to include these cases (Bulgaria, Colombia and Bosnia Herzegovina).

Qualitative Content Analysis: The documents and websites of identified AIMS cases were examined using qualitative content analysis. Krippendorff (1989:18) defines content analysis as *"a research technique for making replicable and valid inferences from texts to the contexts of their use"*. In general, quantitative content analysis dominates in classical content analysis. However, qualitative content analysis has been considered a strategy for the analysis of qualitative descriptive studies particularly in searching for underlying themes in a large quantity of qualitative data (Mayring 2000; Kohlbacher 2006).

All the cases of AIMS were summarized in terms of country, name of the AIMS, URL, year of implementation, implementing ministries, funder, service provider, language in service, listed donors, budget, as well as the data sources. By assessing the AIMS websites regularly, further data was collected, categorized and coded. Based on the conceptual framework for institutional account discussed in Chapter 3, all the cases were analysed to understand the diffusion of AIMS in the global field of aid. To do this, I developed inductive and deductive categories. A deductive approach can also be applied to generate initial categories and codes (Mayring 2000). Mayring (2000) argues that an advantage of qualitative content analysis is the flexibility of deductive and inductive category development or a combination of both approaches in data analysis (Cho & Lee 2014).

The cases were categorized using the existing categories first, namely the OECD's classification by income⁴⁸ and the World Bank's regional classification of countries⁴⁹. Moreover, based on the theoretical framework discussed, I constructed a pre-defined set of categories, known as deductive categorization, to investigate the specific themes of three institutional isomorphic mechanisms as well as five Paris Declaration Principles. This procedure provided a broad structure for data analysis of AIMS cases and helped me generate codes. Based on this, I searched for similarities and patterned regularities in the text and the websites, and made inferences building on these. At this stage, important tasks included eliciting evidence of the proliferation of AIMS; seeing whether AIMS have a similar role, functionalities, design and governance structure; and assessing whether AIMS achieved sustainability, based on the themes related to my questions. Furthermore, the coding frame built on the deductive categories I initially used were evaluated and modified to expand analysis. By taking a step back, similar subcategories were collapsed and revised, and a new emerging theme was added.

The identified themes and findings were supplemented with quantitative methods as an ancillary purpose. This stage involved checking word frequency of key concepts. As discussed, the key concepts were identified using the themes informed by existing aid norms and principles, as well as theories in ICTD such as NPM. In addition, word clouds, which provide visual depictions of texts document or a website that lists key words with different text font size according to their frequency, were generated. I acknowledge the multiplicity of visual representations and their political nature (Manovich 2011; Galloway 2011). These analyses, however, offer a useful quantitative check, in particular, for investigating the visions and rhetoric that AIMS inscribe in different generation (PC-based, Web-based, open data based).

The qualitative content analysis of AIMS documents and websites helped me attain insight into the characteristics of the discourse, identify key actors (relevant social groups in the notion of SCOT), and discover these actors' specific interests and interpretations of technology, all of which are crucial for mapping the key themes in the

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<https://www.oecd.org/dac/stats/documentupload/DAC%20List%20of%20ODA%20Recipients%202014%20final.pdf>

⁴⁹ <http://www.worldbank.org/en/country>

research. The procedure is also iterative between data collection, analysis, and constructing narrative.

The initial analysis, conducted from January to March 2015 before the case selection, enabled me to identify the key themes and actors, and provided me with a better understanding of the field of AIMS. In fact, the participation in the IATI Meeting after the IODC, which I mentioned in the data collection section, resulted from the initial analysis. This made me aware of the importance of participating in the Meeting. I was supposed to present a paper at the Research Seminar at IODC and return to London. However, I extended my trip and attended the IATI meeting, where I met many aid experts who were directly or indirectly involved in AIMS. In order to achieve further understanding, the semi-structured interviews that I conducted were transcribed and analysed in addition to the secondary data.

To understand the current status and its sustainability, the categories were constructed on the basis of theoretical discussions about the sustainability failure of information systems. The cases were classified into the three categories: [A] relatively in active use, [B] accessible but rarely in use, [C] implemented once but shut down. The category [A] refers to systems which were last updated within the one-year period, July 2016 and July 2017, when the final screening of URL was conducted. An update could mean new data input regarding a new project, a disbursement report, or any data revision, as well as the system's software upgrades. However, the criteria do not take into account the frequency of data inputs into the system, or the quality of information. The category [B] refers to systems which have had no updates within the most recent one year period (July 2016 and July 2017), although the URL is still accessible. The category [C] refers to systems for which data that I collected confirms the implementation of AIMS, but the URL could no longer be accessed. In some cases, the URL addresses are not even traceable. For triangulation, semi-structured interviews and informal conversations were conducted on investigating the use of AIMS. However, the numbers of semi-structure interviews were limited, as discussed above.

	Time	Activities
Exploratory Pilot Study	2014	<ul style="list-style-type: none"> • Pilot interviews
1st Stage	Jan – Apr 2015	<ul style="list-style-type: none"> • Data collection – AIMS documents
2nd Stage	May 2015 – Feb 2016	<ul style="list-style-type: none"> • Presentation at IODC and IATI meeting (May, 2015) • Data collection – AIMS documents, Semi-structured interviews • Data triangulation (continued in 2016-17)
Sustainability Studies	Nov – Dec 2016 July 2017	<ul style="list-style-type: none"> • Visiting AIMS and checking its sustainability

Table 4-1. Research Timeline (Part 1)

4.3.4. Limitations and Challenge

Regarding the qualitative content analysis, Cho and Lee (2014) point out that “it can be a labour-intensive and time-consuming process”. Indeed, it is time-demanding for me to process large amounts of data. I mainly rely on the secondary data source, written text. I conducted 14 semi-structured interviews, which were helpful for understanding the big picture of the global diffusion of AIMS and for strengthening an argument. However, the number of interviews is limited and selection bias may exist. Although I acknowledge the semi-structured interviews conducted with government officers who are in charge of AIMS could in each case provide a much more nuanced view, it was not feasible to establish contact with all AIMS-implementing countries due to the time limits.

Except for a limited amount of data, which I directly acquired from interviews, most documents were collected online, mainly through search engines. Notably, the use of English as a primary language in a search function would omit potential data resources written in other languages. Some of the documents collected in French, Spanish, Portuguese, and local languages were therefore acquired only after learning about the existence of AIMS in a particular country. There are probably documents written in Arabic about AIMS, including Egypt’s, that were not identified until the closing of the data collection phase, and so were not included in this study. The documents used for

analysis were mainly in English, while documents in Indonesian were archived to be selectively translated to ensure ‘meaning’ for further analysis according to Scott’s criteria.

In using search engines, researchers encounter not only technical challenges but also political ones (Lucas D. Introna, Helen Nissenbaum 2000). In particular, search engine may be a source of bias, since they often systematically give visibility to, or exclude, particular information and sites in favour of others. This is especially important for my research, since information systems failure is typically not celebrated or advertised. Successful cases may be more prominent on the Web. In spite of these potential pro-AIMS biases in the existing documents on the Web, however, I would like to note that findings of my study present considerable evidence of failure. Therefore, I think the methodological validity still remains.

I also acknowledge that cross-national data has its own limitations. I note that economic categorization based mainly on GDP per capita, as well as other existing indices such as the e-government index, corruption perception index (CPI), and the government effectiveness index, give only a partial picture of ‘ICT-enabled governance in developing countries (Relly & Sabharwal 2009; Rorissa & Demissie 2010). In particular, the rankings not only reflect what happens in a given state but also in every other in relation to the state. Thus, rankings are made with a ‘zero-sum technology’ with *reactivity* (Espeland & Sauder 2007). Such indicators and rankings are carefully used only for supplementary purposes in this study.

4.4. Methodology Part 2. Interpretive Case Study Research

Through conducting the research on the implementation of AIMS discussed in Section 4.3, the broad question about AIMS failure became more focused on sustainability failure. This section justifies the choice of an interpretive single case study, as well as the choice of Indonesian AIMS. Data collection, analysis strategy and limitation will also be discussed.

4.4.1. Justification of Single Case Study

There are two reasons I employed an interpretive single case study for my research. Yin (2009:2) argues that case studies are more appropriate when *'how'* or *'why'* are the main research questions in a natural setting where the researcher has little or no control over behavioural events. The main purpose of this thesis is to explore why AIMS fails to achieve sustainability. In addition, as an investigator, I cannot manipulate events and outcomes in the field. Thus, the case study is the most suitable choice for my research. Secondly, it is a suitable choice for providing an in-depth understanding of the complex phenomenon of AIMS and the hidden dynamics of the stakeholders involved. The case study methodology has often been used in past decades to give rich narratives in the field of IS (Ciborra 2005; Walsham 1993; Walsham 2006). However, Myers (1997) argues that 'the case study research can be positivist (Yin, 2009), interpretive (Walsham1993), or critical'. Framed by my constructivist epistemology, I employ an interpretive single case study, which enables me to be much closer to the situation, and to interpret the real dynamics through the human experience.

4.4.2. Selection of Indonesia's AIMS as a Case Study

Flyvbjerg (2006) emphasizes that how a case is selected plays a major role in theory development and generalizability⁵⁰. Case selection should be linked to the main purpose of research, the theoretical background, and the epistemological perspective of researcher. In selecting the case, I used a methodical procedure and followed a "two-phase approach", which would be suitable for screening "a large number of eligible candidates" (Yin, 2009, pp.95). These two phases involve first collecting relevant data about the entire pool from an archival source and then reducing the candidates by defining some relevant criteria.

In this thesis, the initial data collection identifying the pool of AIMS in the explanatory study (Part 1) represents the first phase. Based on the data collected, the cases of AIMS

⁵⁰ 'empirical transferability' in qualitative research to be further discussed in Section 4.5. Research Quality Criteria.

were summarized by categories such as service provider, year of implementation and region. By accessing their URL, all the AIMS were screened and examined.

Out of 36 cases in the category of sustainability failure, Category [C] as discussed in Section 4.3.3, 13 cases are considered to be relatively feasible to study in terms of data accessibility and the year of implementation, which is assumed to be less than five years.⁵¹ Additionally, in order to reduce the number of candidates (Yin, 2009), fragile states were eliminated due to the complexity of research and difficulty accessing data respectively (Brinkerhoff, 2007). Six cases remained to be investigated further.

While narrowing down the candidates in the first stage of data collection specified in Appendix 3, I checked the feasibility of the study with one of my acquaintances who works for the Indonesian government. The official, who later became one of my important informants, attended my seminar at Seoul National University (SNU) in December 2011. The informant studied abroad as a Master student at Graduate School of International Studies, SNU. I remembered the informant because of questions on my summary from the 4th Busan High Level Forum (HLF) on Aid Effectiveness, where I participated as a representative of the World Bank in the same month. On 12 February, 2015, I contacted the informant concerning an Indonesian experience with AIMS. At that time, the AIMS used for Tsunami recovery (implemented in 2005) was identified only by my data collection. The mail received on 29 March from the informant, however, confirmed the existence of a second experience of AIMS in Indonesia, which was implemented in 2010 but permanently shut down. I had a preliminary semi-structured interview with the informant on 7 April in order to check whether data in the files were accessible.

Accessibility to the sites is one of the major issues of case selection (Yin 2009). At the beginning of the study, the biggest consideration was whether there was difficulty in data accessibility as the system had been shut down two years earlier. There was also the nature of the challenge in studies investigating a case of ‘failure’, including the potential reluctance of interview participants. The five core publications related to

⁵¹ Please see Section 6.3.1 for the details.

Indonesian AIMS received from the informant via the former AIMS Task Force Leader on 24 June was the crucial moment. After examining the government publications, namely, *AIMS On-Line Survey User Guide*, *User Guide*, *Administrator Guide*, *Business Process*, *Technical Reference*, my assessment was that there is sufficient feasibility as a research project in the case.

Another reason is that, in Indonesia, two AIMS were implemented in 2005 and 2010 respectively. The one established with the support of UNSDP for Tsunami recovery has been considered a success story by international organizations (Masyrafah & Mckeon 2008); while the other AIMS, which is the technological object of my study, was shut down. Thus, it may be considered that Indonesia arguably experienced both success and failure in AIMS practice, and therefore evaluation and interpretations from different stakeholders may be contradictory. No study was conducted on the Indonesian case.

4.4.3. Data Collection

Based on the interpretivist perspective, the field work was motivated by the need to actively engage with the real world in which the research object is embedded. While diverse sources were utilized for data collection, semi-structured interviews are used as the primary method. Walsham (2006) argues that ‘interviews are the primary data source in an interpretive study’ in the field of IS research. Following the interpretivist approach, interview methods enabled me to dialogue with the interviewees and collaboratively construct a meaningful reality. In particular, semi-structured interviews enable a researcher to undertake an in-depth analysis of the process of events. It allows the researcher to engage more with interviewees and have flexibility by asking open ended questions (Flick, 2009). However, this can serve as a limitation at the same time because a lot of uncertainty arises during the interview (Flick, 2009). For this reason, the quality of a semi-structure interview often relies on the researcher’s interview skills and capacity.

Developing Interview Capacity: The pilot interviews conducted prior to my PhD upgrade were my very first experience with semi-structured interviews for academic purposes. I faced some challenges, including pausing a few times during conversation

and forgetting to ask a previously planned question. A couple of seminar books on qualitative research helped me develop skills in preparing and conducting interviews. Rapley (2004:18) offers a good overview of preparation, recruitment and interaction in interviews, noting that it is important to “work with them and not strictly delimit the talk to my predetermined agenda”. *InterViews*, authored by Kvale, S. & Brinkmann (2009:135-6) provides useful guidelines for constructing interview questions, as well as follow-up questioning, such as specifying (*can you give me an example?*), directing (*how do you think other people view X?*), structuring (*Thank you for that. I would like to move to another topic.*) and using silence.

Interview Questions: Regarding interview questions, I have mainly followed Robson’s (2011:282) guide. I not only articulated interview questions by avoiding long questions and the use of jargon, but to maintain neutrality, I refrained from ‘leading’ and biased questions. Prior to conducting interviews, the interview questionnaires were constructed in a way that cohered with the research questions and were organized according to several themes linked to the theoretical gaps discussed. In a broad ICTD perspective, the research questions focused on the role of information systems in aid management, interpretations of technology in terms of its role, use, and criteria of success. A topic guide was used for dealing with any uncertainty that could originate from open-ended questions in the semi-structure interviews (Flick, 2009:192). This is crucial to clarify the interview questions and to select interviewees (Bauer & Gaskell 2000). A sample topic guide that I utilized for the semi-structured interviews during my second field visit is attached in Appendix 6.

Access to Field and Participants: Fieldwork has been conducted during four-time visits to Indonesia, of as specified in Table 4-2 as below.

Part 2. Interpretive Single Case Study in Indonesia		
Study preparation	Apr – Jun 2015	<ul style="list-style-type: none"> • Case selection • A pilot interview with an expert in Bappenas, • Arranging interviews
Fieldwork 1	Aug 2015	<ul style="list-style-type: none"> • Semi-structure interviews • Archival data

Fieldwork 2	Dec 2015-Feb 2016	<ul style="list-style-type: none"> • Semi-structure interviews • Archival data
Fieldwork 3	Jun, Jul – Aug 2016	<ul style="list-style-type: none"> • Additional data collection and case analysis
Fieldwork 4	May 2017	<ul style="list-style-type: none"> • Paper presentation at IFIP 9.4 Conference (May 22-24, Yogyakarta)

Table 4-2. Research Timeline (Part 2)

During the field work, 51 semi-structured interviews with 45 informants, each on average an hour long, were conducted mainly in Jakarta, Indonesia with some exceptions in Depok, Yogyakarta, and Bandung. Skype was also used for conducting interviews with the former aid experts of donor agencies in Indonesia, who have now returned back to home countries, and with Indonesian participants during my stay in London. I recorded audio of the interviews and took field notes. Participants of the semi-structured interviews were selected using a ‘snow-balling’ technique (Bryman & Bell, 2007). For my study, snow-balling was particularly appropriate, as a personal network is culturally very important to approaching individuals and organizations.

Three sources greatly helped in the initial stage of snow-balling. First, the existing network enabled me to begin snow-balling, including the informant previously mentioned. Also, I was able to build a strategy to contact the potential interviewees by expanding the existing network in the organizations where I worked previously, including Korea International Cooperation Agency (KOICA) and the World Bank. Second, the internal documents that I acquired – *Technical Meeting for the 2011 Paris Declaration Monitoring Survey* (held on 20 January 2011) and *Workshop on the Monitoring Survey for Paris Declaration – Date Review for Country Spreadsheet* (held on March 16, 2011) were very useful. They each had a full list of the names and organizations of the participants in these two important meetings, including 40 people from 39 donor agencies and more than 30 government officials. In approaching personnel in the list, it was helpful to use Linked-in websites to contact people and explain my research to them. Third, networks that I built during the field visits also helped me approach potential participants. These include:

- Bappenas International Conference on Best Development Practices and Policies, Jakarta, on 19-20 August, 2015
- High-Level Workshop on Indonesia-Korea Cooperation for e-Government, 26 August, 2015
- The Annual Meeting organized by the LSE Alumni Association Indonesia, Jakarta, on 21 January, 2016
- 12th World Islamic Economic Forum, Jakarta, 2-4 August, 2016

This snow-balling, as illustrated in Appendix 8, continued throughout both the entire study period and most of the data collection process. The full list of interviewees is summarized in Appendix 7. I also conducted focus group discussion twice, which brought together AIMS developers, AIMS users from donor agencies, and government officials. Data collected from interviews and focus group meetings were transcribed by me and two transcribers who were paid from the research support budget of the Department of Management, London School of Economics (LSE).

Secondary Data Sources: secondary data including documents from diverse sources, speeches of policy makers, and website content were collected. The most important data was the AIMS website, which was archived on 26 September 2011 by another important informant, one of the AIMS developers. I was able to receive a temporary URL to access the actual AIMS. In addition, government reports, AIMS project documents, user manuals, contract documents, publications by donors, and email communications saved by AIMS developers were collected for analysis. Finally, field notes and notes from informal conversations enriched and complemented the primary data sources. The quality of data was assessed based on the Scott's (1990) criteria discussed in Section 4.3.

4.4.4. Data Analysis

The core task of analysis is to uncover the institutional foundations of actors in the global field of aid that justify their interpretations of technology and their engagement with it. Building on the insights of theories of institution and theories of technology, the analysis in this thesis is a process of mapping the relational actions toward technology with

contextual structures in the different levels of fields – local and global. Such interpretive analysis can be done by ‘thick description’.

Social science research, whether quantitative or qualitative, involves the dual goals of describing and explaining. Some scholars set out to describe the world; others to explain. Each is essential. We cannot construct meaningful causal explanations without good description; description, in turn, loses most of its interest unless linked to some causal relationships. Description often comes first; it is hard to develop explanations before we know something about the world and what needs to be explained on the basis of what characteristics

(King, Keohane, and Verba 1994:35)

The ‘thick description’ requires qualitative analytical methods such as thematic (Aronson 1994), content (Kohlbacher 2006), and discourse analysis (Chouliaraki & Fairclough 1999).

I utilized thematic analysis in this study as the main device to reconstruct the processes of AIMS. The choice of thematic analysis, among the diverse methods available for thick description in qualitative research, is motivated by the central focus of my study represented in research questions. The analytical focus lies particularly in the state actor, differentiated interpretations on technology, and global norms which is set of other interrelated subordinate logics. In general, thematic analysis follows an inductive reasoning, by allowing open coding to derive themes from the data collected. However, thematic analysis is methodologically similar to qualitative content analysis discussed in Section 4.3.3. Building on the methodological combination of inductive and deductive logic, thematic analysis helped me organize and describes the data collected in details as well as identifies important themes and patterns.

While doing interviews, I took notes including interviewees’ emphases and my first impressions. Afterwards, I read the transcript carefully line-by-line with labelling words, terminologies, sentences, and sections with coding and indexing sometimes conducted on printed transcripts or sometimes on the MS word file. On occasion, reading transcripts while listening to the recorded audio file helped me decide what to code. Building on Miles and Huberman (1994), as an interpretive researcher, I used the following guidelines to decide which parts of interviews were more relevant:

- if it is often repeated in the interview
- if interviewees explicitly emphasize
- if I find it very different from existing explanation or if it surprises me
- if it reminds me of a particular concept or theoretical explanation discussed in my literature review and conceptual framework.

Afterwards, I went through all the codes created. They were categorized and integrated with several themes. New codes emerged by combining different codes. Some codes were discarded before analysis. The central focus lies particularly in the state actor, interpretations on technology, the role of stakeholders in using, implementing and shutting down information systems. It also focuses on how they were connected to each other, as well as explains the relationship and connection between categories.

I also investigate whether there was a hierarchy, chronology or causal relationship among the categories, and whether some categories were more important than others. Figures were also created if they helped me in analysing the data more efficiently. Based on this data analysis, as well as previous literature review, I created an analytical narrative and developed discussion. In addition, following the qualitative data analysis method in case study (Yin 2009; Miles & Huberman 1994), the primary data that I collected have been triangulated with government documents on the Indonesian AIMS, donor reports, press releases, speech, and other statistical data and indices.

4.4.5. Limitations and Challenges

One of the fundamental challenges of social science research is the ‘double hermeneutic’ (Giddens 1984). In particular, in an in-depth case study conducted over a certain period of time, it is inevitable that the interpretive research will be involved in the situation the researcher is observing, and that the researcher will influence some of the responses of the participants that the researcher is studying. This study, focusing on system failure, is therefore more likely to make interviewees reluctant or influence their interpretations. With very few exceptions, those people I managed to contact were willing to accept meetings and interviews. However, I realized that previously conducted interviews with informants who introduced new participants in the same organization sometimes limited

my capacity to further approach and fully attain useful information from the new participant. This did not always happen. However, one interviewee seemed to have heard the discussion that I conducted with the previous informant, and insisted that ‘a failure’ was not ‘their’ failure.

As Walsham (2006) emphasizes, good social skills as well as fluency in the local language are instrumental to gaining access to the site and carrying out better field research. Overall, given that the majority of the interview participants were fluent in English and that most of the interviews were not conducted at the community level, the use of Indonesian and tribal local languages is not very crucial in my most of interviews. However, I tried to learn Indonesian by taking a short course offered by SOAS in 2015. Free Youtube channels were good source of learning as well. I would try to start interviews by briefly introducing myself and my research in Indonesian.

However, the language barrier was still one of the challenges I encountered in the field. In general, the level of proficiency in English of government officers, academics, and local hires within international organizations was high. But there were times when interpreters were needed, especially during the interviews with senior government officers that involved detailed or deep discussions. The real challenge was cultural, not solely linguistic. In the case of senior government officers, it was quite difficult to say ‘May an interpreter accompany me for the next interview?’ This was because it could appear disrespectful to some people who were particularly sensitive to seniority. Once I understood the challenge, in a mail prior to the interview I tried to include a sentence asking if the interviewee would prefer to have a conversation in Indonesian. However, it did not make a big difference because most government officers readily accepted English interviews and expressed confidence when making interview appointments. It was quite hard to guess in advance the level of their comfort in having the conversation in English.

Another challenge involved an interpreter who was a former intern at a Ministry and had many college friends and former colleagues in the government. In spite of the interpreter’s amicable character and good ability, the interpreter seemed at times to be trying to mediate or even tone down the interviewee’s response. Although the interpreter

might have been eager to help me with my research, it was risky for the interpreter to engage beyond the role as an interpreter. In order to ensure the reliability and credibility of the research, I carefully let the interpreter know that interviewees' response and their own views do matter as they are.

Regarding the documents that I analysed, most of the government documents that I accessed were also written in English. The main research area is the role of information systems in foreign aid, which by its nature is international so most documents related to aid mechanism and coordination are written in English. Particular documents related to legislation or to the regulation of internal aid management, such as the Presidential Decree and Government Regulations, were checked with a bilingual professional who majored and worked in the field of international relations.

Google Translate, updated in January 2017, was also a useful supplementary source of help. I sometimes used the service when I needed to skim government documents or to search relevant media articles by using key words. Recognizing this type of algorithms-based machine translation often ignore contextual knowledge, once I found a relevant document or article, I received help from two local personnel to translate it in its entirety for further investigation.

4.5. Research Quality Criteria

Denzin (1989 in Flick 2009) distinguishes four systematologies of triangulation, namely data, investigator, theory, and methodological triangulation. It refers to the use of different sources of data, observers or interviewers, various theoretical perspectives and different methodologies. Unlike quantitative research which has generally accepted research quality indicators such as *reliability*, *validity* and *generalizability*, these qualities in qualitative research are rather ambiguous and contentious (Maxwell 1992). In this thesis, following the 'functional equivalents': *transparency* and *reflexivity*, *grounding interpretations and triangulation*, *transferability* and *significance* (Bauer & Gaskell, 2000), I hope to provide a methodological rigor based on the criteria for the in-depth interpretive case study as below.

General criteria	Functional equivalents	Efforts to ensure quality
Reliability	Transparency & Reflexivity	Document the study process explicitly, Clear demonstration of how data was collected and analysed,
(Internal) Validity	Grounding Interpretations & Triangulation	Rich narratives and in-depth description. Use multiple sources of data.
Generalizability (External Validity)	Transferability & Significance	Demonstrate the research findings and result in a wider set of phenomena. Show significance broader than the specific sample under examination.

Table 4-3. Strategies for Ensuring Research Quality

First, arguably, qualitative research does not necessarily aim for ‘reliability’ in the sense of quantitative research, where an instrument of research would produce the same findings with a different researcher at different times. However, by providing enough information to critique, I ensure the ‘transparency and reflexivity’ of my thesis. For this, I present details in methodologies, and research processes including how data was collected and analysed; and how the research design has shaped the data collection and analysis. Also, I discussed the issue of reflexivity.

Second, in order to ensure grounding interpretation and triangulation, I provide rich descriptions with quotes from interviews and documents. I utilise multiple sources of data for triangulation. By investigating converging evidence from findings, data triangulation strengthens the research quality. In doing so, I demonstrate the openness to alternatives, in which I reflect on differences between research findings from different sources. Use of some limited quantification particularly in Chapter 5, was helpful as well.

Third, an interpretive single case study is inevitably limited in how much the research findings can be *generalized* to other populations. Being aware of the methodological limitations, I claim to demonstrate transferability and significance of the thesis beyond the particular case under investigation. I ensure ‘theoretical transferability’ and

‘empirical transferability’ (Miles & Huberman 1994). For this, I associate my research findings to the existing literature, and demonstrate practical and theoretical implications in other similar cases. This will be further discussed in the thesis conclusion.

4.6. Research Ethics

It is important to consider research ethics when conducting research, particularly when this research involves interviewing people. There are a few ethical considerations, however, as this study focuses on the relevant stakeholders’ interpretation of technology instead of a specific person. Unlawful activities were not observed during the research. In order to ensure my research meets strict ethical standards, I reviewed the LSE Ethics Policy⁵² carefully, and briefly read the Framework for Research Ethics published by the Economic and Social Research Council (ESRC)⁵³. Then, prior to each field visit, I filled out the Applications to Undertake Fieldwork. These were then approved by the supervisor, Professor Chrisanthi Avgerou, and submitted to the LSE Research Degree Unit, via the Department of Management. The application form is compulsory for conducting fieldwork away from LSE. In particular, in the case of overseas fieldwork, it is necessary to conduct a Risk Assessment⁵⁴ checklist for a hostile environment. To do this, I referred to the Foreign Travel Advice from the UK government⁵⁵. Regarding the location of the field work, Indonesia, the probability of risk, and likelihood of adverse events or outcomes arising is relatively low including health and safety issues. Thus, the risk of a field visit with potential of being conducted in a hostile environment as part of a particular research component, was not high in my case.

When conducting interviews, I explained the anonymity and confidentiality of the research. Prior to interviews, both a one-page research brief, which provided background information on the study, and an informed consent form were disseminated to interview participants. Confidentiality has been widely discussed in qualitative research (Seymour

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<http://www.lse.ac.uk/intranet/researchAndDevelopment/researchDivision/policyAndEthics/QuickGuide-Research-Ethics-web.pdf>

⁵³ <http://www.esrc.ac.uk/funding/guidance-for-applicants/research-ethics>

⁵⁴ <https://info.lse.ac.uk/staff/Services/Policies-and-procedures/AtoZ>

⁵⁵ <https://www.gov.uk/government/publications/overseas-business-risk-indonesia/overseas-business-risk-indonesia>; <https://www.gov.uk/foreign-travel-advice/indonesia>

& Ingleton 2005; Allmark 2009). The most common issues that potentially lead to identification, particularly in the research related to health, criminology and conflict studies, are the use of quotes which may be identifiable. However, my biggest concern about my research is the risk that participants may be identifiable not to the general public or the media, but to their colleagues involved in the same project. This is especially considerable because the aid field in Indonesia is small. In particular, in government, more specifically, Ministry of National Development Planning (Bappenas), individuals are well-known to each other and have worked together since the research project was done. Thus, I selected quotes carefully and removed the information about participants' affiliation. Once my interviews were transcribed, they were anonymized and stored on my local computer. I assured that no records of the interview were kept with personal information, and that participants remained completely anonymous in their quotes in the writing up of thesis. As written in LSE's Style Guide for Ph.D. Theses in the Department of Social Policy⁵⁶,

[G]ender-neutral language should be used whenever possible, but not at the expense of clarity or good grammar (...) options for developing a gender-neutral thesis or paper include rephrasing the text to facilitate the use of gender-neutral nouns ("an individual", "the subject", "humankind"

(LSE's Style Guide for Ph.D. Theses)

4.7. Summary

This chapter has presented the methodological structure of this thesis. I started with an overview of the underlying epistemological assumption, which led to a research focus on how information systems failure is constructed, as well as a different social actors' interpretation of the failure. The perspective on the dynamics of actors in the field of aid, which is based on the constructivist theory of international relations, and the conceptualization of technology, which is underpinned by socio-technical perspective, elaborated in Chapters 2 and 3, strongly mirrors the idea of social construction. This chapter identified the link between the discussion on epistemology and theoretical perspective and the thesis questions, which was demonstrated by the research design. Data collection was conducted by using diverse sources, as it is typically recommended for interpretive case studies (Yin 2009; Walsham 2006). The following four chapters

⁵⁶ <http://www.lse.ac.uk/socialPolicy/pdf/InformationForCurrentStudents/PhDStyleGuide.pdf>

will present the findings and analysis from the two parts of research: the global diffusion of AIMS (Chapters 5 and 6) and the AIMS failure in Indonesia (Chapters 7 and 8).

Chapter 5. A Review of AIMS Implementation in the Last Two Decades (1996-2015)

In the previous chapters, I positioned my research and explained the theoretical framework and the methodology used in conducting my research. This chapter confirms the global proliferation of AIMS in recipient countries in the last two decades (1996-2015) and provides descriptive evidence for the systematic analysis of AIMS implementation in the next chapter. In this chapter:

- First, I provide an overview of AIMS diffusion in recipient countries where different economic, regional, and political contexts exist. Findings are summarized according to i) *economic status*, ii) *region*, as well as iii) *year of implementation*.
- Second, based on the findings, I investigate the high degree of similarities between AIMS. Commonalities are discussed in three features, i) *rationalities and norms*, ii) *functionalities*, and iii) *target users*. The section identifies that the shared visions and norms AIMS inscribe often translate into homogenous design and functionalities of technologies, as well as targeting users.
- Third, I identify the dominance of two AIMS service providers in the AIMS field, and discuss the influence of these major players on the adoption of AIMS in recipient governments and their homogeneity.

This study conceptualizes AIMS as a set of socio-technical domains in which the varying political and economic interests of stakeholders inevitably collide in the global field of aid. In the following two chapters, I investigate the questions *how we understand the global adoption of AIMS in different contexts*. To the best of my knowledge, there is no published systematic research of the global adoption of AIMS.

5.1. Key Findings: 80 AIMS Cases in 71 Recipient Countries

This section provides an overview of AIMS implementation in recipient countries. I review AIMS implementation in terms of economic status of the country, region, and time of implementation. Based on the data collected on AIMS adoption in recipient countries, this study identified 80 cases of AIMS, either currently being used or previously used in 71 countries during the period 1996 to 2015. It is clear that AIMS have been widely implemented in recipient countries. The findings provide suggestive evidence that AIMS implementations have been driven by the emergence of aid effectiveness norms.

The findings are summarized in Table 5-1 by country, year of implementation, name of AIMS, implementing government agency, URLs (if they are web-based), language in service, and service provider. The full list of AIMS with further information including funder, participating development partners, the current status, as well as the sources of data, is attached in the Appendix 3.

As previously discussed, in this study, the definition of recipient country follows the OECD ODA Recipient List. The cases are classified into six different regions following the World Bank's regional categories, as well as three economy classifications following the OECD categories, as below:

- Upper middle-income countries (upper-MIC), Lower middle-income countries (lower-MICs), Least developed countries (LDCs)
- Europe and Central Asia (ECA), Sub-Saharan Africa (SSA), Middle East & North Africa (MENA), South Asia (SA), East Asia & Pacific (EAP), Latin America & Caribbean (LAC).

No.	Country	Year	Name	Implementing Governmental Agency	URL	Language	Provider
1	Afghanistan	2002	National Budget and Aid Management Systems	Ministry of Finance	http://dadafghanistan.gov.af	EN; PRS	Synergy
2	Armenia	1990s	DAD: Donor Assistance Database	N/A	N/A	N/A	Synergy
3	Bangladesh	2014	AIMS: Aid Information Management System	Ministry of Finance	http://aims.erd.gov.bd/	EN	Techno Vista
4	Bolivia (1)	2007	PGA: Plataforma de Gestión de la Ayuda	Ministry of Planning	N/A	ES	DG
5	Bolivia (2)	2012	MIP: Mapa de la Inversión Pública en Bolivia	Ministry of Planning and Development	http://mip.vipfe.gob.bo/	ES	Local IT
6	Botswana	2005	BODAMIS: Botswana Development Assistance Management Information System	Ministry of Finance and Development Planning (MFDP)	http://bodamis.gov.bw/	EN	Equiniccio
7	Burkina Faso	2008	PGA: Plateforme de Gestion de l'Aide	Ministry of Economics and Finance	http://pga.finances.gov.bf/	EN; FR	DG
8	Burundi (1)	2008	AMP: Aid Management Platform	Burundi's Aid Coordination Committee Permanent Secretariat (SP-CNCA)	http://amp.sp-cnca.gov.bi/		DG
9	Burundi (2)	2012	DAD: Development Assistance Database	Burundi's Aid Coordination Committee Permanent Secretariat (SP-CNCA)	http://dad.synisys.com/dadburundi/	EN; FR	Synergy
10	Cambodia	2005	Cambodia ODA Database	Cambodian Rehabilitation and Development Board (CRDB) / Council of the Development of Cambodia	http://odacambodia.com/	EN	Local IT
11	Cameroon	2010	DAD: Development Assistance Database	Ministry of Economy, Planning and Regional Development	http://dad.minepat.gov.cm/	EN; FR	Synergy
12	Central African Rep.	2008	DAD: Development Assistance Database	Ministry of Planning, Economy and International Cooperation	http://dad.synisys.com/dadcar/#	EN; FR	Synergy
13	Chad	2014	PGA: Plateforme de Gestion de l'Aide	Ministry of Planning and International Cooperation	http://tchad.ampdev.net/	FR; TET	DG
14	Comoros	2013	DAD: Development Assistance Database	General Planning Commission of Comoros	http://dad.synisys.com/dadcomoros/	EN; FR	Synergy
15	Congo Democratic Rep.	2008	AIMP: Aid and Investment Management Platform	The Ministry of Planning	http://217.171.93.182/portal		DG
16	Cotê d'Ivoire	2014	PGA: Plateforme de Gestion de l'Aide	Ministry of Economy and Finances	http://pgfe.finances.gouv.ci/	EN; FR	DG
17	Ethiopia	2005	AMP: Aid Management Platform	Ministry of Finance and Economic Development (MoFED)	http://amp.mofed.gov.et/	EN	DG
18	Gambia	2015	AMP: Aid Management Platform	Ministry of Finance and Economic Affairs (MoFEA)	http://gambia.ampsite.net/	EN	DG
19	Georgia (1)	1990s	DAD: Donor Assistance Database	N/A	N/A	N/A	Synergy
20	Georgia (2)	2015	e-Aid Information Management System (eAIMS)	Ministry of Finance; State Ministers' Office for European and Euro-Atlantic Integration; and the Administration of the Government of Georgia	https://caims.ge/	EN; KA	FAS
21	Guatemala	2009	DAD: Development Assistance Database	SEGEPLAN (La Secretaría de Planificación y Programación de la Presidencia)	http://dad.segeplan.gob.gt/dad	ES	Synergy
22	Guinea Bissau	2011	PGA: Plataforma de Gestão da Ajuda	Ministry of Economic Planning and Regional Integration (MEPIR)	N/A	N/A	DG
23	Haiti	2012	MGAE: Module de Gestion de l'Aide Externe	Ministry of Planning and External Cooperation (MPCE)	https://haiti.ampsite.net/portal/	EN; FR	DG
24	Honduras	2013	PGC: Plataforma de Gestión de la Cooperación	Technical Secretariat for Planning and External Cooperation (SEPLAN)	http://pgc.sre.gob.hn/portal/	EN; ES	DG
25	India	2007	CDSS: Coordination & Decision Support System	Coordination & Decision Support System (CDSS)	http://www.cdssindia.gov.in/	EN	Synergy
26	Indonesia (1)	2005	Recovery Aceh - Nias (RAN) Database	Reconstruction and Rehabilitation Agency of the Government of Indonesia (BRR)	http://rand.bappenas.go.id/	EN	Synergy
27	Indonesia (2)	2009	AIMS: Aid Information Management System	Ministry of National Development Planning (Bappenas)	http://aims.bappenas.go.id	EN	Local IT
28	Iraq	2011	IDMS: Iraq Development Management System	Ministry of Planning	http://www.mop.gov.iq/idms/	EN; AR	Synergy
29	Jordan (1)	2010	JAIMS: Jordan Aid Information Management System	Ministry of Planning and International Co-operation	http://www.mop-jaims.gov.jo/	EN	Local IT
30	Jordan (2)	2015	JORISS: Jordan Response Information System for the Syria Crisis	Jordan Response Platform for the Syria Crisis (JRPSC) Secretariat	http://www.joriss.org.jo/	EN; AR	Local IT
31	Kazakhstan	1990s	DAD: Donor Assistance Database	N/A	N/A	N/A	Synergy
32	Kenya	2010	Electronic Project Monitoring Information System (e-ProMIS)	Ministry of Finance and Treasury	http://e-promis.treasury.go.ke/e-promis/#	EN	Synergy
33	Kosovo	2010	AMP: Aid Management Platform	Ministry of European Integration of the Government of Kosovo / Ministry of European Integration (MEI)	https://amp-mei.net/	EN; SQ;	DG
34	Kyrgyz Republic (1)	1990s	DAD: Donor Assistance Database	N/A	N/A	N/A	Synergy
35	Kyrgyz Republic (2)	2012	AMP: Aid Management Platform	Prime Minister's Office; in coordination with the Ministry of Finance	http://www.amp.gov.kg/	EN; RU	DG
36	Laos	2011	AMP: Aid Management Platform	Department of International Cooperation, Ministry of Planning and Investment	http://ppamp.mpi.gov.la/	EN	DG
37	Lebanon	2006	DAD: Development Assistance Database	Prime Minister's Office (PMO)	http://www.dadlebanon.org	EN	Synergy
38	Lesotho	2013	PSID: Public Sector Investment Database	Ministry Of Development Planning	http://dad.synisys.com/dadlesotho/	EN	Synergy
39	Liberia	2007	AMP: Aid Management Platform	Ministry of Finance and Development Planning	https://amp.mfdp.gov.lr/portal/	EN	DG
40	Macedonia	2010	CDAD: Central Donor Assistance Database	Secretariat for European Affairs / Sector for Coordination of Foreign Assistance	http://cdad.sep.gov.mk/	EN; MK	Synergy
41	Madagascar	2009	AMP: Aid Management Platform	Permanent Technical Secretariat for Aid Coordination (STP-CA)	http://amp-madagascar.gov.mg/	FR	DG
42	Malawi	2008	AMP: Aid Management Platform	Ministry of Finance, Economic Planning & Development	http://malawiaid.finance.gov.mw/	EN	DG
43	Maldives	2005	DAD: Development Assistance Database	National Recovery and Reconstruction Plan (NRRP)	http://dad.finance.gov.mv	EN	Synergy

No.	Country	Year	Name	Implementing Governmental Agency	URL	Language	Provider
44	Mauritania	2011	DAD: Development Assistance Database	Ministry of Economic Affairs and Development (MAED)	http://dad.synisis.com/dadmauritanie/	FR; AR	Synergy
45	Moldova	2014	AMP: Aid Management Platform	State Chancellery (SC)	http://amp.gov.md/portal/	EN; RO	DG
46	Montenegro	2007	AMP: Aid Management Platform	Government of the Republic of Montenegro - Secretariat for European Integration	N/A	N/A	DG
47	Mozambique	2006	ODA to Mozambique Database (ODAmoz)	Ministry of Planning and Development (MPD)	http://www.odamoz.org.mz/	EN; PT	DG
48	Myanmar	2015	Mohinga	Ministry of National Planning and Economic Development	http://mohinga.info/en/	EN; MY	Catalpa Int'l
49	Nepal	2010	AMP: Aid Management Platform	Ministry of Finance / Foreign Aid Coordination Division (FACD)	http://amis.mof.gov.np/portal/	EN	DG
50	Nicaragua	2008	ODA to Nicaragua Database (ODAnic)	N/A	http://nic.odadata.eu/	EN; ES	DG
51	Niger	2009	PGA: Plateforme de Gestion de l'Aide	External Assistance Coordination Unit (CCAIE) Ministry of Planning	http://pga.gouv.ne/portal/	FR	DG
52	Nigeria	2010	DAD: Development Assistance Database	National Planning Commission	http://dad.synisis.com/dadnigeria/	EN	Synergy
53	Pakistan	2006	DAD: Development Assistance Database	Government of Pakistan	http://www.pakaid.info/dad/	EN	Synergy
54	Palestine	2010	DARF: Development Assistance and Reform Platform	Ministry of Planning & Administrative Development (MoPAD)	http://darf.pna.ps/	EN	Local IT
55	Papua New Guinea	2008	DAD: Development Assistance Database	Department of National Planning and Monitoring	http://www.planning.gov.pg/dadpng/		Synergy
56	Philippines (1)	2014	Electronic Monitoring Platform Accountability and Transparency Hub for Yolanda (eMPATHY)	Office of the Presidential Assistant for Rehabilitation and Recovery (OPARR)	http://empathy.oparr.gov.ph/	EN	Synergy
57	Philippines (2)	2013	Foreign Aid Transparency Hub (FaiTH)	FaiTH Task Force	http://www.gov.ph/faith/	EN	Local IT
58	Russia	1996	DAD: Donor Assistance Database	N/A	N/A	N/A	Synergy
59	Rwanda	2006	DAD: Development Assistance Database	Ministry of Finance and Economic Planning (MINECOFIN)	http://dad.minecofin.gov.rw/	EN	Synergy
60	Senegal	2009	PGFE: Plateforme de Gestion des Financements Extérieurs	Ministry of Economy, Finances and Planning	http://pgfe.finances.gouv.sn/	EN; FR	DG
61	Sierra Leone	2008	DAD: Development Assistance Database	Ministry of Finance and Development through the Development Assistance Coordination Office (DACO)	http://dad.synisis.com/dadsierraleone/	EN	Synergy
62	Solomon Island	2011	DAD: Development Assistance Database	Ministry of Development Planning and Aid Coordination (MDPAC)	http://dad.synisis.com/slb/	EN	Synergy
63	Somalia	2011	DAD: Development Assistance Database	N/A	N/A	N/A	Synergy
64	Somaliland	2010	DAD: Development Assistance Database	Ministry of National Planning and Development	http://dad.synisis.com/dadsomaliland/	EN	Synergy
65	South Africa	2004	DCIS: Development Co-operation Information System	South African National Treasury	http://www.dcis.gov.za/	EN	Local IT
66	South Sudan	2010	AMP: Aid Management Platform	Ministry of Finance and Economic Planning	https://ssudan.ampsite.net/portal/	EN	DG
67	Sri Lanka	2005	INDIS: Integrated National Development Information System	Ministry of National Policies and Economic Affairs - Department of Project Management and Monitoring	http://indis.pmm.gov.lk/	EN	Synergy
68	Tajikistan (1)	1990s	DAD: Donor Assistance Database	N/A	N/A	N/A	Synergy
69	Tajikistan (2)	2012	AIMS: Aid Information Management System	Committee on Investments and State Property Management (SCISPM)	http://aims.gki.tj/	EN; RU; TG	Synergy
70	Tanzania	2008	AMP: Aid Management Platform	Ministry of Finance and Economic Affairs	http://amp.mof.go.tz/	EN	DG
71	Thailand	2005	DAD: Development Assistance Database	Thailand International Development Cooperation Agency (TICA) - Ministry of Foreign Affairs	http://dadthailand.mfa.go.th/	EN	Synergy
72	Timor-Leste	2012	Aid Transparency Portal	Ministry of Finance of the Government of Timor-Leste / Development Partnership Management Unit	https://aidtransparency.gov.tl/portal/	EN; TET	DG
73	Togo	2011	PGA: Plateforme de Gestion de l'Aide	Ministry of Planning, Development and Regional Planning	http://www.pgatogo.tg/	EN	DG
74	Turkmenistan	1990s	DAD: Donor Assistance Database	N/A	N/A	N/A	Synergy
75	Uganda	2013	AMP: Aid Management Platform	Ministry of Finance, Planning and Economic Development	http://154.72.196.89/portal/	EN	DG
76	Ukraine (1)	1990s	DAD: Donor Assistance Database	N/A	N/A	N/A	Synergy
77	Ukraine (2)	2012	Open Aid Ukraine	Ministry of Economic Development and Trade (MEDT)	http://openaid.gov.ua/en/	EN; UK	Synergy
78	Vietnam	2005	DAD: Development Assistance Database	Ministry of Planning and Investment (MPI)	http://dad.mpi.gov.vn/	EN; VI	Synergy
79	Yemen	2012	DAD: Development Assistance Database	Ministry of Planning and International Cooperation (MoPIC)	http://dad.synisis.com/dadyemen/		Synergy
80	Zambia	2008	DAD: Development Assistance Database	Ministry of Finance and National Planning	http://www.zdad.gov.zm/	EN	Synergy

* Language: AR (Arabic), EN (English), ES (Spanish), FR (French), KA (Georgian), MK (Macedonian), MY (Myanmar), PRS (Dari), PT (Portuguese), RO (Romanian), RU (Russian), SQ (Albanian), TET (Tetum), TG (Tajik), UK (Ukrainian), VI (Vietnamese)

** Provider: DG (Development Gateway), FAS (Financial Analytical System), Synergy (Synergy International Systems)

Table 5-1. AIMS Implementation in Recipient Countries (1996-2015)

5.1.1. AIMS by Economic Status

Among the 142 OECD ODA recipients⁵⁷, 71 countries (50%) have the experience of implementing AIMS, as shown in the Table 5-1. However, this percentage increases to 67% (59 countries among 88) if the upper MICs where the ODA does not contribute to a significant portion of the government's budget are deselected. In upper MICs, AIMS are implemented only in 12 countries – Russia (1996), Kazakhstan, Turkmenistan (1990s), South Africa (2004), Botswana, Maldives, Thailand (2005), Lebanon (2006), Montenegro (2007), Jordan (2010, 2015), Macedonia (2010), and Iraq (2011). Meanwhile, none of the LAC countries with the status of upper-MICs, i.e. emerging economies such as Brazil, Chile, Costa Rica, Mexico, Uruguay, as well as Caribbean countries, ever installed AIMS. Reasonably, in these countries, aid dependency is low and the amount of ODA is relatively small. Likewise, island-countries of the Oceania in EAP have never implemented AIMS⁵⁸. Among the 35 OECD ODA recipients categorized as lower MICs, 21 countries (60%) have implemented AIMS. As expected, the highest percentage (72%) and the majority of AIMS implementation happened in LICs with 38 cases in 53 countries.

Nine countries have implemented AIMS twice: Bolivia (2007, 2012), Burundi (2007, 2012); Georgia (1990s, 2015); Indonesia (2005, 2009); Kyrgyz Republic (1990s, 2012); Philippines (2013, 2014); Tajikistan (1990s, 2012); and Ukraine (1990s, 2012). The motivations for multiple implementations may vary, but the fact that implementation context changes overtime may be one reason, e.g. from PC-based intra-governmental purpose to web-based in an Internet era, or for the case of humanitarian aid vs. for the management of regular ODA. Also possible disappointments may reflect in the switch of providers (e.g., in the case of Bolivia, Burundi, Kyrgyz, Georgia and Indonesia).

⁵⁷According to the OECD ODA List, 142 countries are listed with these notes. Somaliland, and Palestine (West Bank and Gaza) are not in the List. However, I added them in the low income category according to the World Bank. Russia is not currently in the OECD ODA List. However, it was listed as a recipient of 'official aid', a previous OECD categorisation of aid given to more advanced developing and eastern European countries. Six territories registered in the List are not included here, i.e. Cook Islands, Montserrat, Niue, Saint Helena, Tokelau, and Wallis and Futuna. Thus, actually there are 146 recipients, and 68 among those have AIMS experience

⁵⁸ Fiji, Marshall Islands, Nauru, Palau, Tonga, Micronesia, Samoa, Kiribati, Vanuatu, and Tuvalu.

I found that some AIMS cases have been on and off during the examination period between 2015 and 2017. The AIMS, which have been ‘alive’ for a relatively long time, include those in Afghanistan, Cambodia (2005), Ethiopia (2005), Indonesia⁵⁹, Mozambique (2006), Sri Lanka (2005)⁶⁰. Of course, the level of use, the actual outcome of the systems, and how often, and how many users benefits from the systems, may vary in each case. For example, the websites of the Ethiopian Aid Management Platform (AMP) is not open to public; Mozambique ODAMoz uses outdated version of bulletin board system (BBS). However, the service provider argues, in the interviews, that they are still being actively used by government workers. As both AIMS in Ethiopia and Mozambique are the early products of the service provider, they may have made considerable efforts to these. There may be various reasons for their sustainability. This will be discussed in detail in Section 6.3. At the very least it is clear that such systems have been able to exist for whatever reasons for more than a decade.

5.1.2. AIMS by Region

Except for the transition economies in the earlier period of AIMS between 1996 and 1999, the implementation of AIMS occurred in all regions and in countries with differing levels of economic development as shown in Table 5-2. AIMS have been evenly diffused in all regions. As was expected, the majority of AIMS implementation happened in the SSA region.

Sub-Saharan Africa (SSA): Findings show that there are 33 AIMS cases in 32 countries, which represents 45% of the 71 countries where AIMS have been implemented. The majority, 28 out of 33 cases that had AIMS in the SSA region occurred in 27 countries that fall under the low-income economy group – Burkina Faso (2008), Burundi (2008, 2012), Central African Republic (2008), Chad (2014), Comoros (2013), Congo Democratic Republic (2008), Ethiopia (2005), Gambia (2015), Guinea Bissau (2011), Kenya (2010), Lesotho (2013), Liberia (2007), Madagascar (2009), Malawi (2008), Mauritania (2011), Mozambique (2006), Niger (2009), Rwanda (2006), Senegal (2009),

⁵⁹ The one implemented in 2005 for post-tsunami reconstruction. It has not been being used since the post-tsunami reconstruction program ended. But, the URL is still accessible.

⁶⁰ It was implemented as an AIMS for post-tsunami reconstruction, but later evolved as Integrated National Development Information System (INDIS), which manages ODA.

Sierra Leone (2008), Somalia (2011), Somaliland (2010), South Sudan (2010), Tanzania (2008), Togo (2011), Uganda (2013), and Zambia (2008). The other five countries from the SSA region – Botswana (2005), South Africa (2004), Cameroon (2010), Cote d'Ivoire (2014), and Nigeria (2010) are from the upper and lower middle-income economy groups.

East and Asia Pacific (EAP): With the exception of the island-countries of Oceania, which are sovereign states, the majority have used AIMS in the EAP region. Twelve cases have been implemented in 10 countries. In particular, seven out of 10 ASEAN countries implemented AIMS: Thailand (2005), Indonesia (2005, 2010), Cambodia (2005), Vietnam (2005), Laos (2011), Philippines (2013, 2014), and Myanmar (2015), while the remaining three are richer countries – Brunei, Malaysia, and Singapore.

South Asia (SA): With Bhutan as an exception, all countries have implemented AIMS in this region: Afghanistan (2002), Maldives (2005), Sri Lanka (2005), Pakistan (2006), India (2007), Bangladesh (2014), and Nepal (2010), all countries have the experience of AIMS in this region.

Europe and Central Asia (ECA): The findings show that 12 countries in the region have implemented AIMS: Armenia (1990s), Georgia (1990s and 2015), Kazakhstan (1990s), Kosovo (2010), Kyrgyz (1990s and 2012), Macedonia (2010), Moldova (2014), Montenegro (2007), Russia (1996), Tajikistan (1990s and 2012), Turkmenistan (1990s), and Ukraine (1990s and 2012). Following SSA with the largest number of AIMS implemented, the ECA region had 16 cases from 12 countries. However, the majority of AIMS in these transition economies were implemented in late 1990s.

Latin America and Caribbean (LAC): With only five out of 24 countries implementing AIMS in this region, the numeric coverage (21%) looks relatively low. However, this may be because the LAC region includes many Caribbean island-countries and emerging countries where ODA does not contribute to their government budgets as discussed above. Bolivia (2007, 2012), Guatemala (2009), Haiti (2012), Honduras (2013), Nicaragua (2008) have implemented AIMS.

Middle East and North Africa (MENA): six cases of AIMS have been implemented in this region, i.e. Iraq (2011), Jordan (2010 and 2015), Lebanon (2006), Palestine (2010), and Yemen (2012).

In transition economies in Eastern Europe and tsunami-affected countries in Southeast Asia and South Asia, there was relatively visible mimetic isomorphism in the AIMS implementation. I will discuss in more detail in Section 6.2, where I present a historical review of AIMS implementation.

* Countries (Cases of AIMS)

	ECA Europe & Central Asia	SSA Sub-Saharan Africa	MENA Middle East & North Africa	SA South Asia	EAP East Asia & Pacific	LAC Latin America & Caribbean	
Upper Middle Income							
AIMS	Kazakhstan, Macedonia, Montenegro, Russia, Turkmenistan	Botswana, South Africa	Iraq, Jordan*, Lebanon	Maldives	Thailand		
	5 (5)	2 (2)	3 (4)	1 (1)	1 (1)	0 (0)	12 (13)
Non	Albania, Azerbaijan, Belarus, Bosnia and Herzegovina, Serbia, Turkey	Gabon, Mauritius, Namibia, Seychelles	Algeria, Iran, Libya, Tunisia		China, Fiji, Malaysia, Marshall Islands, Nauru, Palau, Tonga	Antigua and Barbuda, Argentina, Belize, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Rep, Ecuador, Grenada, Jamaica, Mexico, Panama, Peru, St Lucia, St Vincent and the Grenadines, Suriname, Uruguay, Venezuela	
	6	4	4	0	7	21	42
	11	6	7	1	8	21	54
Lower Middle Income							
AIMS	Armenia, Georgia*, Kosovo, Kyrgyz*, Moldova, Ukraine*	Cameroon, Côte d'Ivoire, Nigeria	Palestine	India, Pakistan, Sri Lanka	Indonesia*, Papua New Guinea, Philippines*, Vietnam	Bolivia*, Guatemala, Honduras, Nicaragua	
	6 (9)	3 (3)	1 (1)	3 (3)	4 (6)	4 (5)	21 (27)
Non	Uzbekistan	Cabo Verde, Congo, Ghana, Swaziland	Egypt, Morocco, Syria		Micronesia, Mongolia, Samoa	El Salvador, Guyana, Paraguay	
	1	4	3	0	3	3	14
	7	7	4	3	7	7	35
Least Developed Countries							
AIMS	Tajikistan*	Burkina Faso, Burundi*, Central African Rep., Chad, Comoros, Congo DR, Ethiopia, Gambia, Guinea Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mauritania, Mozambique, Niger, Rwanda, Senegal, Sierra Leone, Somalia, Somaliland, South Sudan, Tanzania, Togo, Uganda,	Yemen	Afghanistan, Bangladesh, Nepal	Cambodia, Laos, Myanmar, Solomon Islands, Timor-Leste	Haiti	
	1 (2)	27 (28)	1 (1)	3 (3)	5 (5)	1 (1)	38 (40)
Non		Angola, Benin, Equatorial Guinea, Eritrea, Guinea, Mali, Sao Tome and Principe, Sudan, Zimbabwe	Djibouti	Bhutan	Kiribati, North Korea, Tuvalu, Vanuatu		
	0	9	1	1	4	0	15
	1	36	2	4	9	1	53
AIMS	12 (16)	32 (33)	5 (6)	7 (7)	10 (12)	5 (6)	71 (80)
Non	7	17	8	1	14	24	71
	19	49	13	8	24	29	142

Table 5-2. AIMS Implementation by Region, Year and Economy

5.1.3. AIMS by Time Implemented

I highlight the role of global aid norms, governance, and agenda on AIMS implementation. Early AIMS adoption occurred clearly in the transition economies. At least eight CIS countries implemented AIMS between 1996 and 2000, as shown in Figure 5-1. In the early 2000s, only two countries, Afghanistan in 2002 and South Africa in 2004, started using AIMS. As shown in Figure 5-1 below, it is apparent that the implementation of many AIMS began after 2005 when the Paris Declaration on Aid Effectiveness (PD) was signed by 138 countries and 28 international organizations at the second OECD High Level Forum on Aid Effectiveness (HLF). In 2005 and 2006, 12 countries implemented such systems. The PD became a tipping point of norm cascade as well as diffusion of AIMS, which I will discuss in details in Section 6.2.2.

In fact, another contingency that influenced the spread of AIMS was the Indian Ocean Tsunami that happened in December in 2004, which will be investigated in more detail in Section 6.2.2. The Tsunami-affected countries, Sri Lanka, Maldives, Indonesia, and Thailand implemented AIMS for the purpose of managing humanitarian assistance. It is, however, clear that the series of the HLFs on Aid Effectiveness, and the emergence of aid effectiveness norms in the global field of aid, served as an important driving force to boost the number of countries using AIMS. Right after the Accra Action Plan in 2008, there was another peak in diffusion with the establishment of AIMS in 10 countries. Another five countries joined in 2009, while 10 countries adopted such systems in 2010.

The comparison between AIMS implementation and the states' participation in the PD and the PD Surveys on three occasions is summarized in Table 5-3. Although the purpose of comparison involves conceptual inference rather than statistical generalizability, the findings provide implications for further analysis, as indicated in the following paragraphs.

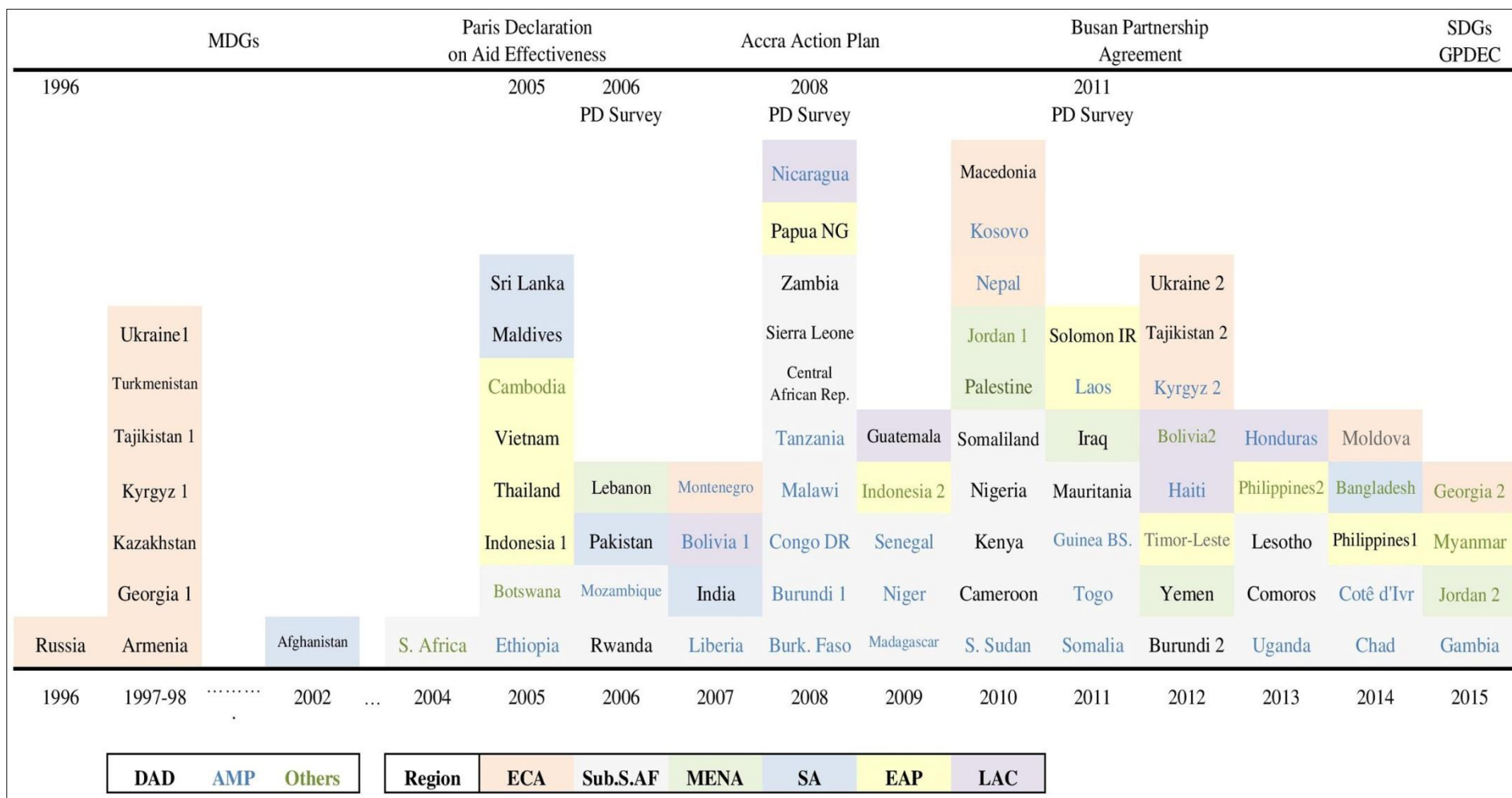


Figure 5-1. AIMS Implementation and the Timeline of the Global Aid Agenda

The findings show that a country that participated in the PD or the Surveys at least once is more likely to implement AIMS. Of the 71 recipient countries, 63 participated in the PD or the Surveys. In addition, 47 countries that never participated in the PD and the three PD Surveys did not have AIMS⁶¹. This is evidence of the influence the non-participatory behaviour in the PD institutions exerted on the non-implementation of AIMS.

The countries which implemented AIMS without participating in the Surveys were Maldives (2005), Sri Lanka (2005), Thailand (2005), Lebanon (2006), India (2007), Montenegro (2007), Macedonia (2010), Somaliland (2010), Iraq (2011), Somalia (2011), Myanmar (2015), as well as the early CIS countries. However, the early AIMS implementation in the CIS countries happened in the late 1990s, prior to the PD, while Maldives, Sri Lanka, Thailand, which will be further discussed on institutional isomorphism of AIMS adoption, in the next analysis chapter, are Tsunami-affected countries.

The other seven countries, except for India, are post-conflict or fragile countries with limited availability and capacity to actively participate in the global aid governance. The adoption of AIMS in such countries can be understood as an outcome of a different momentum. Thus, except for these countries, it is clear that all 53 countries with AIMS participated in the PD and PD surveys at least once.⁶²

⁶¹ Thirty countries have not endorsed the PD and never participated in any of the surveys, i.e. Algeria, Angola, Antigua and Barbuda, Azerbaijan, Belize, Bhutan, Chile, Costa Rica, Cuba, Dominica, Equatorial Guinea, Eritrea, Grenada, Iran, Kiribati, North Korea, Libya, Marshall Islands, Mauritius, Micronesia, Nauru, Palau, St. Lucia, Seychelles, Suriname, Tuvalu, Uruguay, Uzbekistan, Venezuela, and Zimbabwe. 16 countries only joined the PD but never participated in any of the surveys, i.e. Argentina, Belarus, Brazil, China, Congo, Djibouti, Guinea, Guyana, Malaysia, Mexico, Panama, Paraguay, Serbia, Syria, Tunisia, and Turkey. Additionally, St. Vincent and the Grenadines only joined the 2011 PD Survey without endorsing the PD. Meanwhile, Kazakhstan, Lebanon, Macedonia, Montenegro, Myanmar, Somalia, Somaliland, and Turkmenistan have not even endorsed the PD, but have implemented AIMS.

⁶² There are still nine countries, which endorsed the PD and participated in all three PD Surveys but did not implement AIMS: Albania, Benin, Cape Verde, Dominican Republic, Egypt, Ghana, Mali, Mongolia, and Peru.

No.	Country	Paris Declaration	PD Survey			AIMS
			2006	2008	2011	
1	Afghanistan	✓	✓	✓	✓	2002
2	Albania	✓	✓	✓	✓	
3	Algeria					
4	Angola					
5	Antigua and Barbuda					
6	Argentina	✓				
7	Armenia	✓		✓		1990s
8	Azerbaijan					
9	Bangladesh	✓	✓	✓	✓	2014
10	Belarus	✓				
11	Belize					
12	Benin	✓	✓	✓	✓	
13	Bhutan					
14	Bolivia*	✓	✓	✓	✓	2007; 2012
15	Bosnia and Herzegovina	✓			✓	
16	Botswana	✓			✓	2005
17	Brazil	✓				
18	Burkina Faso	✓	✓	✓	✓	2008
19	Burundi*	✓	✓	✓	✓	2008; 2012
20	Cabo Verde	✓	✓	✓	✓	
21	Cambodia	✓	✓	✓	✓	2005
22	Cameroon	✓		✓	✓	2010
23	Central African Rep.	✓		✓	✓	2008
24	Chad	✓		✓	✓	2014
25	Chile					
26	China	✓				
27	Colombia	✓		✓	✓	
28	Comoros	✓			✓	2013
29	Congo	✓				
30	Congo, Democratic Rep.	✓	✓	✓	✓	2008
31	Costa Rica					
32	Cotê d'Ivoire	✓		✓		2014
33	Cuba					
34	Djibouti	✓				
35	Dominica					
36	Dominican Republic	✓	✓	✓	✓	
37	Ecuador	✓			✓	
38	Egypt	✓	✓	✓	✓	
39	El Salvador	✓			✓	
40	Equatorial Guinea					
41	Eritrea					
42	Ethiopia	✓	✓	✓	✓	2005
43	Fiji	✓			✓	
44	Gabon	✓		✓	✓	
45	Gambia	✓			✓	2015
46	Georgia*	✓				1990s; 2015
47	Ghana	✓	✓	✓	✓	
48	Grenada					
49	Guatemala	✓			✓	2009
50	Guinea	✓				
51	Guinea Bissau	✓			✓	2011
52	Guyana	✓				
53	Haiti	✓		✓	✓	2012
54	Honduras	✓	✓	✓	✓	2013
55	India	✓				2007
56	Indonesia*	✓		✓	✓	2005; 2009
57	Iran					
58	Iraq	✓				2011
59	Jamaica	✓			✓	
60	Jordan*	✓		✓	✓	2010; 2015
61	Kazakhstan					1990s
62	Kenya	✓	✓	✓	✓	2010
63	Kiribati					
64	Korea, North					
65	Kosovo			✓	✓	2010
66	Kyrgyz Republic*	✓	✓	✓	✓	1990s; 2012
67	Laos	✓		✓	✓	2011
68	Lebanon					2006
69	Lesotho	✓			✓	2013
70	Liberia			✓	✓	2007
71	Libya					
72	Macedonia					2010
73	Madagascar	✓		✓	✓	2009
74	Malawi	✓	✓	✓	✓	2008
75	Malaysia	✓				
76	Maldives	✓				2005
77	Mali	✓	✓	✓	✓	
78	Marshall Islands					
79	Mauritania	✓	✓	✓	✓	2011
80	Mauritius					
81	Mexico	✓				
82	Micronesia					
83	Moldova	✓	✓	✓	✓	2014
84	Mongolia	✓	✓	✓	✓	
85	Montenegro					2007
86	Morocco	✓			✓	
87	Mozambique	✓	✓	✓	✓	2006
88	Myanmar					2015
89	Namibia	✓			✓	
90	Nauru					
91	Nepal	✓		✓	✓	2010
92	Nicaragua	✓	✓	✓	✓	2008
93	Niger	✓	✓	✓	✓	2009
94	Nigeria	✓		✓	✓	2010
95	Pakistan	✓			✓	2006
96	Palau					
97	Palestine**	✓			✓	2010
98	Panama	✓				
99	Papua New Guinea	✓			✓	2008
100	Paraguay	✓				
101	Peru	✓	✓	✓	✓	
102	Philippines*	✓		✓	✓	2013; 2014
103	Russia***	✓				1996
104	Rwanda	✓	✓	✓	✓	2006
105	St. Lucia					
106	St. Vincent and the Grenadines				✓	
107	Samoa	✓			✓	
108	Sao Tome and Principe	✓			✓	
109	Senegal	✓	✓	✓	✓	2009
110	Serbia	✓				
111	Seychelles					
112	Sierra Leone	✓		✓	✓	2008
113	Solomon Island	✓			✓	2011
114	Somalia					2011
115	Somaliland**					2010
116	South Africa	✓	✓		✓	2004
117	South Sudan				✓	2010
118	Sri Lanka	✓			✓	2005
119	Sudan	✓		✓	✓	
120	Suriname					
121	Swaziland	✓			✓	
122	Syria	✓				
123	Tajikistan	✓			✓	1990s; 2012
124	Tanzania	✓	✓	✓	✓	2008
125	Thailand	✓				2005
126	Timor-Leste	✓			✓	2012
127	Togo	✓		✓	✓	2011
128	Tonga	✓			✓	
129	Tunisia	✓				
130	Turkey	✓				
131	Turkmenistan					1990s
132	Tuvalu					
133	Uganda	✓	✓	✓	✓	2013
134	Ukraine*	✓		✓	✓	1990s; 2012
135	Uruguay					
136	Uzbekistan					
137	Vanuatu	✓			✓	
138	Venezuela					
139	Vietnam	✓	✓	✓	✓	2005
140	Yemen	✓	✓	✓	✓	2012
141	Zambia	✓	✓	✓	✓	2008
142	Zimbabwe					
		100	34	55	78	71

Table 5-3. The Paris Declaration on Aid Effectiveness and AIMS Implementation

5.2. Similarities between AIMS

Based on the findings from the review of documents including AIMS project documents, user manuals, administrative guides, business process documents as well as the AIMS websites, apparently, there are a high degree of similarity in the AIMS, in terms of technical functionalities, website, user manual, the process of implementation, vision and purpose. The commonalities of AIMS are categorized in three features, first the vision, rhetoric, and norms that AIMS support; secondly the functionalities of AIMS, and thirdly target users.

5.2.1. Vision, Rationality and Norms that AIMS inscribe

As discussed in Section 3.3.3, no clear definition of AIMS exists in academic research. Building on a commonly agreed definition of AIMS found in the UNDP (2010:1), in Chapter 3, I define AIMS as

Socio-technical systems implemented in a recipient country in order to share and process aid information that would enable the government to manage aid effectively as well as development partners better coordinate.

The PD may have been the most significant momentum for the global adoption of AIMS. Aid effectiveness became the ‘super-norm’, in the notion of Finnemore & Sikkink, (1998), which embraces subordinate concepts such as aid transparency, coordination, and harmonization. The PD and aid effectiveness are referenced in most AIMS documents and AIMS websites published in between 2005 and 2011, when the fourth HLF on Aid Effectiveness was held in Busan, Korea. For example, the Cambodian AIMS explicitly discusses the PD principles in the section under ‘*How does the ODA Database support the Aid Effectiveness Agenda?*’:

Cambodia: The National Strategic Development Plan (NSDP) provides the overarching framework for implementing development activities and for programming domestic and external resources in Cambodia. In this context, and noting the *obligations of both Government and development partners to the 2005 Paris Declaration on Aid Effectiveness*, the Royal Government has developed its own ODA Database to promote effective aid management.

(Cambodia ODA Database <http://odacambodia.com>,
accessed on 7 July 2017, emphasis added)

Some of the AIMS-related documents published in 2010 also explain the vision of the PD:

Mozambique: Based in the Ministry of Planning and Development, the electronic database on ODA to Mozambique (ODAmoz) was established in response to the Government's need for data and for greater alignment of partners with national priorities in line with the Paris Declaration. ODAmoz enables tracking of development partners' projects and programs: location, funding sources, implementing partner/agency, covering more than 90 per cent of ODA in Mozambique.

(United Nations Mozambique Newsletter, Issue 29, May 2010, emphasis added)

Tajikistan: AIMS is fully compliant with the principles of partnership declared in the Paris Declaration on Aid Effectiveness and by the Busan Partnership for Effective Development Co-operation. In summary, AIMS: - is a government tool that promotes coordinated efforts aimed at the country's development (*Ownership*); - allows analyzing and reporting on aid in accordance with national policies and priorities (*Alignment*); - ensures provision of information on joint activities, thereby promoting harmonized, transparent and efficient development activities (*Harmonization*); enables obtaining information on the results of development work, thereby promoting effective decision making (*Results-Based*); - promotes increased accountability and transparency in the use of resources for development (*Mutual Accountability*).

(State Committee on Investments and State Property Management of the Republic of Tajikistan, Foreign Aid Report (2014:15)⁶³, emphasis added)

AIMS are often designed to track progress towards national development goals and pre-existing targets set by the global development agenda such as Millennium Development Goals (2000), Aid Effectiveness (2005), and Sustainable Development Goals (2015). In order to evaluate aid activities and its effectiveness, it is considered a core component that the system enables monitoring of pre-defined progress by using indicators and measurements.

It is expected that AIMS track key aid effectiveness indicators deriving from a recipient government's national development agenda as well as the global aid evaluation framework, led by rule-making organizations, such as the PD Surveys in the global field of aid. This will be discussed in more detail in the following Section 5.2.

⁶³ http://amcu.gki.tj/eng/images/FAR-2014/3.aid_information_management_system_en.pdf

In addition to efforts in norm localization of aid effectiveness and commitment to the PD, references to internalized aid governance appeared in some cases. For example, the Indonesian AIMS referred to the Jakarta Commitment, which was established in 2009, as the domestic aid governance in its explanatory section, instead of direct quotes from the PD:

Indonesia: AIMS is developed to support development partners and Government of Indonesia agencies to accelerate management of external assistances in effective and efficient way, through the preparation of a single system for implementation and monitoring and evaluation of external assistances. The Government and development partners will jointly carryout regular reviews on progress in implementing the commitments on aid for development effectiveness and improve development outcomes through an objective country level mechanism. AIMS is described in the *Jakarta Commitment* as Central information system used by government and development partners.

(AIMS Indonesia website archived on 26 September 2011, emphasis added)

In addition to super-norms of aid effectiveness, the ideas envisioned in the PD are often discussed in the official documents of AIMS and their websites. Three main themes that emerge from most cases of AIMS include better *transparency*, enhanced *coordination* among stakeholders for decision making, and the recipient government's *ownership* of aid management. As demonstrated in the examples below, these rationales and expectations frequently appear in a similar way in different cases, while well reflecting the PD principles. These themes have normative positions, in which super-norms of aid effectiveness structures sets of these inter-related norms. These themes, transparency, coordination, and ownership are used for the grand prescriptive goal, aid effectiveness.

Theme 1 -Transparency: Transparency has been considered to be a prerequisite for aid effectiveness (Christensen et al. 2011; Publish What You Fund 2016). It is often discussed in AIMS implementation:

Botswana: The Botswana Development Assistance Management Information System (BODAMIS) is an online database that tracks the funding of all development assistance in Botswana since 2005 as well as planned disbursements. It has been developed by the Government of Botswana's Ministry of Finance and Development Planning (MFDP) with funding from the European Union. Its aim is to provide a global overview and *transparent information on external aid* received by Botswana to the public at large.

(BODAMIS <http://bodamis.gov.bw>, pages archived on 18 February 2015, emphasis added)

A similar notion of transparency is discussed in the Official Development Assistance section of the Nicaragua Database (ODAnic):

Nicaragua: The main purpose of ODAnic is to provide donors in Nicaragua with the tools and training to fulfill their reporting obligations under the Paris Declaration and Accra Agenda for Action, *following international standards and in the spirit of transparency and accountability*. At the same time, ODAnic also provides the Government, donors, civil society and the public a snapshot of donors' strategies, projects and financial commitments.

(ODA Nicaragua Database <http://nic.odadata.eu>, accessed on 17 December 2014, emphasis added)

In Myanmar's Mohinga webpage, their expectations on open access are elaborated in Q&A format as follows:

Myanmar: Making *aid transparent helps to ensure aid goes where it is most needed*. By ensuring open access to aid information a wider group of stakeholders are able to clearly see who is doing what and where. Access to better quality aid information also supports the equitable allocation of resources, both sectorally and geographically, ensuring that all Myanmar people can benefit (...) *Aid transparency isn't just about numbers. Results matter too*. Open access to aid information means that the people of Myanmar are better able to see the impact that aid activities have in their communities. This also helps other countries learn what may work, or not work, in their country.

(<https://mohinga.info/en>, accessed on 7 July 2017, emphasis added)

Theme 2 - Coordination for decision making: As discussed in Section 2.3.3, aid coordination among stakeholders has been discussed as the fundamental for better aid targeting that lead to aid effectiveness (Nunnenkamp et al. 2013; Nunnenkamp & Thiele 2010). In this thesis, aid coordination is conceptualized at the three different levels: donor coordination, donor-government coordination, and intra-governmental coordination (McCormick et al. 2007). Among the five PD Principles, the notions of 'alignment' (donor-government coordination), 'harmonization' (donor coordination), and 'mutual accountability' are well represented in the theme of coordination. As the examples below show, AIMS are expected to enhance these three levels of coordination by sharing aid information and minimizing overlaps among stakeholders, thus finally resulting in better aid allocation:

Botswana: BODAMIS will be used by the Botswana Development Partner Forum to *enable coordination and avoid duplication of development partners' assistance* as well

as to enable the Government of Botswana to better plan resource allocation using information on the ongoing and planned interventions of its development partners (...).
(BODAMIS <http://bodamis.gov.bw>, pages archived on 18 February 2015, emphasis added)

Bangladesh: The AIMS is your one-stop-shop for all information related to foreign assistance in Bangladesh. AIMS records and processes information provided by donors on development activities and related aid flows in the country (...) This strengthens accountability, *facilitate coordination and allow for more efficient aid management*.
(Bangladesh AIMS <http://aims.erd.gov.bd>, accessed on 7 July 2017, emphasis added)

Theme 3 - Ownership in aid management: The strengthening of recipient governments' ownership through the use of AIMS is part of the repetitive rhetoric of AIMS implementation. As may be seen from the Mozambique case below, ostensibly, systems providers also recognized ownership as a key issue:

Mozambique: "In light of the need to guarantee Government of Mozambique ownership and to ensure a proper administrative set up of the project, management of ODAmoz was handed over to the designated directorate in the Ministry of Planning and Development (MPD) in September 2006 and ODAmoz Management Committee installed in late 2006, composed of Donor and GoM representatives."
(ODAmoz <http://www.odamoz.org.mz>, accessed on 7 July, 2017)

As part of the upgraded system, the Government of Mozambique is now managing and administering ODAmoz. In March 2011, Development Gateway staff travelled to Mozambique to install the system on government servers and train the government's IT focal points. These final steps solidify government ownership of the system, ensuring its sustainability.

(Development Gateway, 'Aid information management in Mozambique: a success story'⁶⁴, clarification added)

Similarly, another major service provider Synergy International argued that national ownership was paramount to the success of AIMS.

Rwanda: We aim to continue working closely with the Government of Rwanda to support its DAD Team, promote the participation of other government institutions, and improve data collection processes and the quality of information to enhance the Government's decision-making capabilities.

(Synergy International, Government of Rwanda: Expanding the DAD for Better Decision Making, 24 December, 2010)⁶⁵

⁶⁴ <http://www.developmentgateway.org/blog/aid-information-management-mozambique-success-story>

⁶⁵ Source: <https://www.synisys.com/the-government-of-rwanda-expanding-the-dad-for-better-decision-making/>

5.2.2. Functionalities of AIMS

These shared norms and similarities in vision inscribed in AIMS often translate into the homogenous design and functionalities of technologies (Currie 2012). These functionalities support various purposes, including, aid effectiveness norms and the achievement of legitimacy in the global field of aid.

Based on the commonly discussed technical rationality of AIMS, the following features and functionalities are often emphasized when designing an AIMS that is supposed to effectively support i) aid transparency, ii) coordination and decision making, and iii) government's aid management.

Openness for Transparency: In principle, the use of a web-based system is strongly encouraged, because it is seen as a way to allow all relevant actors to access aid information providing for greater transparency. The UNDP (2006) recommends that the “*system should be web-based and easy to use*” and asserts:

It is recommendable to use a system that is web-based, *because this allows everybody to access the information, provides for greater transparency and accountability* and therefore fosters the acceptance and sustainability of an AIMS. However, the usefulness of a web-enabled system obviously depends on the existing national IT infrastructure and capabilities. Ideally, the set-up of an information management system should be part of a holistic IT strategy to establish/upgrade the IT infrastructure within a certain ministry or the government as a whole.

(Nadoll, 2006:4, emphasis added)⁶⁶

A web-based system to improve transparency was also specifically designed for the Electronic Project Monitoring Information System (e-ProMIS) in Kenya, as the World Bank reported:⁶⁷

Kenya: (...) the web-enabled system was designed to improve the efficiency and transparency of Kenya's national development planning, as well as improve the coordination of reconstruction activities nationally. It is also a powerful tool for tracking and analysing aid flows, from donors to the various implementing agencies within government. The system serves as the main project database and M&E reporting

⁶⁶ “Lessons learnt from establishing aid information management systems to support nationally-led aid coordination”, authored by Jorg Nadoll at UNDP Regional Centre in Bangkok.

⁶⁷World Bank (2016) The State and Impact of Open Aid Initiatives in Kenya: A Case Study, p.4.

system for Government of Kenya, donor, and NGO communities as it ensures effective public access to development data.

(e-ProMIS Kenya, <http://e-promis.treasury.go.ke>)

Based on the findings, most AIMS are web-based systems. However, the usefulness of a web-based AIMS depends upon the ICT infrastructure and information capabilities in the country. The guidelines of UNDP (2008) suggested that the ICT infrastructure and information capabilities be assessed before developing and implementing a system. In addition, the usefulness of AIMS relies on donors entering data on their development activities. Therefore, it is important to ensure institutional mechanisms to enable timely and accurate data entry.

Analytical and Evaluation tool for Coordination: UNDP (2006) strongly recommends a useful analytical tool and reporting module in AIMS. One of the important rationales for collecting information is the capacity for analysis that will enhance policy decision making. Information processing and analytical presentation are fundamental components in this respect. The system is supposed to “allow cutting and dicing the data in the most flexible way” (UNDP 2006:6).

It is further recommended that the system has a reporting tool that allows for flexible connection of all datasets and their presentation in user-friendly graphs, charts, and tables. As can be seen from the examples below, GIS, open data, visualization tools such as graphs and charts, as well as publishing report tools have been featured in AIMS. In India, the organized lists, reports, charts, and maps are considered to be the result of CDSS as a powerful tool:

India: The CDSS India is a powerful tool to view project data organized into lists, reports, charts, and maps, present the project data in the form of list, chart and map reports, memorize/save the reports, print them, and export them into various formats. (...) The CDSS India is designed to provide quick access to the project and aid data remotely via Internet. Once you have accessed the application, you can view the project data stored in the database, add new projects, edit existing ones, etc.

(India's Coordination & Decision Support System (CDSS) – Analytics User Manual Version 2.1: p.4)

A reporting tool is often considered, however there is lack of evidence AIMS improves accountability, as technology has no innate accountability properties (Fox 2007)

Mozambique: After four years of existence, it was necessary to upgrade the technical basis from the system designated 1.0 to a more sophisticated and user-friendly model in order to meet the increasing and more complex needs of the Government and its development partners. Its "*Design your own report*" function makes it easy to search for specific information and offers tables and geographic maps for analysis. The new ODAmoz 2.0 is currently in a testing phase and will be officially launched next year.

(United Nations Mozambique Newsletter, Issue 29, May 2010, emphasis added)

In particular, a GIS-based mapping platform is often recommended. All AIMS after 2000s have a mapping tool to some degree. The underlying assumption of AIMS is that mapping facilitates the tracking of the sub-national project level information on aid activities, disbursements, and evaluation, as well as results and progress towards the achievement of goals by geographical location. When designing an AIMS, the GIS are considered to be an indispensable tool for enhanced coordination and better aid targeting:

Nepal: Using geocoded AMP data on-budget projects, users can easily analyze trends like DP division of labor and regional allocation. Maps can be overlaid with socioeconomic indicators such as poverty and all data can be filtered by AMP data fields. Users can conduct sector-specific analysis to determine where future activities should be targeted to address gaps in current funding. Local geocoded data can also help government and donors to track project progress and to engage citizens and others to monitor program results.

(Nepal Aid Management Platform - Data Management Guidance Note, 2015, p.26)

Compatibility for Ownership: It is recommended that AIMS provide an overview of grants and loans, preferably, are linked to the government's system used to manage the national budget (UNDP 2006). Ideally, the set-up of AIMS should be part of a holistic ICT strategy to strengthen the capacity of the recipient government as a whole. In the longer run in a country which has a domestic IS in the public sector, the systems such as public expenditure systems and resource management systems, should be developed to allow tracking aid activities and analysis of financial data, including planned budget, commitments, and disbursements:

Tanzania: The Aid Management Platform (AMP) is a web based application tool designed to enable better management and coordination of development assistance in Tanzania. It is a web-based database that can be used by both the Government and Development Partners (DPs) in managing external resources, including planning, tracking and reporting of development assistance flows. The AMP is a central instrument in managing development assistance *according to national priorities and offers a platform for measuring results in line with the MKUKUTA/MKUZA II*⁶⁸ *including MDG performance.* As such, the AMP is customized Tanzania's development priorities while also tracking progress towards international aid and development effectiveness principles.

(Tanzanian Ministry of Finance, Aid Management Platform System Disbursement Flash Report, 2012, p.2, emphasis added)

In the assumption that AIMS implementation is purely driven by the quest for managerial efficiency, it is a key motivation that most recipient governments have difficulties maintaining detailed aid information on disbursements and budget allocations. A common way of managing aid flow without AIMS is by using Excel Spreadsheets. However, even after AIMS implementation, Excel spreadsheets are still used in many cases as an initial step of managing aid information. OECD (2006) has found that those governments who build capacity and ownership in aid data reporting in Excel are also those which more effectively use AIMS. On the contrary, those which never experienced the use of Excel for aid data reporting are more likely to face challenges in taking ownership of AIMS. Thus, the recipient government's ownership and capacity are often discussed in AIMS implementation. More importantly, it is recommended that the government plans workflow, report process in Excel, and then migrate the information to AIMS.

5.2.3. Target Users

UNDP (2010:1) describes target users as follows:

The primary users of AIMS are government staff in central ministries who are responsible for coordinating and reporting aid, and for planning aid in relation to the national budget and national planes. The secondary users are those responsible for reporting the data required, including development partners.

⁶⁸ Kiswahili acronym MKUKUTA for the five-year term National Strategy for Growth and Reduction of Poverty. MKUZA is the Poverty Reduction Strategy for Zanzibar.

In most cases, however, both government staffs and aid reporting experts in development partners are equally important primary target users. First, key government staffs are responsible for aid management and planning national budgets or national development plans. The AIMS implementing ministry plays a key role in managing AIMS, while other line ministries normally use the AIMS for intra-governmental aid coordination. Second, aid experts in donor agencies are responsible for the input of aid information into the AIMS, as well as reporting data to their countries and the OECD, in the case of an OECD DAC country.

Secondary users are expected to be decision-makers and the aid experts of all development partners. In many cases, the donor aid agencies and the MDAs appoint a donor focal point usually the World Bank or UNDP, who is supposed to facilitate the use of AIMS and the coordination for information providing.

***Mozambique:** (...) focal points from all UN agencies resident in Mozambique and a growing number of non-resident agencies provide input to ODAmoz on all their projects and programmes. The UN focal point in the Resident Coordinator's Office sits in the Management Committee and coordinates development partners.*

(ODAmoz <http://www.odamoz.org.mz>, accessed on 7 July, 2017, emphasis added)

In theory, all development partners can access detailed aid information undertaken by all participating agencies at the sub-national level, as well as sector level, and so achieve better coordination to minimize overlaps in aid activities (OECD & UNDP 2006). However, the actual outcomes and sustainability of the systems may vary.

Lastly, it is expected that the public users would benefit from AIMS, and in particular CSTs, media and academia may have access to the system for conducting research (OECD & UNDP 2006; Weaver et al. 2014). This rhetoric of 'citizen participation' in aid mechanisms via AIMS appears in the post-conflict states of Timor-Leste and Somaliland:

Timor-Leste: Aid Transparency Portal is a publicly-accessible internet tool which is part of the Government of Timor-Leste’s transparency initiative (...) Aid Transparency Portal and system behind it has been highly customised to meet the needs of Timor-Leste and its development partners. The portal is accessible to all members of the public, groups and development partners.

(Timor-Leste Ministry of Finance, Aid Transparency Portal, assessed on 1 July, 2017)⁶⁹

Somaliland: To ensure more flexibility and to provide access to a wider range of users, the system is designed in such a way that it allows public users to enter it without registration. *Public users wishing to view data should click on the Enter button in the Enter as a Public User section on the login screen.* They will be directed to the List module of the application.

(Synergy International Systems, DAD Somaliland Analytics Quick Reference Guide, 2012, p.1, emphasis added)⁷⁰

Timor Leste’s AIMS, named as Aid Transparency Portal, provides the option of the local language Tetum, in addition to English. On the other hand, the DAD Somaliland only provides service in English based on the screenshots posted in the user manual; Somaliland uses three official languages (English, Arabic, and Somali).

Openness to Whom? As discussed, transparency and openness are key concepts of AIMS. However, some important questions arise here: What is meant by ‘openness’? Openness to whom? Access to information on the web-based platform by the public users is often emphasized as a key aspect in AIMS documents. However, only a few AIMS are serviced in the local language as shown in Table 5-1. Illiteracy is often discussed as an impediment to participating in social activities and human development. In developing countries, many of those who can read only know the official language of a country. In particular, the dominance of an Americanised version of English on the Internet, which has been “compressed to exclude the complexities of political discourse and localized expression” has been criticized in ICTD research (Murphy, 2006:1065). Although many ICTD researchers have pointed out the dominance of English in web content, the lack of local language and training are significant barriers (Urquhart et al. 2008), and the progress seems very low. Among 80 cases, there were only 23 AIMS that

⁶⁹ Source: <https://www.mof.gov.tl/aid-effectiveness/aid-transparency-portal/?lang=en>

⁷⁰ Source: http://www.somalilandlaw.com/DAD_SOMALILAND_Analytics_UserManual.pdf

clearly offer services in local languages, as summarized in Table 5-1.⁷¹ Warschauer (2003) suggests a literacy approach to the digital divide with four distinct concepts: computer literacy, information literacy, computer-mediated communication literacy and multimedia literacy. A lack of English proficiency and ‘computer-mediated communication literacy’ prevent users from continuous use of AIMS, though local AIMS users might have all other three types of literacy.⁷² Some countries specifically include this criticism in an evaluation report, for example:

Thailand: The Memorandum of Understanding stipulates that the system should be bilingual and TICA is to provide an online Thai translation, but this has yet to happen. (Tsunami Evaluation Coalition, Impact of the tsunami response on local and national capacities: Thailand – Country Report, 2006, pp. 32-33⁷³)

5.3. AIMS Providers

One of the crucial reasons for the significant homogeneities in the design and functionality of AIMS is the dominance of two AIMS providers in the global market. There are two major IS vendors in recipient countries across all regions: Synergy International (Synergy), and Development Gateway (DG). When combined, they have serviced 85% of the 80AIMS cases worldwide.⁷⁴ Only four AIMS had service providers that were neither of the two: Botswana (Equinoccio Ltd.), Georgia (Financial Analysis Service Ltd.), Myanmar (Catalpa International Ltd.), and Bangladesh (Techno Vista Ltd.). In addition, eight cases of the AIMS were developed by local IT contracted by the government or donor agencies, i.e. Bolivia (2), Cambodia, Indonesia (2)⁷⁵, Jordan (1) and (2), Palestine, Philippines (2), and South Africa. There has been no overlap of AIMS provider identified, i.e. one country simultaneously has more than two AIMS developed

⁷¹ Bilingual AIMS cases includes: Afghanistan (EN, PRS); Burkina Faso (EN, FR); Burundi 2 (EN, FR); Cameroon (EN, FR); Central African Republic (EN, FR); Cotê d'Ivoire(EN, FR); Georgia 2 (EN, KA); Haiti (EN, FR); Honduras (EN, ES); Iraq (EN, AR); Jordan 2 (EN, AR); Kosovo (EN, SQ, HBS); Kyrgyz 2 (EN, RU); Macedonia (EN, MK); Moldova (EN, RO); Mozambique (EN, PT); Myanmar (EN, MY); Nicaragua (EN, ES); Senegal (EN, FR); Tajikistan 2 (EN, RU, TG); Timor-Leste (EN, TET); Ukraine (EN, UK); Vietnam (EN, VI).

⁷² Meanwhile, these AIMS provide only local language and no English: Bolivia 1, 2 (ES), Chad (FR, TET), Guatemala (ES), Madagascar (FR), Mauritania (FR, AR), and Niger (FR).

⁷³ PDF downloaded from <http://www.alnap.org/pool/files/capacities-thailand.pdf>, retrieved on 2 June 2016.

⁷⁴ Synergy International Inc. in 39, and Development Gateway in 29 AIMS cases.

⁷⁵ The second experience in Indonesia which is the technological object in this study.

by different service providers, so that different service providers are working together. Because of the nature of AIMS as a national single window information systems for aid management, there may be high competition between providers.

Synergy International Systems (Synergy), established in 1997, was the first comer in the AIMS market. Its founder, Ashot Hovanesian, worked with the G7, which led to the creation of a database for tracking international assistance to Russia (Synergy International Systems 2004). This very first AIMS was branded the Donor Assistance Database, which in late 1990s was also implemented in several former Soviet Union countries. In 2005, the flagship system was re-branded as the Development Assistant Database (DAD). Synergy has maintained a relatively close relationship with the UNDP:

In July 2005, Synergy International Systems signed a contract with the UN Development Program (UNDP) to make the DAD the ‘official’ tool for donor coordination, by establishing that a country office that needs the DAD software need not go through a bidding process.

(Kishinchand, 2007:398)

Following the humanitarian aid flowing to countries affected by the Tsunami that swept across the Indian Ocean in late 2004, Synergy provided AIMS for Maldives, Sri Lanka Thailand, and Indonesia. This will be further discussed in Section 6.2. Based on the findings of AIMS implementation, Synergy has been present in all six regions, servicing 39 cases in total. The distribution of their service is as follows: SSA – 13 cases, EAP – 6, SA – 5, LAC – 1, ECA – 11 (including CIS countries), and MENA – 3.

Development Gateway (DG): was established in 1999 “as a vision of World Bank President James D. Wolfensohn to promote sustainable growth and poverty reduction through the use of ICT” (Independent Evaluation Group, 2007:xi). It was transitioned from a Bank-owned initiative to an independent organization in 2002. The first standardized aid reporting systems called, Accessible Information on Development Activities was developed. Subsequently, the main product, Aid Management Platform (AMP), was introduced in the market in 2005, alongside with the Paris Declaration. It has provided services to 29 cases in five regions (SSA, EAP, SA, LAC, and ECA), except for MENA. Out of the 29 countries, 18 were from the SSA region, 2 from EAP, 1 from SA, 4 from LAC, and 4 from EAC. In their early years, around 2005, DG actually

had another brand ‘ODAdata’ that was used in Mozambique and Nicaragua. However, the two systems are not significantly different from AMP.

AIMS	Development Assistance Database (DAD)	Aid Management Platform (AMP)
Provider	Synergy International Systems, Ltd.	Development Gateway
Major network	UNDP	The World Bank Group, Aiddata
Headquarters	Washington DC, Development & Global Learning Center in Yerevan, Armenia	Washington DC
First development Countries implemented	Russia (1996) 37 countries including 8 former Soviet Union central Asian countries in 1990s.	Ethiopia (2005) 29 countries (no collaboration with MENA countries)
Software, operating system, and hosting environment ⁷⁶	Synergy IDM Knowledge Builder (closed source code) MS SQL hosted on MS Server	Java open source-based application. But source code not released.

Table 5-4. Comparison of Two Major AIMS Providers

AIMS developed by other foreign ICT vendors include:

- Botswana Development Assistance Management Information Systems (BODAMIS) in Botswana (2005) by Equinoccio (<http://www.equinoccio.eu/en>),
- Mohinga – Aid Transparency Portal in Myanmar (2015) by Catalpa International (<https://catalpa.io>)

AIMS developed by local IT vendors or consultants are:

- Aid Information Management Systems in Bangladesh (2014) by Techno Vista, ICT company based in Dhaka (<http://www.technovista.com.bd>),
- E-Aid Information Management System (e-AIMS) in Georgia (2015) by Financial Analytical System, public enterprise based in Tbilisi, which belongs to Ministry of Finance (<http://www.fas.ge/en>),
- Local IT consultants in Bolivia (2012), Cambodia (2005), Indonesia (2009), Jordan (2010 and 2015), Palestine (2010), Philippines (2013), and South Africa (2004).

⁷⁶ Synergy International Systems (2009)

5.4. Summary

This section confirmed the global proliferation of AIMS in recipient countries in the last two decades. This has been often understood by rational choice institutionalism, which AIMS may be viewed as an innovative tool for solving collective action and multiple principal-agent problems in aid management. Managerial rationality is often considered to be a key motivation for implementing an AIMS, since a recipient government is given considerable amounts of aid from various stakeholders and requires the capacity for managing aid in more efficient way. Reports published by MDAs often describe that a recipient government identified technical, managerial and functional challenges and showed interest in expanding this capacity to better manage aid (OECD & UNDP 2006).

However, considering the findings presented in this section, particularly, the similarity between AIMS, and the state's decision to implement AIMS after the institutionalization of international aid governance, may also be interpreted as the result of institutional pressure from the global field of aid on local government. Also, as discussed in Chapter 2, there is a lack of understanding of the role of aid governance in information systems adoption. Building on the findings presented in this section, in the subsequent chapter, I will trace how aid effectiveness norms emerge in the global field of aid, and explain the diffusion and evolution of AIMS.

Chapter 6. The Global Diffusion and the Evolution of AIMS

In the previous Chapter 5, I provide an overview of 80 cases of AIMS in 71 recipient countries, which well confirms the proliferation of AIMS and their apparent homogeneity. This chapter investigates *how we can understand this global diffusion of AIMS*.

This chapter serves two main purposes. First, it provides a historical overview of AIMS in the global field of aid and an institutional account explaining the global adoption of AIMS. Second, it highlights the complexity of AIMS and their frequent sustainability failure which calls for an in-depth study to understand *why AIMS fail*. This chapter is organized as follows:

- First, as discussed in Chapter 3, the importance of understanding global aid institutions in studying AIMS in a recipient country are highlighted. In this context, the key actors, norms and governance in the global field of aid is considered. In particular, based on Finnemore & Sikkink (1998)'s norm dynamic, I trace the emergence and institutionalisation of aid effectiveness norms.
- Second, I analyse the process of the global diffusion of AIMS, as well as how AIMS evolved to reproduce norms, rules, and institutional structures of the global aid governance. Having investigated isomorphism, I examine how their inscribed visions have changed over time alongside the emergence of global aid architecture by identifying three stages: PC-based AIMS 1.0, web-based AIMS 2.0, and open data based AIMS 3.0.
- In spite of the global popularity of AIMS and significant investments made in such systems, the study empirically shows that, in many instances, the majority of AIMS have not achieved the expected outcomes that aid effectiveness norms anticipate. Also 36 cases did not achieve sustainability and have shut down (45%). Expanding on the concept of 'sustainability failure' (Heeks & Kenny, 2002), the fourth section 6.4 Summary emphasizes the complexity of

understanding AIMS and calls for an in-depth study to understand the hidden dynamics in AIMS failure to unpack the puzzle of *Why do AIMS fail in sustainability*.

6.1. Global Field of Aid: Institutional Power and Norm Dynamics

AIMS, as well as its inscribed vision, cannot be adequately studied without taking into account the complex structure of global aid governance and the historical evolution of aid effectiveness norms. Since the Bretton Woods Agreement in 1948, the field of aid has been gradually established with “key suppliers, regulatory agencies, and other organizations that produce similar services and products” (Di Maggio & Powell 1991). Conceptualizing AIMS as a set of socio-technical domains in the global field of aid, this section begins with brief accounts of key actors, aid governance and its institutional power in the field. Then, it traces how ‘aid effectiveness’ norms have emerged and matured to support a particular way of achieving development through institutional reform in aid management. Before discussing how AIMS have emerged in the global sphere, this section investigates how aid regimes such as the Paris Declaration and Accra Agenda for Action reproduce the norms of aid effectiveness and provide rules and institutional structure, in the field of aid.

6.1.1. Institutionalization of the Field and Key Actors

As discussed in Chapter 2, foreign aid has been the most direct action and the largest financial source aimed at socio-economic development and poverty alleviation in recipient countries. The structures of foreign aid, which actually began with European colonialism, have become tied to changing economic, military, and political interests, as well as a growing humanitarian concern. The Marshall Plan, introduced during the post-World War II reconstruction, is arguably considered an origin of modern foreign aid. Schmelzer (2016:23) describes it as follows:

The Marshall Plan did not only become the intellectual master narrative for the global development enterprise, which copied many of its institutional arrangements and guidelines, but the same organization, which was founded for the self-monitoring of the European Recovery Program (ERP) aid, was in 1961 transformed into the world’s preeminent ‘donors’ club.’ However, while the Organisation for European Economic

Co-operation (OEEC) received loans and grants on a highly concessional basis and the recipients of aid themselves monitored its distribution and use, these principles were not reproduced in the OECD.

Schmelzer (2016:23)

Since the Bretton Woods Agreements, a debate on development has continued for decades on whether foreign aid should be mainly utilized for the facilitation of national economic growth, or for poverty alleviation that directly focuses on ‘basic needs’. Scholars have investigated the politics and the competing incentives behind foreign aid, and how emerging global institutional powers change the contour line of the landscape in the aid field (Sachs 2005; Chang 2002; Escobar 1994).

The organizational field of international aid was gradually established as a ‘functionally specific arena’ of members that partake in a common meaning system and interact with each other (Scott, 2001:207). It has all the key characteristics of a “*recognized area of institutional life*” with three traditional key actors: donor countries, recipient countries, and MDAs, all performing similar functions (DiMaggio & Powell, 1983:148). Above all, MDAs such as the World Bank, UNDP and OECD have played the most influential role as ‘norm entrepreneurs’ and ‘rule-making’ entities within this organizational field. The MDAs led the aid agenda from ‘modernization’ in the early 1960s to the neoliberal Structural Adjustment Programs (SAPs) and ‘good governance’ in the 1990s, and to ‘aid effectiveness’ in the 2000s, as well as the setting up of common development goals such as the MDGs in 2000, and most recently, to the launch of the SDGs in 2015, as discussed in Table 2-1. Recipient countries are generally expected to accept the institutionalized norms and rules in the asymmetrical power relations among donors.

As I discussed in Chapter 2, since the end of the Cold War, the field has gone through some major changes, due to the proliferation of the new actors (Acharya et al. 2006; Manning 2006), aid heterogeneity (Mavrotas 2005) and the extensive philosophical debate on development (Sen 1999; Bourguignon & Sundberg 2007). There is general consensus in aid literature that these changes resulted in the institutionalizing of the global aid regime, which emerged in the 2000s. The proliferation of actors is the key characteristic of the global field of aid (Nadoll & Hussain 2008; Acharya et al. 2006). Non-DAC emerging donors, diverse rule-supporting institutions such as mega-

philanthropists and policy institutes, as well as professional communities emerged as important actors in the 2000s and helped to further institutionalize the field (Boisjolie 2015; Manning 2006). However, the major aid governance order and a set of core norms and rules are still shaped by traditional powerful actors in the sphere of global aid. Among the DAC countries, the early Western DAC members such as the US, the UK, France, Germany, the Netherlands, Italy and Belgium⁷⁷, in addition to Japan, have been the most influential in global aid governance (OECD 2006). The Western rich donor group, the OECD DAC established in 1961, has played the most important role by:

- defining ODA;
- providing a set of rules and guiding principles such as Resolution on the Terms and Conditions of Aid (1963), ODA definition (1969), ‘Disciplines for Tied Aid (1991)’, ‘Untying ODA to the LDCs’ and ‘Guidelines on Poverty Reduction’ (2001), PD Survey (2006, 2008, 2011), and the Countries Peer Reviews;
- leading the Peer Review of DAC members⁷⁸ and monitoring and evaluating aid, which began with the Principle for Evaluation of Development Assistance’ (1991)⁷⁹; and
- providing aid reporting classifications, commonly called, Creditor Reporting Systems (CRS).

The financial crisis in 2008, originating in the US, and the economic recession that followed, resulted in a reduction in the ODA budgets of the global North. As discussed in Section 2, if aid was not effective in the LDCs’ development, the downturn in ODA may not have been of much concern from the perspective of aid critics. However, the recent change in the global economy has negatively impacted existing ODA targets and development goals, such as the MDGs, and highlighted the need for change in the power dynamics in the global field of aid (OECD 2012b; Addison et al. 2010). The expanding membership of the OECD DAC has reflected this concern; growing from 17 member

⁷⁷ Countries are ordered by their contribution to aid in 1960s

⁷⁸ <http://www.oecd.org/dac/peer-reviews/>

⁷⁹ <https://www.oecd.org/development/evaluation/2755284.pdf>

countries in 1970s, 23 in 2005, to 30⁸⁰ in 2016. Also, the OECD DAC members' promotion of 'burden sharing' in development finance, especially in the ODA receipts for MDAs, is one of the reasons for the increasing role of emerging new donors such as China, India, Indonesia, as well as the private sector's engagement in global funds (Addison et al. 2004; Manning 2006).

Category	Stakeholder	Role
Donor country	Major Western states, new DAC member states	Lending, funding, norm entrepreneur, rule-making, aid information reporting to the OECD ⁸¹
	Non-OECD DAC emerging donor countries such as China, India, and Indonesia	Lending, funding, leading South-South cooperation
Multilateral Development Agency (MDAs)	OECD DAC, World Bank, UNDP, ADB, AfDB, AIIB, UNICEF, WFP, etc.	Lending, managing multi-donor trust fund, norm entrepreneur, knowledge disseminating, rule-making, agenda setting
Recipient country		Managing foreign aid, executing national development plans
Non-governmental Organizations (NGOs)	Mega-philanthropists, civil society organizations (CSOs)	Contractor, rule-supporting, reproducing international norms
Research & policy institute and others	Mainly institutes in major donor countries, summarized in Table 6-2.	Providing consultation, knowledge dissemination, rule-supporting, reproducing international norms
Vendor	IT company, management consulting company, law firm, etc.	Providing technology, IT platform, auditing, consulting, financial and legal advisory, tax services, etc.

Table 6-1. Stakeholders in the Global Field of Aid

The emergence of diverse rule-supporting actors is an important feature as well. The increasing interactions among the stakeholders continuously contribute to establishment

⁸⁰ Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, United Kingdom, United States, European Union.

⁸¹ For more details see the List of DAC Recommendations and Guiding Principles (OECD 2006)

and maturation of the field. It appears that rule-supporting organizations such as research institutes and NGOs are totally independent from the power dynamics within the area. However, by closely evaluating the funding sources and the board members who are used to working with MDAs or donor agencies, as well as investigating how close the organizations work together with the traditionally powerful actors in the field, it becomes quite clear that there is high-level interdependence between rule-supporting and rule-making organizations. The International Aid Transparency Initiative (IATI), for example, played the role of the ‘aid effectiveness’ rule-supporting organization. Based on its close relationship and collaboration with OECD DAC, it became a ‘rule-making’ organization and provided an emerging standard of aid reporting. Such indices including the Aid Transparency Index (ATI) developed by Transparency International (TI) and the Quality of ODA (QuODA) created by the Centre for Global Development, have supported and reproduced the norms. The indices have been used for evaluating the practice of each country and judging the success or failure of aid management practices, mostly from a technical-rational view and the donor’s perspective. They also help in disseminating knowledge on best practices.

These rule-supporting organizations share changing norms and a common meaning system. They frequently perceive other organizations as peers and interact with each other. Common legitimate principles and the framework of codes are communicated between state actors and MDAs through a series of meetings, agenda-setting, and monitoring and evaluation (M&E) exercises based on such indices. In this institutionalized setting, recipient countries, which are subject to isomorphic pressures, generally share and follow norms and practise the rules proposed by the global aid governance system. The symbolic status of sharing the same set of sense-making devices and being recognized as a responsible actor by the international community is also important. The organisational arena has an institutional power of its own. Thus, it is difficult to disentangle the activities and functionings of an actor from those of another. Norms exist and are generated by the culmination of actors, connection and relationships.

Organization	Headquarter	Supporting norms and rules	Ranking, Index developed	Assessment
Publish What You Fund (PWYF)	London, UK; Representative in Washington DC	Aid transparency	Aid transparency index (ATI)	more than 40 donor agencies
Transparency International (TI)	Berlin, Germany	Transparency, corruption	Corruption Perceptions Index (CPI)	Global TI Report on more than 180 countries
International Aid Transparency Initiative (IATI)	Secretariat (UNDP, Ghana, Sweden, UNOPS, Development Initiatives)	Aid transparency, coordination, effectiveness	IATI aid reporting standard (rule-making role)	IATI Standard and TAG meeting. 27 partner countries and over 500 organizations follow IATI standard
Centre for Global Development (CGD)	Washington DC, US	Aid effectiveness in general	Commitment to Development Index	27 donor agencies (CDI);
Overseas Development Institute (ODI)	London, UK	Aid effectiveness in general	Donor resilience index	more than 28 donor agencies
Brookings Institute	Washington DC, US	Governance in general	Quality of ODA (QuODA) with CGD ⁸²	35 donor countries and more than 100 aid agencies

Table 6-2. Major Rule-Supporting Organizations in the Global Field of Foreign Aid

6.1.2. Norm Emergence: Aid Effectiveness

In order to analyse how aid effectiveness norms have emerged and have been internationalized, this study employs a constructivist conceptual lens based on Finnemore and Sikkink (1998)'s *norm dynamic* discussed in Chapter 3. As discussed in Section 2.3, based on a plethora of research and international calls for more effective aid, the desire to improve policy coherence through better transparency and coordination in the aid system was given increasingly more prominence in the 1990s (Forster & Stokke 1999). Since the beginning of the new millennium, four High Level Forums on Aid Effectiveness (HLF) have been organized by the OECD DAC and held in Rome

⁸² <https://www.brookings.edu/research/the-quality-of-official-development-assistance-quoda-third-edition/>

(2003), Paris (2005), Accra (2008), and Busan (2011). They have shaped the then new emerging framework known as ‘aid effectiveness’. As discussed in Chapter 2, rational-choice institutionalism is a central theme that emerged in the debate.

The emerging ‘*aid effectiveness paradigm*’ was explicitly articulated in ‘*Shaping the 21st Century: The Contribution of Development Cooperation*’ (OECD 1996a), which also proposed detailed targets and commitments that later contributed to the formation of the MDGs in 2000. Having been influenced by the institutionalization of the UN-driven MDGs as the internationally accepted development goals (Fukuda-Parr & Hulme 2011), there was subsequently growing demand on a specific ‘way of doing’ *aid* as ‘means’ to achieve *development* goals, MDGs. The emergence of aid effectiveness norm was not encoded in a single document. Rather, it was the collective result of the continuous process of developing momentum, receiving international attention, and negotiating with actors in the field.

In this norm emergence process, *norm entrepreneurs* “convince a critical mass of states to embrace new norms” (Finnemore & Sikkink, 1998 p.330) by using their organizational platforms such as international forums and social movements organized by norm-supporting CSOs to drive public debates around aid effectiveness. The OECD DAC donors and international organizations such as the World Bank and UNDP, initiated ‘norm building’ through several meetings with state actors and professional communities in the field of aid, for example the American Economic Association (AEA), Brookings Institute, Centre for Global Development. In particular, the OECD DAC played the most influential role as norm entrepreneur and led the formation of the HLFs. The OECD DAC successfully organized the first HLF held in Rome in 2003 and adopted the *Rome Declaration on Harmonisation* signed by 28 recipient governments and more than 40 multilateral and bilateral development agencies. The donor’s responsibility in ineffective aid was emphasized⁸³:

We in the *donor community* have been concerned with the growing evidence that, over time, the totality and wide variety of donor requirements and processes for preparing, delivering, and monitoring development assistance are *generating unproductive transaction costs for, and drawing down the limited capacity of, partner countries*. We

⁸³ <http://www.oecd.org/dac/effectiveness/31451637.pdf>

are also aware of partner country concerns that donors' practices do not always fit well with national development priorities and systems, including their budget, programme, and project planning cycles and public expenditure and financial management systems. We recognise that these issues require urgent, coordinated, and sustained action to improve our effectiveness on the ground.

(Rome Declaration on Harmonisation, 2003, emphasis added)

The most significant difference between aid effectiveness norms and the previous aid governance such as 'good governance' and neo-liberal 'structural reform' is a shift in the view of responsibility in aid performance from recipient countries' to a mutual matter between donors and recipients. Within the previous aid frameworks driven by the World Bank and IMF in the 1990s, such as Structural Adjustment Programs (SAPs) and Poverty Reduction Strategy Program (PRSPs), recipient governments were expected to ensure 'good institution' for advancing political and economic governance in implementing the donor-driven strategies, while donors only offered financial and technical assistance. Likewise, the norms of 'good governance' placed commitment for ensuring the performance of foreign aid on recipient governments, while criticizing 'poor governance' and weak aid management of recipient government (World Bank 1989). Although some scholars still criticize its vagueness and the donor-driven nature (Hayman 2009; Sjösted 2013), it is clear that aid effectiveness norms bring to the attention to the donors' responsibility in the field. The Rome Declaration explicitly emphasizes a lack of coordination between donors and poor alignment to recipient's priorities as a challenge yet to tackle.

6.1.3. Norm Cascades and Paris Declaration

Having two years for further norm building after the Rome Declaration, the PD produced the 'tipping point', which provided the idea of aid effectiveness and international approval. While MDAs are powerful actors in the global aid community, the endorsement of a critical mass of states, particularly recipient governments are crucial in culminating this 'tipping point' (Finnemore and Sikkink, 1998). The PD successfully attracted a large number of states including LDCs, and was signed by 138 countries and 28 international organizations in 2005. It is recognized as the most significant milestone in the history of foreign aid (Hyden 2008). Although the initiative of the PD was still

driven by major donors, it was arguably praised as a paradigmatic shift towards greater recipient governments' control and ownership over the foreign aid.

We, Ministers of developed and developing countries responsible for promoting development and Heads of multilateral and bilateral development institutions, meeting in Paris on 2 March 2005, resolve to take far-reaching and monitorable actions to reform the ways we deliver and manage aid (...) we recognise that while the volumes of aid and other development resources must increase to achieve these goals, aid effectiveness must increase significantly as well to support partner country efforts to strengthen governance and improve development performance. This will be all the more important if existing and new bilateral and multilateral initiatives lead to significant further increases in aid.

(Paris Declaration on Aid Effectiveness, 2005: Article 1)

Following the Rome Declaration, the Paris Declaration added a new momentum to the global aid paradigm, namely that donor countries also have to improve their activities significantly. This explicitly realized that a lack of coordination amongst donors, weak harmonization of procedures and poor alignment to recipient governments' priorities had to be tackled (OECD-DAC, 2003). Hayman (2009:583) argues that "(t)his implied a shift from recipient failure towards joint responsibility for aid effectiveness, with recipient governments committing themselves to better governance and donors committing themselves to better co-ordination". This tipping point had a strong effect on the further distribution of aid effectiveness norms within the global field of aid.

Paris Principles on Aid Effectiveness: The PD provides a practical road-map to improving aid quality, setting a series of target goals and indicators to be attained, as well as, imposing commitments to share aid information for transparency and aid coordination throughout the global aid system (OECD 2005). The norm cascade process prescribes a set of legitimate principles of governing aid activities, the five 'Paris Principles', and provides protocols shared by all signatory states and international organizations to coordinate aid efforts.

Finnemore and Sikkink (1998) point out that 'vaguely specified norms' are unlikely to have a tipping point to 'cascade' across countries. The findings clearly show that the aid effectiveness norms brought the specificity of ideas and the details in order to achieve the suggested principles through a series of preparation meetings and scholarly research.

First, based on the institutional economics' assumption of transaction cost and the multiple principal-agent problems (Bourguignon & Sundberg 2007; Svensson 2006) as discussed in Section 2.3.3, five principles are outlined (OECD 2005).

1. *Ownership*: Developing countries set their own strategies for poverty reduction, improve their institutions and tackle corruption.
2. *Alignment*: Donor countries align behind these objectives and use local systems.
3. *Harmonisation*: Donor countries coordinate, simplify procedures and share information to avoid duplication.
4. *Results*: Developing countries and donors shift focus to development results and results get measured.
5. *Mutual accountability*: Donors and partners are accountable for development results.

(OECD, Paris Declaration on Aid Effectiveness, 2005)

Secondly, the PD was also guided by specified indicators, timelines and targets. "The concept of 'aid effectiveness' thus entered the development discourse as embodying a package of specific ideas and measures" (Haymen 2006:583).

We commit to accelerate the pace of change by implementing, in a spirit of mutual accountability, the Partnership Commitments presented in Section II and to measure progress against *12 specific indicators* that we have agreed today and that are set out in Section III of this Declaration.

(Paris Declaration Article 8, emphasis added)

In the norm dynamics of Finnemore and Sikkink (1998), the key actors involved in the cascade stage for aid effectiveness are the state actors and international organisations that endorsed the PD to achieve legitimacy through compliance with global aid norms. However, in the process of achieving the global tipping point, the major norm entrepreneurs the OECD DAC donor countries and leading MDAs led the international discussion and intensive preparation for the declaration. Schmelzer (2016) provides a valuable historical analysis of how the OECD has institutionalized norms and governance in the field of aid. Schmelzer argues that the genesis of global aid institutions is the "result of a very specific ensemble of discourse, economic theory and statistical standards that came to dominate policy making in industrialized countries under certain social and historical conditions" (Schmelzer, 2016:10).

The DAC was an exclusive donors' club, designed to suspend the voices of aid recipients, and its criteria for aid, set by the donors themselves, did not guarantee a flow of capital from the North to the South that was comparable in magnitude or concessionality to the Marshall Plan. DAC countries thus not only captured the power of standardizing the major development-related policy ideas, practices, and data with all the relevant definitions and specifications, but they also monopolized the process of evaluating donor performance.

(Ibid, p.237)

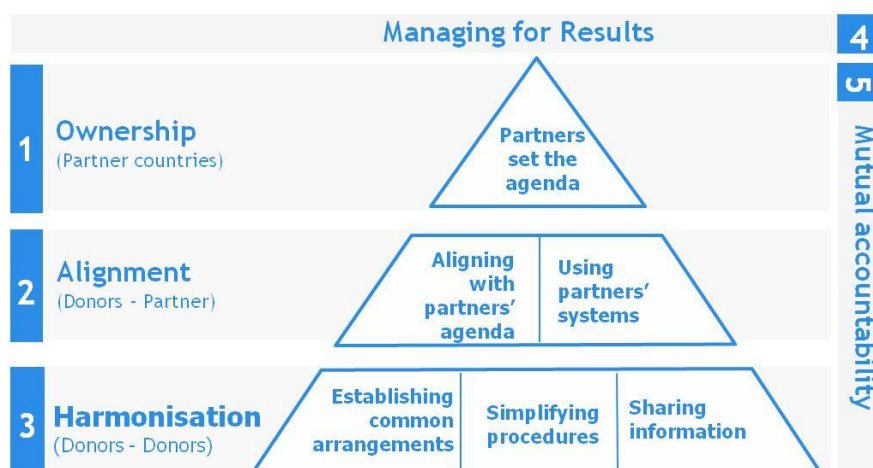


Figure 6-1. Paris Declaration on Aid Effectiveness ‘Pyramid’
(Source: OECD 2008)

After Paris, the two subsequent HLFs strengthened the norm cascade process and created a powerful political momentum to reorganize the way recipient countries and development partners cooperate. Once the norm was institutionalized, there was a strong expectation of a high degree of compliance and norm internalization in each country:

Progress has been made. But we have to move faster. We don't need more analysis. We know what needs to be done. With the Paris Declaration, we have the *blueprint* to do it (Speech of President of the World Bank President, from

(OECD, 2008:15))

The 3rd HLF in Accra in 2008 was organized to evaluate the progress in achieving the Paris goals. The first PD Survey that was globally conducted in 2006 was presented⁸⁴. This Survey, for the first time, globally assessed the effectiveness of aid internationally in a standardized manner by using 12 suggested criteria, and provides the results of the

⁸⁴ http://www.oecd-ilibrary.org/development/oecd-journal-on-development/volume-8/issue-2_journal_dev-v8-2-en

Survey of 34 developing countries and 55 donors, as well as, a snapshot of global aid in 2006. The Survey results explored the degree to which recipient governments and donor agencies had achieved the outcomes in their aid management, policy-making, as well as better coordination with other development partners which required in the internationally agreed targets (Wood et al., 2008). The Surveys that followed were conducted in 2008 and 2010, with the intention of assessing the impact of the PD on development outcomes, and their findings were shared at the Busan HLF in 2011.

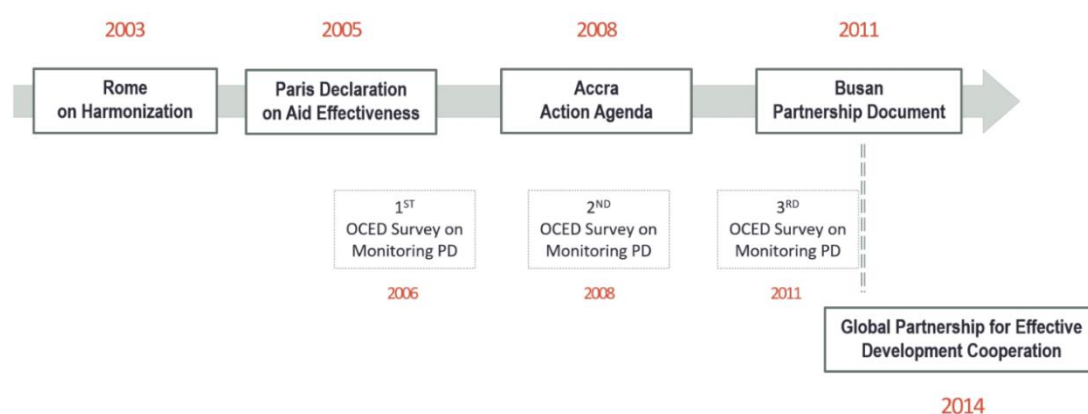


Figure 6-2. High Level Forums on Aid Effectiveness and its Monitoring Survey (Summarized by Author)

The *Accra Agenda for Action (AAA)*⁸⁵, endorsed at the Accra HLF, reaffirmed the Paris commitments. One difference from the PD, in the process of AAA, international NGO networks mainly rule-supporting organizations also played a major role as norm entrepreneurs. Building on the PD, the AAA incorporated feedback and challenges from practice and suggested a more recipient government focused action plan, and highlighted the sharing of aid information as the most fundamental action to be achieved as a prerequisite to better transparency, coordination and aid effectiveness.

Based on the analysis of norm dynamics previously discussed, during the norm cascades stage, it is identified that aid effectiveness norms became widely accepted by states, through the tipping point, the PD. Considering this, why have AIMS been widely

⁸⁵ Accra Agenda for Action, 3rd High Level Forum on Aid Effectiveness, 2-4 September 2008, Accra, Ghana

adopted by states? How can we understand the global diffusion of AIMS and their homogeneity in the states where different socio-economic and political contexts exist be understood? Who leads AIMS implementation? Is it driven by recipient government or a particular technological innovation? These questions can be answered by tracing the forces influencing AIMS implementations and the institutional changes in the global field of aid.

Stage	1. Norm emergence	2. Norm cascade	3. Norm internalization
Actors	Norm entrepreneurs (OECD DAC) with organizational platforms (High Level Forum on Aid Effectiveness)	States (other donors, recipients), other international organizations, networks	Rules, Paris Declaration Survey, professions, bureaucracy in recipient countries
Motives	Altruism, empathy, ideational commitment	Legitimacy, reputation, esteem	Conformity
Dominant mechanisms	Persuasion	Socialization, institutionalization, demonstration	Habit, institutionalization
Aid effectiveness and AIMS	- 2003 (Rome Declaration)	2003-2005 (HLF Paris as a tipping point)	2005-

Table 6-3. Norm Dynamics of Aid Effectiveness (Developed on Finnemore and Sikkink, 1998)

6.2. Evolution of AIMS and Institutional Power

AIMS and the norms AIMS inscribe have spread around the globe in the last two decades. Using the IR constructivist lens, this study interprets ‘aid effectiveness’ as an external norm that has been established and diffused among recipient countries (Finnemore & Sikkink 1998; Acharya 2004). In this view, AIMS is conceptualized as a norm supporting system.

Building on the discussion of norm dynamics in the global field of aid, this section offers a historical overview of AIMS and institutional account of the process of AIMS diffusion in three analytical foci. First, I explain the emergence and evolution of AIMS in the global sphere. Second, I examine how their inscribed visions have changed over time alongside the shifting global aid governance, and how AIMS reproduce norms,

rules, and institutional structures promoted by the global aid governance. Third, drawing on institutional isomorphism, I identify coercive, normative and mimetic pressures on AIMS adoptions have existed as framed in Figure 6-3. These three mechanisms of isomorphism are not always mutually exclusive, often occurred simultaneously. However, the analytical boundary helps me to explain the rapid diffusion of AIMS in the global field of aid and their homogeneity. This section consists of three sub-sections explaining the evolution of AIMS, namely, AIMS 1.0: PC-based, AIMS 2.0 web-based, and the emerging open data-based AIMS 3.0.

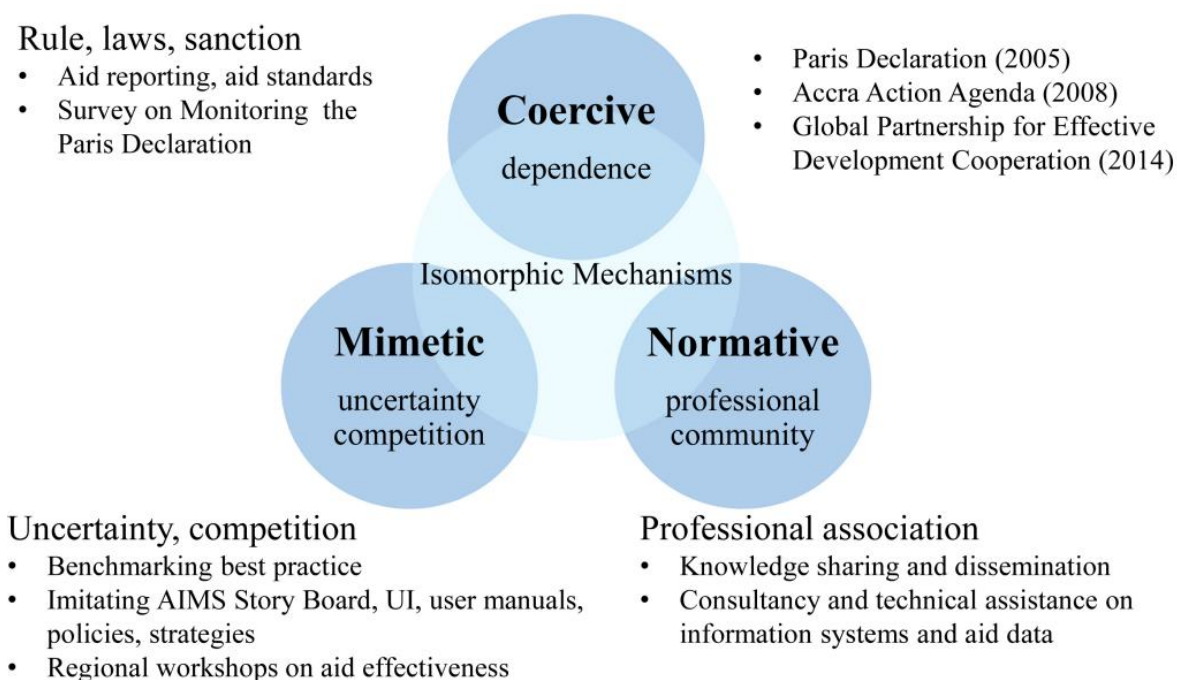


Figure 6-3. Institutional Isomorphism in the Organizational Field of International Aid (Developed by Author for This Study)

6.2.1. AIMS 1.0: PC-based Systems in Transition Economy

Although it is not one of the information systems implemented in a recipient country, the OECD Creditor Reporting System (CRS) could be considered as an origin of AIMS⁸⁶. The CRS was initially established for tracing aid flow reported by the OECD DAC in 1973. It was neither a complete nor timely database in the beginning, and it was

⁸⁶ Data can be accessible at <https://stats.oecd.org/Index.aspx?DataSetCode=CRS1>

only after the mid-1990s that the information started being widely used by stakeholders in international aid community. As of 2017, the thirty members of the DAC and other donors⁸⁷ submit their data on all aid activities to the CRS and this is verified by OECD. It has served as the source of official donor statistics on aid information where each donor country of the DAC supplies aid, and shows how it is spent in the recipient country. It remains the most reliable database for aid information at this time.

The very first AIMS implemented within a recipient country was the Donor Assistance Database⁸⁸ in Russia in 1996. The system was developed by Synergy International, but was intended to be operated by the government to facilitate information flow among government agencies and donor agencies, while receiving technical support from USAID. It was financed by the G7 Support Implementation Group (SIG), also headquartered in Moscow, Russia (Synergy International Systems 2004). The G-7 SIG was established for the purpose of effective assistance to Russia at the Tokyo Summit, in 1993. It was the US driven operations for “promoting information sharing and coordination among the G7 countries” and “communication and consultation with Russian authorities” (Gilman, 2010:29). Later, this PC-based AIMS was implemented in the Commonwealth of Independent States (CIS)⁸⁹ including Armenia, Georgia, Kazakhstan, Kyrgyzstan, Turkmenistan, Ukraine, and Tajikistan in close partnership with UNDP. These AIMS, named as ‘donor assistance database’ were developed by Synergy International Systems (Synergy International Systems 2004).

It is not very clear why the earliest AIMS were implemented in these transition economies, which were changing from a centrally planned economy toward a market economy. It is, however, generally accepted that the region of transition economies was then the priority of main donors and the target of SAPs led by the World Bank and IMF

⁸⁷ Some of the candidates of the OECD DAC and other countries such as Bulgaria, Croatia, Cyprus, Estonia, Hungary, Israel, Kazakhstan, Kuwait (KFAED), Latvia, Liechtenstein, Lithuania, Malta, Romania, Russia, Saudi Arabia, Chinese Taipei, Thailand, Turkey, Timor Leste, United Arab Emirates also provide aid information. (<https://stats.oecd.org/Index.aspx?DataSetCode=CRS1>)

⁸⁸ Later re-branded as Development Assistance Database (DAD)

⁸⁹ When the Soviet Union was dissolved in 1991, the CIS was established, comprising most of the former Soviet republics. The confederation currently has of 9 member states, i.e. Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, and Uzbekistan. Additionally, Turkmenistan and Ukraine are listed as associate members. Georgia was also a member of CIS until the withdrawal of its membership in 2008.

(Roaf et al. 2014; World Bank 1999). The underlying assumption of the World Bank's Poverty Reduction Strategy Papers (PRSPs) and was that public sector reform and a higher recipient government engagement in designing development policy would lead to better aid management and greater ownership of fiscal policy. The IMF report titled *25 years of Transition: Post-Communist Europe and the IMF* also recalls the priority of assistance to these transition economies and the emphasis of NPM reform (Roaf et al. 2014):

In transition economy, (...) foreign direct investment (FDI)—played a key role in developing new sectors that could reabsorb the dismissed employees from the declining sectors. By facilitating transfers of technology, managerial skills, and international marketing networks, deepening pools of FDI appeared to have opened a self-enforcing cycle of fast productivity convergence and job creation.

(Roaf et al. 2014)

Apart from a debate of how relevant NPM reform was in transition economies and what the legacy of NPM is (Manning 2001; Kenisarin & Andrews-Speed 2008), it is clear that MDAs driven public sector reforms were the dominant trend in the region in the late 1990s. The World Bank launched over 500 'good governance' initiatives in 97 countries since 1996 (World Bank, 2000:188-217). It promoted the NPM model in transition economies:

Understandably, many developing and transitional countries have explored NPM models as opportunities to accelerate their development and improve public sector performance. While many aspects of NPM are valuable in any setting, moving too fast may be risky and open the door to corruption and abuse if basic public institutions are not sufficiently developed.

(World Bank, 2000, p.36)

As discussed, building on the notion of 'good governance', ICT implementation was arguably considered an innovative tool for increasing managerial efficiency, interconnecting ministries and enhancing intra-governmental coordination. In addition, it was also based on the assumption that developing countries have a disadvantage in ICT and suffer from a 'digital divide', meaning a new form of inequality. As ICT penetration increased in developing countries, professional community in MDAs and donor countries promoted ICT-enabled public sector reform, commonly referred to as e-government. Most AIMS were separately implemented from e-government initiatives.

However, working alongside the popularity of e-government projects created significant normative pressure on the adoption of AIMS in the aid field. AIMS were implemented in transition economies with the similar vision of NPM and extended hopes of good governance and corruption reduction in aid sectors.

In addition to normative pressure, mimetic isomorphism may be the main source of institutional pressure on the adoptions, while coercive pressures for a particular AIMS seems to be less prevalent, compared to following generations. The mimetic isomorphism is encouraged when there is a high level of competition or uncertainty in the field. In these transitional economies, countries tended to replicate policy and new practices of the first adopter that they perceive to be legitimate and successful. In addition, regional competition for attracting more aid between the former CIS countries could be a source of mimetic pressure. AIMS may be an attractive tool for aid management, during the transition era, in which global ICT-enabled public sector reform was increasingly considered as a norm as well. In spite of the limitations of lack of data in the late 1990s, normative and mimetic isomorphic pressures are the main drivers of the diffusion of AIMS in this region.

Regarding the functionalities of AIMS, most AIMS in this early generation in CIS countries were intra-governmental systems or a database of aid activities. They were usually not open to the public, but were used internally to support government officers to manage aid and to have better communication with several different donors, which donors also found it as a main challenge. The PC based AIMS had reporting tools, which in general are not web-based and single desktop applications. Such applications can be utilized to create charts and graphs, but there exists no evidence that PC based AIMS allowed external users except authorized users from donor agencies. There is an exceptional observation that some DADs were transitioned to web-based systems:

The first DAD was a PC system developed for Russia in 1996 by the G7 Support Implementation Group. It was called the Donor Assistance Database, and tracked 20,000 projects over the period from 1991-2001. Originally, it was not web-based but after they were stood up in the Newly Independent States (NIS), the DAD was further developed to be accessible via web portals.

(Kishinchand, 2007: 398)

However, the rhetoric of aid transparency to citizens was not yet significantly discussed, compared to the post-PD period. Instead, the rationale of better communication between government and donors was more highlighted. It is a donor-centric view, meeting donors' needs for an efficient way of advising, consulting, and supervising aid activities. In addition, the rationale of ownership or mutual accountability did not appear in the AIMS in this period. This may not be considered a significant problem of the recipient government as they seem to have been more interested in having such ICT initiatives transferred to the local government.

6.2.2. AIMS 2.0: Web-based Systems

The second generation of AIMS, while still based on the CRS as a main data source, were encouraged to be open to the public and were developed as web-based systems (OECD & UNDP 2006). The driving forces for the implementation of web-based AIMS were considered to be both internal and external. Encouraged by the rapid diffusion of the Internet and broadband connectivity, recipient governments may increasingly have sought to adopt web-based AIMS and improve management of the aid they received (Linders 2013). However, and more importantly, external institutional pressure played a critical role in facilitating the isomorphic dynamics and adopting such AIMS in recipient countries.

The Rome Declaration on Harmonization in 2003 was the first international consensus on a way of achieving better aid effectiveness. Explaining the further steps in the process toward the Paris Forum in 2005, the Rome Declaration also explicitly recognizes the importance of ICT and alludes to the adoption of such tools for goals:

We acknowledge the potential contribution of *modern information and communication technologies* to promoting and facilitating harmonisation – already demonstrated by the use of audio and videoconferencing facilities in the staff work on harmonisation, the *Development Gateway*, the Country Analytic Work Website, and the early work on e-government, e-procurement, and e-financial management. We commit to further efforts to exploit these technologies.

(Rome Declaration on Harmonisation, 2003, emphasis added)

It is quite surprising that, in the official agreement, a particular group was mentioned. The Development Gateway (DG), that was launched as a program of the World Bank in 1999, but which was at the time an independent foundation in 2002, later became one of the major AIMS providers. The funding to support DG includes the initial funding of \$7 million during 2000-2001 and \$46.1 million as cash and in-kind contributions from non-Bank donors in a close relationship with the World Bank (Independent Evaluation Group 2008). Although the DG transitioned to be fully independent from the World Bank, the DG seems to have built its reputation on its close collaboration with the World Bank, which has a global network of development partners and recipient countries.

Initially, when the (Development) Gateway was part of the World Bank and no partners were involved, its legitimacy rested entirely on the reputation of the Bank. The Gateway's continuing legitimacy depends on the Gateway's ability to mobilize support from other partners, and its ability to produce and demonstrate positive results. (...) Currently, no Bank employees serve on the Board of Directors, although two Board members are former Bank Vice Presidents. It is likely that the Bank will be represented in the future by the new Vice President of OPCS, the unit in charge of the Bank's aid effectiveness agenda. In line with the recommendations of the 2005 independent evaluation, the governance of the Gateway has moved toward more of a stakeholder model.

(Independent Evaluation Group, 2007: xvi)

Normative Isomorphic Pressure via the Paris Declaration and the Accra Action Agenda: In the subsequent PD in 2005 and AAA in 2008, the adoption of AIMS was promoted as an innovative tool for achieving aid effectiveness in recipient countries (OECD 2008c). As ICT penetration increased, MDAs promoted ICT-enabled public sector reform in developing countries. Working alongside the popularity of e-government projects, a web-based AIMS became promoted in many recipient countries. The PD, the norm adopted by a critical mass of relevant state actors and marked as a 'tipping point' of norm cascade, emphasizes that aid information is fundamental in the international partnership of donors and partner countries:

“to coordinate the international monitoring of the Indicators of Progress” and “to enable consistent aggregation of information across a range of countries to be summed up in a periodic report”

(Paris Declaration on Aid Effectiveness, 2005, Article 11);

Managing for results means managing and implementing aid in a way that focuses on the desired results and uses information to improve decision-making.

(Ibid, Article 43)

In this sense, donors commit to:

provide timely, transparent and comprehensive information on aid flows so as to enable partner authorities to present comprehensive budget reports to their legislatures and citizens.”

(Ibid, Article 48)

In the PD, the term AIMS does not appear, but the term ‘country systems’ appears 13 times with ambiguity about whether the term means existing ‘information systems’ of recipient governments or whether it rather means a broader sense of governance structure and legal systems.

Using a country’s own institutions and systems, where these provide assurance that aid will be used for agreed purposes, increases aid effectiveness by strengthening the partner country’s sustainable capacity to develop, implement and account for its policies to its citizens and parliament. *Country systems* and procedures typically include, but are not restricted to, national arrangements and procedures for public financial management, accounting, auditing, procurement, results frameworks and monitoring.

(Ibid, Article 17, emphasis added)

These major AIMS providers were often explicitly recommended for collaboration in the field of aid. The OECD DAC Working Party held a series of meetings on sharing aid information including its eighth meeting ‘*Role of Aid Information Management Systems in Implementing the Paris Declaration on Aid Effectiveness at the Country Level*’ in July 2006 and promoted the implementation of AIMS in developing countries:

A good example that could be applied to AIMS is the process of data harvesting put in place by AiDA⁹⁰, where data is automatically transferred from the donor internal database to the AiDA reporting system.

(OECD 2006:8)

⁹⁰ AiDA (Accessible information on Development Activities) was the then Development Gateway’s online aid information directory (<http://aida.developmentgateway.org/AidaHome.do>) AMP builds on the AiDA standards some of which in turn come from the OECD’s Creditor Reporting System.

Finally, in the AAA agreed in 2008, the term ‘information systems’ emerged, and the need for AIMS in aid management and coordination is clearly reaffirmed.

“Developing countries will strengthen the quality of policy design, implementation and assessment by improving information systems”

(Accra Action Agenda, 2008, Article 23-a)

“Donors will align their monitoring with country information systems. They will support, and invest in strengthening, developing countries’ national statistical capacity and information systems, including those for managing aid.”

(Ibid, Article 23-c)

In addition to the OECD DAC being the most important ‘norm entrepreneur’, MDAs and the professional communities exerted normative pressures on recipient countries by introducing ‘knowledge’ of aid management and AIMS. The World Bank and the UNDP, particularly, promoted the ‘ICT for aid effectiveness’ agenda and the adoption of AIMS in recipient countries, and often financially supported and provided technical assistance for the implementation of AIMS. Furthermore, the professional community and policy institutes have developed aid effectiveness indices, such as the Aid Transparency Index (ATI) and the Quality of ODA (QuODA), which implicitly promote AIMS and put more weight on the existence of an ICT component in the score. Particularly, after the PD in 2005, such powerful NGOs and research institutes including Transparency International and Publish What You Fund (PWYF), and International Aid Transparency Initiative (IATI)⁹¹ have expanded their ‘rule-supporting’ roles in driving aid transparency agenda as well as creating normative pressure on AIMS implementation in the global field of aid.

In the international aid community, once the norms “achieve a ‘taken for granted’ quality that makes conformance with the norm almost automatic”, isomorphic mechanisms could influence organizations in having similarity with peers and gaining institutional legitimacy (DiMaggio & Powell 1983). This normative pressure was presented as moral and irresistible. There were only two AIMS implemented in recipient countries before 2004, except the early PC-based AIMS in CIS countries. Four countries adopted AIMS

⁹¹ IATI has been acting as a rule-making organization by promoting the emerging aid reporting standard, called IATI Standards since 2008. The standard has not been fully institutionalized in the global field of aid. Please see (IATI 2013) for further discussion.

alongside with the PD endorsement in 2005 (Botswana, Cambodia, Ethiopia, Viet Nam) excluding four AIMS implementations in Tsunami-affected countries Indonesia, Sri Lanka, Thailand and Maldives. Eight countries subsequently implemented AIMS between the PD and the AAA in 2008 (Lebanon, Pakistan, India, Liberia, Mozambique, Rwanda, Bolivia, Montenegro). The year of 2008 was the peak of AIMS implementation with 10 recipient countries (Burkina Faso, Burundi, Congo Democratic Republic, Malawi, Tanzania, Central African Republic, Sierra Leone, Zambia, Nicaragua, and Papua New Guinea). Another five countries joined in 2009, while 10 countries adopted such systems in 2010.

Mimetic Process in Disaster Management: In fact, the series of HLFs on Aid Effectiveness were not the only source of driving forces of AIMS diffusion. Ironically, the catastrophe of the Indian Ocean Tsunami that occurred happened on 26 December in 2004 greatly contributed to AIMS adoption in Tsunami affected countries. In this process, the then emerging aid effectiveness norms created normative pressures for AIMS adoption to support the management of humanitarian assistance. At the same time, the uncertainty and urgency in the period became an important source that encouraged imitation of good practice. The “*organizational technologies are poorly understood, when goals are ambiguous or when the environment creates symbolic uncertainty*”, and as a result, the mimetic process occurs (Currie 2012). Furthermore, and vice versa, the AIMS experiences in these countries produced mimetic isomorphic pressures back to other neighbouring countries for their subsequent AIMS implementation in ASEAN as well as the countries affected later by similar natural disasters such as the 2005 Kashmir Earthquake (AIMS adopted in Pakistan and India), and Typhoon Yolanda in 2013 (Philippines).

In the Tsunami recovery programs and the adoption of AIMS, the UNDP played the most important role in promoting AIMS. They had the previous experience of AIMS in Afghanistan, working together with AIMS provider, Synergy International. The AIMS in Afghanistan was often introduced as a good practice in the aid community:

UNDP has a proven track record of providing customised aid management IT-based tools. Recent successful implementations of the Development Assistance Database (DAD) in Afghanistan, Iraq and Sierra Leone resulted in strong support from UNDP

and the Office of Special Envoy to customise the DAD to meet needs of Tsunami affected countries and Pakistan after the South-Asia earthquake.

(DAC Working Party on Aid Effectiveness Eighth Meeting, p.2)

Due to the extreme uncertainty in the countries, which were experiencing the devastating emergency situation in the region, the mimetic isomorphic pressures to adopt AIMS were seen (DiMaggio & Powell 1983). At the *High Level Coordination Meeting on Rehabilitation and Reconstruction of Tsunami-Affected Countries* organized by the Asian Development Bank (ADB), held in Manila on March 2005, ADB and UNDP were asked to assist governments in managing and tracking emergency relief funds due to the proliferation of assistance in a disorganized manner. Subsequently, the Governments of Sri Lanka, Maldives and Thailand officially asked the UNDP to assist the establishment of aid tracking systems. Based on the previous collaboration between UNDP and Synergy International Systems in Afghanistan and the earlier PC-based AIMS 1.0 in transitional economies, they quickly started working together and conducted a round of needs assessments in each country.⁹² In July 2005, Synergy then announced the implementation of DAD 5.0 in Sri Lanka, Maldives, Thailand and Indonesia.⁹³ The service provider argued, via interviews, that a significant configuration process was necessary in order to customize AIMS to meet each country's specific requirements. It is, however, not clear how much local government actively engaged in the process due to the high degree of homogeneity in terms of technological features, implementation process, and funding. With the exception of one AIMS in Indonesia to be further discussed in Section 7.2, the functionalities and system design of AIMS were identical. The implementations in Tsunami-affected countries also provide a source of mimetic isomorphism to AIMS implementations including:

- Development Assistance Database in Pakistan
- Coordination and Decision Support System (CDSS) in India after the 2005 Kashmir Earthquake, and
- Electronic Monitoring Platform Accountability and Transparency Hub for Yolanda (eMPATHY) after the 2013 Typhoon Yolanda

⁹² "Synergy deploys DAD systems in support of countries affected by Tsunami disaster" from <https://www.synisys.com/synergy-deploys-dad-systems-in-support-of-countries-affected-by-tsunami-disaster/>, accessed 10 August 2017

⁹³ *Ibid*

Those AIMS were also developed by Synergy International.

A similar process seems to have taken place in the post-conflict countries. Although their sustainability is questionable, AIMS have been continuously adopted in the post-conflict countries⁹⁴. The experience of AIMS in neighbouring countries or other post-conflict countries may create mimetic isomorphic pressure on those post-conflict countries. In addition, the adoption of AIMS has been constantly promoted by MDAs and professional community in the area of fragile and post-conflict states (UNDP, 2010:1).

AIMS are meant to be sustainably embedded in government institution. In practice, however, this often does not occur in post-conflict and fragile situations. There is thus a need for better guidance to assist governments so they can better incorporated such systems into government institutions. Such efforts would facilitate national planning and resource allocation and would positively contribute to national capacity development and the process of building, or rebuilding, the state.

(Comparative Experience: Aid Information Management Systems in Post-Conflict and Fragile Situations, 2010, p.2)

Coercive isomorphism is also considerable in the diffusion of web-based AIMS. The PD and AAA marks a new milestone in aid governance institutionalization in the global field of aid, putting into place a set of rules on aid reporting and PD Surveys, and symbolic myths in the global aid field that constitute a paradigmatic scheme of rationalizing the concept of aid effectiveness, as well as creates coercive isomorphic pressures on AIMS implementation. The Survey assessed the effectiveness of aid by using 12 suggested criteria. In the indicators, Indicator 2a and 5a directly ask whether a recipient country uses any type of ‘management systems’ for aid management:

Indicator 2a: reliable country public financial management systems

- What reforms have been implemented or are planned to improve the quality of public financial management systems?
- What efforts are being made to improve financial management at sub-national levels?

Indicator 2b: reliable country procurement systems
(2011 Survey on Monitoring the Paris Declaration, OECD, 2010, p.60)

Indicator 5a: Use of country public financial management systems

⁹⁴ Afghanistan (2002), Ethiopia (2005), Rwanda (2006), Lebanon (2006), Liberia (2007), Burkina Faso (2008), Burundi (2008 & 2012) Democratic Republic of the Congo (2008), Central African Republic (2008), Sierra Leone (2008), Niger (2009), South Sudan (2010), Somaliland (2010), Palestine (2010), Kosovo (2010), Somalia (2011), Iraq (2011), Timor-Leste (2012), Chad (2014), Cote d’Ivoire (2014)

- Are procedures currently in place to use country systems beyond general or sector budget support (e.g. project and basket fund modalities)?
- Have significant efforts been made to increase use of partner countries' public financial management systems by donors in a way that may not be captured fully by indicator 5a (for example, through partial use of systems)?
- To what extent are donors making efforts at the country level to implement their AAA commitments to use country systems as a first option, communicate clearly reasons for not using country systems where this is the case, and to review this regularly? (see AAA 15a-c)

(Ibid, p.61)

While AIMS was not explicitly mentioned, the adoption of such systems to meet what indicators assess was implicitly recommended. In 2006, 34 recipient countries conducted the first Survey; 55 in the second in 2008; 78 in the third in 2011. This pressure and the formal rules such as timely reporting according to standardized questionnaires and the official peer review process by OECD increased coercive pressures on the adoption of AIMS.

Likewise, in the AAA, it is strongly recommended to participate in the PD Surveys and DAC Peer Reviews by using an AIMS. This role of AIMS as an assessment tool contributes to the coercive isomorphic pressure exerted on recipient governments:

We will step up our efforts to ensure that – as agreed in the Paris Declaration – mutual assessment reviews are in place by 2010 in all countries that have endorsed the Declaration. These reviews will be based on country results reporting and information systems complemented with available donor data and credible independent evidence. They will draw on emerging good practice with stronger parliamentary scrutiny and citizen engagement. With them we will hold each other accountable for mutually agreed results in keeping with country development and aid policies.

(OECD 2008c, AAA, Article 24-b, emphasis added).

The influence of the global aid institutions was apparent in the documents of AIMS as well:

Nicaragua: Since the Rome Declaration on Aid Effectiveness in 2003, Aid Information Management Systems have been widely recognized as essential tools for improving government accountability, and assessing aid effectiveness. By using the system, the Survey on Monitoring the Paris Declaration can be easily conducted.

(ODAnic - Official Development Assistance to Nicaragua Database
<http://nic.odadata.eu/>, page archived on 27 January 2013)

As illustrated in the previous chapter, findings show that most web-based AIMS in this period were homogenous in terms of the functionalities focused on the PD Survey, implementation process, project documents, and even web design of AIMS. This homogeneity may have resulted from the two main service providers and their close collaboration with the MDAs. However, this significant homogeneity can also be identified in the cases of AIMS developed by local IT consultants or vendors:

Indonesia: When we started discussion, what we did first was bench-marking other AIMS. Bappenas was interested in Cambodia AIMS was recommended by Bappenas. But we decided to do some studies and tried to find more resources on-line. (...after the interviewee found the Excel file titled “National AIMS Sites”...) We conducted a short study on each case, and finally we referred to cases of Afghanistan, India, Pakistan, and South Africa, and their user manuals were quite helpful.

(Focus group interview with AIMS developer and coordinator)

6.2.3. AIMS 3.0: Emerging Concept of Open Data

When it comes to the emerging term ‘open development’ and ‘open aid’, Smith and his colleagues (2011) point out that openness in general is rather a marketing term than an analytic concept. Although Harvey (2014:292) argues that openness may best be understood “as a collective process that is continuously under development and review”, such elusiveness can be problematic and cause further confusion for not only academic research but also decision making in policy arena.

In recent years, new opportunities and challenges in aid management have risen and prompted a more technologically sophisticated AIMS including open data, covering and processing more detailed and inclusive aid information and advanced geographic information systems (GIS). With this backdrop, the concept of “open development” has attained popularity as a new model of “engagement and innovation that are more participatory, more collaborative, and driven more by the beneficiaries” in aid sector (Smith & Reilly 2014; Smith et al. 2011). The common underlying assumption that open data can contribute to solving conventional problems of aid ineffectiveness has been increasingly discussed in AIMS implementation (Linders 2013; Dietrich 2012). While there is an increase in the implementation of emerging AIMS, which are arguably referred to as ‘open data –based’, there is still ambiguity concerning how open data

contribute to better aid. Although the use, practice, challenges, and regulatory framework of each AIMS may vary, I identify the following reasons as key drivers for the demand for open data based AIMS.

First, in the 2000s, the global field of aid has changed dramatically and become more complex due to the proliferation of new donors (Acharya et al. 2006; Burcky 2011) and aid heterogeneity increasing in type and modality (Mavrotas 2005). In particular, the 2008 global financial crisis has influenced the field and led to a significant slowdown in traditional donors' aid budget (Addison et al. 2010). This subsequently focused attention on opening opportunities for engaging new players. Non-DAC emerging economies for South-South Cooperation (SSC), private sectors, and new mega philanthropists have come to the field and expanded their roles. They are now providing significant amounts of aid of various types across the world. The changes brought the complexity to capture collective information on aid, and question the validity of the current definition and scope of ODA (Severino & Ray 2009). It also calls for a more extensive version of AIMS that covers data from new donors and diverse projects which have not been included previously on the OECD CRS database.

Second, empirical research shows that most of the poorest of the poor no longer live in low income countries (LICs), but rather live in middle income countries (MICs) (Sumner 2012; Kanbur & Sumner 2011). This phenomenon raises important questions about the current model of aid management and how aid should be allocated to the poorest in non-poor countries. This new geography of global poverty demands subnational aid targeting and better management within a country by using sub-national open data, which is often referred to the World Development Indicator (WDI) published by the World Bank, as well as an advanced geographic information system (GIS) and geospatial analysis. The World Bank's open data initiatives can be marked as milestones that accelerated the diffusion of 'open development' or 'data for development'. It embarked on April 20, 2010, to provide free access to more than 2,000 economic, financial, health, education, ICT, and human development indicators that had previously only been available to paid subscribers.

Third, there has been considerable enthusiasm for an inclusive development process in recipient countries, particularly by citizen engagement (World Bank 2014b; Chambers 1997). Stakeholders emphasize beneficiary feedback in the design, implementation, tracking and evaluation of development programs. As previously discussed, however, the notion of a digital divide has extended beyond the access to information and technology to the broader view of achieving human development of beneficiaries (Sen 1999) and to apply ICT for fixing the broken feedback mechanism in aid activities (Wittemyer et al. 2014). With this backdrop, there is growing interest in how new tools including open data, mapping platform and social media can contribute to enhancing citizen participation in the aid projects in their own local community, and responding to citizens' actual needs and policy preference (Hogge 2010).

The launch of the World Bank's open data initiatives in 2010 became the 'tipping point' of spreading the norms of openness in the global field of aid. Several states, cities and international organizations across the world have been embracing the idea of 'openness', establishing ICT platforms, launching open data initiatives with impressive speed, and making their information publicly available for re-use and dissemination. More importantly, motivated by the national open data initiatives, development agencies in donor countries launched their own information systems, often called 'open aid platforms', as identified in this study in Table 6-4. MDAs have also implemented systems based on linked open data including the MDG, WDI dataset, which were also greatly recognized in the establishment of a new development aid agenda, the SDGs in 2015. In this process, traditional rule-supporting organizations including development NGOs and research institutes also played an important role as norm entrepreneurs. More importantly, new emerging organizations, in particular, the Web Foundation, the Open Data Institute based in the UK, and Esri, a GIS specialized American IT company, also came into the process.

Donor Country	Agency	Name of Open Aid	URL
Australia	Australian Aid	Australian Aid Tracker	http://devpolicy.org/aidtracker/
Canada	Global Affairs Canada	Canadian International Development Platform	http://cidpnsi.ca/foreign-aid-data/
France	Agence Française de Développement (AFD)	Les Données de l' Aide Publique au Développement	https://opendata.afd.fr/page/accueil/
Italy	Agenzia Italiana per la Cooperazione allo Sviluppo (AICS)	Open Aid Italia	http://openaid.aics.gov.it/
Korea	Korea International Cooperation Agency (KOICA)	KOICA Integrated Project Management	http://stat.koica.go.kr/
Netherland	Ministry of Foreign Affairs	openaidNL	https://www.openaid.nl/
Norway	Norwegian Agency for Development Cooperation (NORAD)	Norwegian Aid Statistics	https://www.norad.no/en/front/toolspublications/norwegian-aid-statistics/?tab=geo
Spain	Agencia Española de Cooperación Internacional para el Desarrollo (AECID)	Realidad de la Ayuda	http://www.realidadayuda.org/
Sweden	Swedish International Development Cooperation Agency (SIDA)	Open Aid Sweden	https://openaid.se/aid/
UK	Department for International Development (DFID)	DevTracker	https://devtracker.dfid.gov.uk/
USA	United States Agency for International Development	Foreign Aid Explorer	https://explorer.usaid.gov/

Multi Donor Agency	Name of Open Aid	URL
AfDB: African Development Bank	Africa Information Highway	http://dataportal.opendataforafrica.org
EU: European Union	EU Aid Explorer	https://euaidexplorer.ec.europa.eu/
OECD	OECD.Stat	http://stats.oecd.org/
UNDP	Open UNDP	http://open.undp.org/#2017
World Bank	World Bank Open Data	https://data.worldbank.org/

Non-Profit Organization	Name of Open Aid	URL
Donor Tracker	Donor Tracker	https://donortracker.org/#donors
Open Aid	Open Aid Data	http://www.openaiddata.org/
Aid Data	Aid Data	http://aiddata.org

Table 6-4. Donor's Open Aid Platforms (Summarized from data collected)

The World Bank launched 'mapping for results' which has geo-mapped and visually summarized all donors' activities at the project level on the Open Aid Map (OAM) platform since 2011. Since then, building on the similar rationales to AIMS, most major aid agencies of donor countries and MDAs have developed their own information systems to support aid transparency and effectiveness by making aid flow more traceable. One of the main objectives of donor's information systems is, however, 'upward accountability' to their tax payers (donor countries) and member countries (MDAs).

So far, I have provided a historical overview of AIMS implementation and explained their global diffusion in three different periods. Although AIMS are often implemented with NPM principles, the inscribed vision and rhetoric of AIMS have changed over time alongside shifts in global aid governance, from ‘good governance’, ‘aid effectiveness’ and ‘open development’. AIMS are often adopted as norm supporting device, and used to reproduce the norms, rules, and institutional structures promoted by the international aid governance system. This chapter has identified three different generations in the evolution of AIMS. Firstly, PC-based AIMS in transition economies; secondly, web-based AIMS since the establishment of the Paris Principle in 2005; thirdly, and most recently open data AIMS based on the popular notions of ‘open aid’. As AIMS have evolved from the initial adoption as an intra-system in recipient governments to more transactional and integrated applications as web-based and open data based systems, the themes inscribed in AIMS have also evolved. This development illustrates the evolution from a ‘managerial’ to a ‘socio-political’ theme and more recently, the addition of ‘civil’, ‘participatory’ and ‘business’ themes as the evolution of AIMS is summarized in Table 6-4 below. In this change, it is clear that the series of HLFs on Aid Effectiveness played as the most important driving force to boost the number of countries using AIMS. The boundary of target users has been expanded to cover all public users, with the latest AIMS focusing in particular on citizens in recipient countries in the latest AIMS. However, these diversified target audiences created challenges in usage, and raised questions about how to enhance user experiences effectively.

It has been found that institutional isomorphic pressures drove countries to adopt shared norms and homogenous practices in aid management. The three isomorphic mechanisms are not mutually exclusive and often occurred simultaneously. However, I found the analytical categorizations of three isomorphism are useful for explaining the diffusion of AIMS as shown in Table 6-7.

	AIMS 1.0	AIMS 2.0	AIMS 3.0
	PC-based	Web-based	Open data based
	1996-	2005-	2010-
Rationality (theme)	Managerial rationality - <i>'efficiency, service delivery'</i>		
	Socio-political - <i>'transparency, accountability, coordination as donor's responsibility, ownership'</i>		Inclusive – <i>'participation, citizen, engagement, empowerment'</i> Business – <i>'entrepreneurship, job, company'</i>
Milestones	Transitional economies	Paris Declaration (2005)	Proliferation of donors open data initiatives (World Bank, 2010); Open Government Partnership (2011)
Primary target users	Government officials	+ donor agency academia, media	+ public users (citizens), CSOs, private sector, donors' tax payer (donor open aid initiatives)
Type of services	Database	Web-based, GIS, analytic tools	+ Linked open data in machine-readable and open format for reuse, open API
Aid data standard	CRS	CRS++	CRS++, IATI
Tension & challenges	Paper-based and IT enabled administration	Different interests and perceptions between stakeholders	Aid heterogeneity, too many actors, gaps between supply and demand, confusion in aid standards

Table 6-5. The Evolution of AIMS (Summary from data analysis)

It also seems striking that there are considerable similarities in the implementation processes of AIMS. So far, I have discussed the commonalities of technical functionalities, user manuals, website, and visions that AIMS inscribe in Chapter 5 and 6. Based on review of 11 project documents, 9 user manuals and 5 evaluation reports from 18 AIMS cases, I identified that there is significant homogeneity in AIMS in terms of functionalities and implementation processes. Although generalization may not be possible, the common process of AIMS implementation follows seven stages; 1) political process, 2) financial process, 3) design/development, 4) data input, 5) implementation, 6) usage and evaluation, and 7) policy, as shown in Table 6-6.

Stage	Key elements	Key questions
1. Political Process	<ul style="list-style-type: none"> • Sharing the needs of AIMS among stakeholders • Decision-making process • Donor's commitment to data provision • External/international pressure • Aid data standard: CRS, IATI 	<ul style="list-style-type: none"> • Who are the stakeholders? • Who drives AIMS? • Is there relevant legal framework / regional or int'l aid agreement?
2. Financial Process	<ul style="list-style-type: none"> • Financial commitment (bilateral ODA, multi-donor trust fund) • Hiring IT consultants or vendors and staffing • Normally, donor provides fund to gov; government takes ownership. 	<ul style="list-style-type: none"> • Who provides funding? • Who operates and manages the AIMS?
3. Design & Development	<ul style="list-style-type: none"> • Government-driven vs ready-made AIMS • Meetings with stakeholders • Considering the existing data standards and classification in data architecture • Considering the existing government information systems and compatibility • Ways of data visualization • Beta version test 	<ul style="list-style-type: none"> • Who are the users? • What software, technical features? – GIS, linked data, API • Who provides and enters data, what kind of data in what format? • How to make AIMS compatible with existing system?
4. Data Input	<ul style="list-style-type: none"> • Donors' provision of data (sometimes with ID/password) • Data workshop with donor agencies • Feedback mechanism with beta users • Data quality control 	<ul style="list-style-type: none"> • Who is donor focal point? • Who does data quality control? • Normally, donors provide data, gov manages, rearranges, and does quality control
5. Implementation	<ul style="list-style-type: none"> • Launch of AIMS, normally with a fancy ceremony and vision announcement by high-level policy makers • Marketing and media coverage • Workshop, capacity development programs • Data management 	<ul style="list-style-type: none"> • How to advertise AIMS? • How are social, political, cultural contexts considered?
6. Usage & Evaluation	<ul style="list-style-type: none"> • Encouragement of data use, re-use (open data) • Feedback process • Sustainability • Data update • Research and publication, best practices (mainly by donors) 	<ul style="list-style-type: none"> • How to sustain AIMS? • How to update data? • How to promote use? • How to scale up best practices to other contexts? • How to promote citizen engagement? (most recent AIMS)
7. Policy	<ul style="list-style-type: none"> • Expected outcomes (transparency, coordination, accountability) • Further legislation and policy dialogue 	<ul style="list-style-type: none"> • How to enhance actual aid coordination and accountability?

Table 6-6. Process and Seven Common Stages of AIMS

Isomorphism	Carrier	Aid field	Stakeholders	Episodes	Data and Exemplary Quotes	Analysis
Coercive	Rules, laws, sanctions	<ul style="list-style-type: none"> • Aid governance principle, • Aid reporting scheme (shift from CRS to IATI) 	<ul style="list-style-type: none"> • Major donors (OECD-DAC) • Int'l org 	<ul style="list-style-type: none"> • Establishment of High Level Forum on Aid Effectiveness in Rome (2002); • Paris Declaration (2005); • Accra Action Agenda (2008) • The OECD Survey on Monitoring Paris Declaration (2006; 2009; 2011) 	<ul style="list-style-type: none"> • “We received lots of pressure from development partners, why not participating the survey, especially OECD” [GV4] • The survey assessed the effectiveness of aid by using 12 criteria. 	<ul style="list-style-type: none"> • The monitoring survey provided formal rules and codes on aid management and reporting. • In this process, recipient countries and donor agencies were encouraged to use AIMS in conducting the survey. • The pressure and the formal rules such as timely reporting according to standardized questionnaires and the official peer review process by OECD increased coercion on the adopting AIMS.
Normative	Duty, obligation	<ul style="list-style-type: none"> • Major annual development report (WDR, HDR), • knowledge dissemination 	<ul style="list-style-type: none"> • Professional community - Int'l org, Academia • Rule-supporting orgs 	<ul style="list-style-type: none"> • DAC Working party on aid effectiveness and AIMS (2006) • Series of workshop, report provided, in particular, by the World Bank and UNDP promoted the adoption of AIMS in recipient countries • Technical assistance for the implementation of AIMS. • Emergence of open data, Open Government Partnership (2009) 	<ul style="list-style-type: none"> • OECD, WB reports including • Lesson learnt from establishing AIMS to support nationally-led aid coordination (2006) • UNDP Success Stories Strengthening management for results (2010) • Complementary roles for the OECD-DAC CRS and IATI (2011) • “Int'l community became interested in how open data can increase transparency in the aid sector” [IOi2] • “The Open Aid Partnership is a multi-stakeholder initiative that helps promote open development and improve aid coordination and effectiveness” [IOi0] 	<ul style="list-style-type: none"> • Two major systems on the market have become the Development Assistance Database (DAD) developed by Synergy International Systems (since 1996), and the Aid Management Platform (AMP) by Development Gateway (since 2005) • MDAs and rule-supporting research institutions helped to further institutionalize the field. These professional communities created normative pressures on recipient countries by disseminating cases of ‘best practice’ of AIMS and developing indices such as ATI and the Quality of ODA (QOODA). • The emerging new international norm – ‘openness’ in development has created normative pressure on recipient government to open-data based AIMS, and follow a new aid reporting standard - IATI
Mimetic	Leaning, Uncertainty, Competition	<ul style="list-style-type: none"> • South-South cooperation • Regional development agenda 	<ul style="list-style-type: none"> • Peers in regional economic community (ASEAN, EAC, CIS, LAC); market 	<ul style="list-style-type: none"> • Regional – within the transition economy countries • The uncertainty of the period was a crucial force that encouraged imitation right after the Paris Declaration (2005) and before the Busan (2011). 	<ul style="list-style-type: none"> • Findings show that most web-based AIMS after the Paris (2005) were homogenous in terms of user manuals, project documents, functionalities, and even web design of AIMS. • This may have resulted from the two main service providers and collaborations with MDAs. 	<ul style="list-style-type: none"> • When there is ambiguity in interpretations of agreed goals or symbolic uncertainty, mimetic process is more likely to occur. • By the Accra Action Plan in Ghana in 2008, the goals of the Paris Principles and the role of AIMS to achieve them were poorly understood, both in policy terms and as a practical road-map in aid management. However, the web-based AIMS were mostly implemented in this period (2005-2008).

Table 6-7. Isomorphic Pressure on AIMS in the Global Field of Aid (Selected analysis)

6.3. Empirical Puzzle: Why do AIMS Fail?

So far, I have discussed the global diffusion based on the findings on 80 AIMS cases and traced their implementation over the last two decades. This section discusses how AIMS is used in actual practice and investigates their sustainability. As explained in Section 4.3.3, the analysed 80 cases of AIMS were classified into three categories: [A] in relatively active use, [B] accessible URL but rarely being used, and [C] implemented once but shut down. In summary, this study empirically shows that many AIMS diffused in recipient countries have not achieved the expected outcomes and even sustainability, in spite of the considerable investments made. This is often associated with what Heeks (2002) referred to as the “sustainability failure”, in which information system initiatives were initially successful in developing countries but then abandoned after a short period of time. However, Heeks’ definition does not clearly differentiate between [B] and [C]. Based on this analysis, I argue that there is significant difference in the role of technology between [B] and [C]. Highlighting the symbolic role of technology, I extend the concept of ‘sustainability failure’ of information systems.

6.3.1. Sustainability Failure of AIMS in Recipient Countries.

As discussed in the Methodology Section 4.3, the AIMS identified have been carefully traced by visiting the websites and conducting additional interviews with three main periods of 2015, 2016 and 2017 respectively. The final modification process was done in July 2017 with the result presented in Table 6-8 below.

Among 80 cases, only 16 cases are identified as belonging to Category [A]. Although the criteria for distinction between category [A] and [B] are not clear-cut; as well as actual practices of AIMS vary in each case, at least these 16 cases have been updated and been in use recently (July 2015 – July 2017). Bangladesh, Cambodia, Côte d’Ivoire, Georgia(2), Honduras, Jordan(2), Kenya, Malawi, Moldova, Myanmar, Nepal, Niger, Rwanda, Senegal, Timor-Leste, and Ukraine(2) are listed as Category [A]. However, ‘last update’ could mean merely upgrading websites or uploading data without any strategic purpose. Thus, the actual number of ‘good practices’ that are actively being used may be lower. Data was also triangulated by semi-structured interviews with

service providers. Service providers tended to argue that their practices are active. However, on the demand side in general, there is lack of evidence when it comes to usage by the originally targeted users, particularly citizens in recipient countries. In order to further assess the use and impact of AIMS, closer empirical scrutiny of each system is needed.

There are 28 cases of AIMS with accessible URLs, however without any recent data provision or evidence of usage. These cases use different kinds of platforms and are spread across all regions. A particular pattern could not be established, for example, AIMS maybe more likely to be successful or less successful in a particular region, or in economic status, depending on various factors.

The category [C] is the main interest of research of sustainability failure. Compared to the year of implementation, it is not easy to pinpoint when exactly the system is not online anymore or the system is shutdown. An ‘abandonment’ is not to be celebrated or something to be proud of in many cases. Thus, most cases may just slowly have faded away without any note or, evaluation. There are a total of 36 cases of AIMS being shut down. This number represents 45% of the total cases researched. Results empirically show the majority of AIMS were identified in categories B and C (64 out of 80 or 80%). It happened to cases within all different regions, with different service providers. Surprisingly there is a lack of critical studies based on the assessment of AIMS, compared to plethora reports published by MDAs with hopes of improving aid effectiveness. It seems many of them had been shut down without any thoughtful reflection and investigation into why they failed to achieve expected coordination goals or remain in operation.

Region	[A] Relatively active and being used	[B] Accessible but rarely being used	[C] Implemented once but shutdown	Service Provider
Sub Saharan Africa	Côte d'Ivoire, Malawi, Senegal	Burkina Faso, Chad, Ethiopia, Gambia, Guinea Bissau, Liberia, Mozambique, Niger, South Sudan, Tanzania, Uganda	Burundi(1), Congo Democratic Republic, Madagascar, Togo	Development Gateway
Middle East and North Africa				
East Asia & Pacific	Timor-Leste	Laos		
South Asia	Nepal			
Latin America and Caribbean	Honduras	Haiti	Bolivia(1), Nicaragua	
Europe and Central Asia	Moldova	Kosovo, Kyrgyz Republic(2)	Montenegro	
Sub Saharan Africa	Kenya, Rwanda	Cameroon, Comoros, Lesotho, Mauritania, Nigeria, Sierra Leone	Burundi(2), Central African Republic, Somalia, Somaliland, Zambia	Synergy International
Middle East and North Africa		Iraq	Lebanon, Yemen	
East Asia & Pacific		Indonesia(1)*, Solomon Islands	Papua New Guinea, Philippines(1), Thailand*, Vietnam	
South Asia		Afghanistan, Sri Lanka	India, Maldives*, Pakistan	
Latin America and Caribbean			Guatemala	
Europe and Central Asia	Ukraine (2)	Macedonia	Armenia, Georgia (1), Kazakhstan, Kyrgyz Republic(1), Russia, Tajikistan (1), Tajikistan (2), Turkmenistan, Ukraine (1)	
	Bangladesh, Cambodia, Georgia (2), Jordan (2), Myanmar	Bolivia(2), Palestine	Botswana, Indonesia(2), Jordan (1), Philippines(2), South Africa	Others
	15	29	36	

Table 6-8. Sustainability of AIMS

Unstable Sustainability: After the initial data collection in the period of January to April in 2015, the AIMS URLs were accessed for further data collection mainly in two different time periods from November 2016 to July 2017 respectively. However, cases have been frequently accessed while conducting analysis and writing results. I found some AIMS were on and off in this period, and identified significant instability in those cases:

'Dying AIMS': The URLs for the AIMS in Somaliland, Yemen, Papua New Guinea, Pakistan, Tajikistan(2), Philippines, and South Africa were accessible at two different checking points in 2015 and December 2016. Furthermore, Congo and Madagascar even had particularly active AIMS during the initial period of this research in 2015. However during the final checking in July 2017, those 9 cases of AIMS had to be put in [C] because the URLs became no longer accessible.

'Back to life': Several AIMS came back from the status of inaccessibility [C] to [B] or [A]. Some AIMS, whose URLs were initially inaccessible, came back online during the second phase or the final phase checking. Gambia, Mozambique, Liberia, South Sudan, Iraq, and Sri Lanka were moved from [C] to [B], while Senegal and Kenya turned out to have a relatively active AIMS and categorized as [A]. In the Laos case, the category switch back and forth from [B] to [C] and back to [B]. There was a period during the second phase checking in late 2016, when Laos' AIMS were inaccessible. A typical case of instability access is that of the Central African Republic. In the very initial data collection in the period of January and April in 2015, the URL was accessible. It became inaccessible in late 2015, then again accessible at two different phases of URL checks in September and December 2016. However, the case finally had to be categorized as [C] because in July 2017 it again became inaccessible.

There may be various reasons for these instabilities. An interview with an AIMS expert in a service provider reflects these issues:

Accessibility is a bit tricky, of course the most obvious example of an accessible AIMS is one with a public URL, which one can access from anywhere. However there are a few relatively common cases that may be worth considering: i) AIMS with a private URL or IP, which are meant to be accessed only within a

government intranet, and ii) AIMS with a public URL, which are temporarily inaccessible for any number of reasons, such as: internet outages, power outages, or planned downtime.

(Interview with a senior policy officer at an AIMS provider)

Re-defining Sustainability Failure: As discussed, the ascription of failure may be socially constructed and diversified. Accessibility is not the only decisive criterion of failure. It may still be possible that an AIMS is actively being used internally, but is not open to the public. This can be further investigated by using in-depth case studies. However, based on the thorough analysis with diverse sources of data in this study, it is quite clear that the cases of category [B] and [C] are experiencing difficulties in achieving the originally expected outcomes and their sustainability. Another counter argument may be that there can be left-over innovation from the experiences of AIMS within implementing government organizations, so that it can be argued that [C] is not a case of failure.

As discussed in Chapter 3, there is no single decisive boundary in defining success or failure as the evaluation process and its criteria depend on individual perspectives (Wilson & Howcroft 2002; Bartis & Mitev 2008). However, it is true that the AIMS in category [C] did not achieve sustainability for some reason, which I define as ‘sustainability failure’ in this study. I define the sustainability failure of information systems as a *‘permanent shutdown of the system within a relatively short time frame, such as three years after implementation, without any transformation, left-over innovation or thoughtful reflection (evaluation for future innovation)’*.

Following this, in this thesis, I conceptualize [B] not as ‘sustainability failure’, only consider [C]. I define ‘sustainability failure’ as ‘a permanent shutdown of the information system within a short time (3 years) after implementation, without any visible transformation, left-over innovation, or thoughtful reflection and evaluation. Existing theoretical frameworks of sustainability failure discussed in Chapter 3 cannot capture the difference between [B] and [C]. According to Heeks’ definition, both [B] and [C] are cases of “sustainability failure” that were initially successfully implemented but “abandoned after a year or so”. However, it is important to distinguish between B and C because the role of technology in [B] and [C] may be

different, which I will more discuss in Chapter 8. A hint about this can be found in the comments of an interviewee:

Why do we have to shut it down? Anyway it's our baby. Many people spent a lot of time there. Also we invested a lot of money. It is unfortunate nobody is using it. But it was good try for aid management. If we have more assistance, or we build up our capacity to run it, maybe then we can re-use it. I hope it's soon.

(Interview with a former AIMS team member in a recipient government)

It is not possible for this thesis to determine for all 80 cases whether a particular case is a success or failure, not only because of the large number of samples, but also due to the constructive nature of such an evaluation. Although several frameworks in terms of ICT practice in developing countries, aid transparency (Publish What You Fund 2016), open data (World Bank 2013), e-governance (UN 2014) have often been suggested by MDAs and international NGOs, the purpose of this study is not applying a pre-fixed evaluation tool to examine whether each case is successful or not. Rather, I focus on sustainability failure as conceptualized in Chapter. 3, and highlight the emerging question, *why have AIMS failed to be sustainable?* Reflecting the high rate of sustainability failure, this section emphasizes the complexity of problems surrounding AIMS. This calls for a new approach, avoiding the technical rational approach often applied to AIMS promotion and implementation, as well as more in-depth case study to understand the hidden institutional dynamics of sustainability failure.

6.3.2. Do State Actors Matter? – Role of State Actor in AIMS

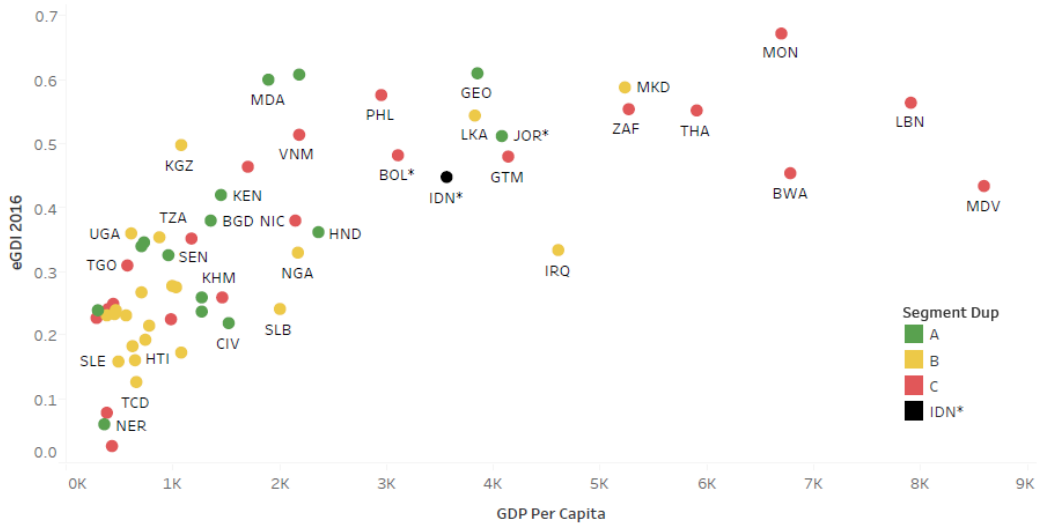
In this section, I discuss one of the empirical findings, which suggests that AIMS failure cannot be understood using the existing framework of e-government research. In particular, the frequent shutdown of AIMS in emerging economies poses an empirical puzzle as it contradicts extant theory of e-government failure.

In particular, cross-national studies on e-government performance based on regression analysis often suggest that e-government is more likely to be successful in states, that are wealthy, urbanized, transparent, with higher ICT infrastructure, literacy, government efficiency and low-level corruption (Kim 2007; Relly &

Sabharwal 2009; Rorissa & Demissie 2010; Ferro et al. 2011; Gil-Garcia & Martinez-Moyano 2007). Using the E-government Development Index annually published by UN, and other socio-economic indicators, such studies have identified the correlations between socio-economic indicators of the states and e-Government Development Index (how successful e-government is). In spite of the various confounding factors, as well as a-contextual approach in a cross-national analysis, findings from such studies almost became an orthodoxy and have been used to often justify NPM principles in e-government practice in developing countries.

However, the findings from 80 AIMS cases suggest rather contradictory findings. Empirical evidence suggests that the correlation between AIMS sustainability/success and factors frequently used for e-government research is unclear. More importantly, most emerging economies fall into the case of 'abandonment', as outlined in Category [C]. It may not be simply generalized, however, as findings also show that it is more likely to find a great number of LDCs in [A], in which groups AIMS are in relatively active use, to emerging economies. At the same time, it is more likely to find MICs in [C], rather than [B], which groups AIMS that are rarely used.

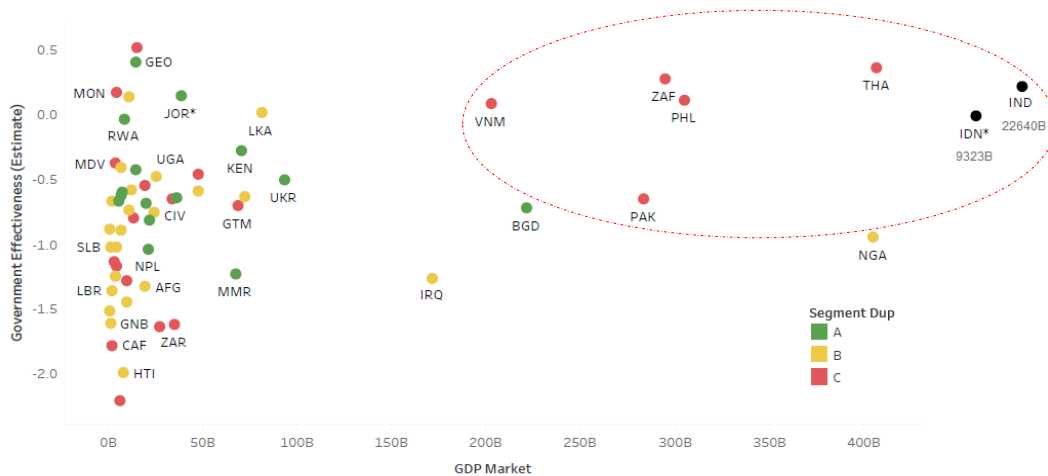
As shown in Figure 6-4, while there is a strong correlation between e-Government and economic status (GDP per capita) in line with extant research, sustainability failure of AIMS often occurred in countries with higher e-Government performance and upper middle-income countries.



* Denotes countries falling in more than 1 segments - [A] or [B] or [C]

Figure 6-4. Mapping AIMS in the Comparison of e-Government Development Index and GDP per Capita (Developed by Author)

Furthermore, AIMS is more likely not sustainable in larger economies with higher government effectiveness. This includes emerging economies such as Indonesia (GDP: 9323 billion USD), India (GDP: 22,640 billion USD), South Africa, Thailand, Philippines, Vietnam.



* Denotes countries falling in more than 1 segments - [A] or [B] or [C]
Excluded IND (Outlier in GDP)

Figure 6-5. Mapping AIMS in the Comparison of Government Effectiveness Developed by the World Bank and Total GDP (Developed by Author)

This suggests that there is no simple and linear way to identify the unquestioned assumptions made in existent multivariate analyses in e-government research. In

order to explain this puzzle, understanding state actors in the global context is the key to explaining those particular cases of ‘sustainability failure’ where the major sources of changes and contingency are to be found on the donor’s side or in the global aid governance, instead of the recipient’s side (Ramalingam 2013; Moyo 2008). Much of the disuse of information systems needs to be explained by tracing the change in relations, ideologies, and institutional arrangements among the donors and MDAs, which are normally beyond the influence of the recipient country as a state actor. Within this macro dynamic, the role of states in the field of international aid has rarely been accounted for and theorised in the ICTD literature to explain IS failure.

In light of these gaps, the following chapter aims to understand why a donor-funded AIMS designed to institute global aid governance principles, in particular, those endorsed by the PD, has been implemented, used, and then abandoned in recipient country. Taking a closer look at a particular case in Indonesia is important, as it illustrates the ‘sustainability failure’ in a struggle with the change of norms, rules and relations in a global context of aid. I raise the question, why *does AIMS fail to achieve sustainability?* By tracing the justifications for AIMS failure from their local context to the global context, the following Chapter 7 and 8 illustrate how an information system failure in Indonesia needs to be understood as a result of macro events occurring in the global field of aid.

Furthermore, there is a lack of understanding of the effect of the macro dynamic between states and global aid institutions, which often govern, enable and constrain development initiatives, on IS failure in recipient countries. In particular IS failure has rarely been explained by examining the role of state actors in the macro context of global field of aid. Thus, the following chapters present the case study and further investigate how the state of Indonesia as an emerging power has actively shaped this global-level contingency, in the field of aid, which used to be dominated by the global North.

6.4. Summary

To the best of my knowledge, there is no published systematic research of the global adoption on AIMS. The review and discussion of the diffusion of AIMS in this chapter shows that such systems were spread and evolved technologically, however, there are major issue of sustainability and questions about the way they are actually used and the purposes they serve within recipient countries. This chapter has traced the history of AIMS and explored 80 AIMS cases implemented in 71 developing countries over the last two decades in order to provide a historical overview of the global diffusion of AIMS in the field of aid. It has explained and identified their driving forces for the diffusion and the homogeneity of such systems. This chapter also offered an understanding of evolution and the main rhetoric inscribed in AIMS and how it has changed over time. The analysis enables us to highlight the complexity of problems surrounding AIMS.

In the light of the discussion in this chapter, the following chapters seek to answer the emerging question of the sustainability failure of AIMS, through an in depth interpretive case study of the AIMS in Indonesia. It traces the changes in international and domestic aid governance that influenced the unique context of AIMS in this emerging economy. The analysis highlights the role of the state in the institutional account of AIMS failure. I argue that understanding the failure of AIMS requires a shift in focus from the process of aid management to the global level. It needs to be seen as a consequence of macro-level events occurring in the global field of aid.

Chapter 7. Case Study: AIMS in Indonesia

This chapter elaborates on the case used for empirical fieldwork. The chapter is divided into three sections:

- Section 7.1 provides an overview of the geopolitical and economic context in Indonesia with a specific focus on the historical significance of foreign aid that has influenced transformation of national development policy.
- Section 7.2 offers an overview of aid management mechanism with a specific focus on the period of the President Susilo Bambang Yudhoyono (SBY)'s administration (2004-2014).
- Section 7.3 illustrates the technological object of the case study; the Indonesian Aid Information Management Systems (AIMS), the national level aid management system, which was implemented in 2010, used and abandoned in 2012. As discussed in Chapter 2, there is significant dependence of aid on its historical, political and global context. A full understanding of the AIMS, including its rationale, role, implementation and shutdown, can be achieved through using a historical and political lens, as done in this chapter.

7.1. 'Dancing with Aid' - Indonesia's Strategic Actions with Donors

7.1.1. Indonesia's Geopolitical and Economic Context

The Indonesian Archipelago consists of more than 17,500 islands whose '*Tanah Air* (land and water)'⁹⁵ constitutes the territory of Republic of Indonesia. Over 300 ethnic groups make up the more than 257 million (UN World Population Prospects, 2015)⁹⁶ people who constitute a population abundant in diversity of languages, culture and community. Under the legacy of the founding principles '*Pancasila*'⁹⁷, Indonesian society has enjoyed a full diversity and religious freedom in spite of the fact that Indonesia is the country with the largest Moslem population in the world.⁹⁸ The national motto '*bhinneka tunggal ika* (unity in diversity)', envisioned in the national development policy, simultaneously embraces pluralism while still maintaining national identity (Vickers 2006).

The country has been recognized for its geo-political location as well as great capacity for economic growth. Looking back at the history of Indonesia, especially the golden era of Sriwijaya (650-1377) and the Majapahit Empire (1293-1527), Indonesia has repeatedly earned wealth and glory from its geo-political position as the centre between the Indochinese Peninsula and Oceania. Indonesia's strategic location also enables the state to become the centre of the Association of South East Asian Nations (ASEAN)⁹⁹. In addition, the fundamental characteristics of

⁹⁵ Mentioned in the lyrics of the most popular song in the '*Lagu Wajib Nasional* (National compulsory song)'. These are the songs about patriotism and independence which must be learned by Indonesian students in elementary and secondary school. After the Suharto's step down in 1998, it became not compulsory any more. But, some songs are still very popular and loved by the people of Indonesia.

⁹⁶ Source: <https://esa.un.org/unpd/wpp>, accessed 1 August 2017.

⁹⁷ *Pancasila* comprises two Sanskrit words, '*panca*' meaning five, and '*sila*' meaning principle. It consists of five inseparable and interrelated principles: i) belief in the one and only god, ii) just and civilized humanity, iii) the unity of Indonesia as a state, iv) democracy guided by the inner wisdom in the unanimity arising out of deliberations among representatives, v) social justice for the people of Indonesia.

⁹⁸ In the media, Indonesia is often considered as the largest 'Islamic country'. However, it is not true. Although 88% of its population is Moslem, Indonesia is not an Islamic country, meaning not a state based on Islamic law as well as having freedom of religion.

⁹⁹ The Secretariat of ASEAN was housed in Jakarta, the capital city of Indonesia.

Indonesia, including in particular the demographic advantage of increasing labour force in productive age (67%, 2015)¹⁰⁰, as well as large territory filled with natural resource, both offer significant potential for economic development and industrialisation.

The state, however, underwent a long economic downturn and an era of political instability before the new millennium. There is still on-going scholarly and public debate on the era of Suharto (1967-1998), controversially called ‘Father of Development (*Bapak Pembangunan*)’, when Indonesia enjoyed the highest growth rate in its history. Three decades of authoritarian leadership under Suharto arguably failed to achieve the expected performance in socio-economic progress and democracy. Scholarly research on this period often focuses on the corruption of Suharto’s New Order regime and the nation’s economic development (Juwono 2016; King 2000). Authoritarian leadership, corruption, nepotism and clientelism are often considered to impede on the motivation and development of the nation’s capacity for sustainable progress (Robertson-Snape 1999; Goodpaster 2003). Transparency International ranked the former President Mohamed Suharto (1967-1998) as the most corrupt politician in the world, with an alleged embezzlement of \$15-35 billion (Transparency International 2004). At the end of his term, when the Asian Financial Crisis hit the nation in 1997, the economy remained fragile, creating massive economic disparity.

Since the beginning of the 21st century, Indonesia has experienced a transition from an authoritarian political regime to political pluralism with a multi-party system and a decentralized government, with the recovery of economy. Since President Susilo Bambang Yudhoyono (SBY) took the office in 2004, the average of annual economic growth rates in his first (2004-2009) and second term (2009-2014) were 5.64% and 5.80% respectively¹⁰¹. With moderately strong economic growth in this period, Indonesia achieved a structural reform in economy and became the world’s sixteenth-largest economy (World Bank 2015). In addition to joining G20 in 1999,

¹⁰⁰ Source: <http://data.worldbank.org/indicator/SP.POP.1564.TO.ZS>, accessed 7 July 2017.

¹⁰¹ It is lower than the previous Suharto’s era. However, it is relatively high compared to other emerging economies and other ASEAN countries in 2010s.

Indonesia was invited to join the club of the OECD Enhanced Engagement Countries in 2008, along with four other countries, Brazil, India, China and South Africa (OECD 2007). Within the region, Indonesia also has played a key role in regional integration and collaboration, specifically through ASEAN.

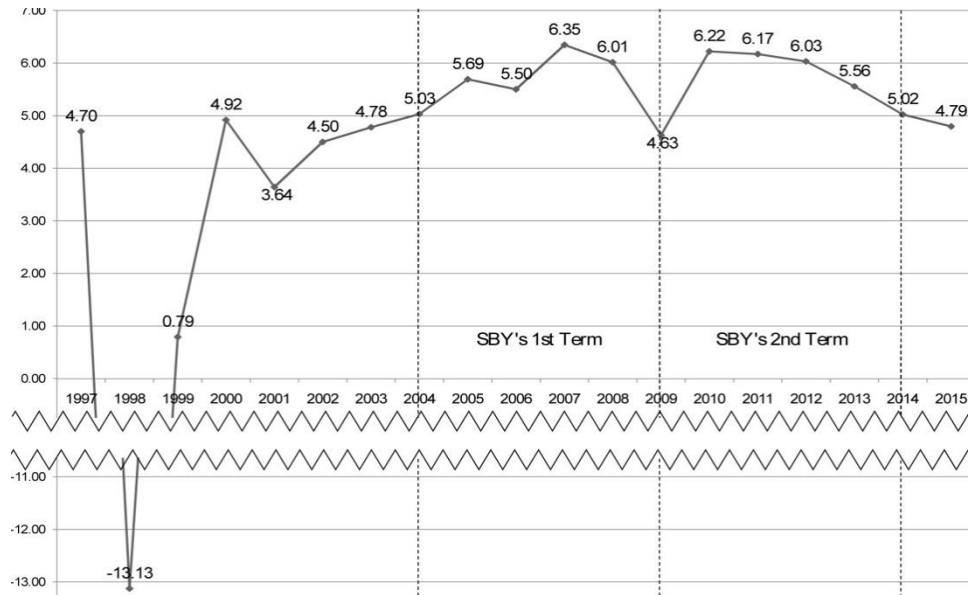


Figure 7-1. Indonesian Economic Growth from 1997-2015
(Figured by author based on the World Bank Data)

In spite of these remarkable achievements in the beginning of the 21st century, the progress in socio-economic development can still be improved upon. According to the Central Bureau of Statistics Indonesia (*BPS: Badan Pusat Statistik*), the number of people below the national poverty line has surpassed 28.01 million as of 2016. Over 40% of the Indonesian population “remain vulnerable of falling into poverty, as their income hover marginally above the national poverty line”¹⁰², set at 330,776 Indonesian Rupiah (IDR) per person per month (\$22.60)¹⁰³. This is higher than the average of ASEAN member states both in percentage and number¹⁰⁴. In addition to

¹⁰² Source: <http://www.worldbank.org/en/country/indonesia/overview>, accessed 18 June 2017

¹⁰³ Set by BPS for the period of March-September 2015 as disclosed in the document https://www.bps.go.id/website/brs_ind/brsInd-20160104121812.pdf, accessed 19 June 2017. The national poverty line is defined according to each country’s specific economic and social conditions.

¹⁰⁴ The international poverty line (\$1.90 per day) set by the World Bank has been periodically updated to reflect price data of basic food, clothing, and housing needed around the world. The new global poverty line \$1.90 was updated in October, 2015, and generally used in comparing poverty measures across countries.

the poverty reduction in the most impoverished group, the goal to surpass the status of middle-income to that of high-income country by 2025, is still the most important priority in the national development agenda as well as development cooperation with donors.

[B]y 2025 our country will be in phase to set actually move towards a developed country. This is our vision for 2025.

(President Susilo Bambang Yudhoyono's speech commemorating the 64 year of independence, Jakarta on 14 August 2009, p.9)

As discussed in Chapter 2, the effect of foreign aid on the economic and social development of recipient countries has been a controversial issue. Some empirical studies of aid advocate the positive impact of foreign aid on economic growth, while other studies highlight that it increases recipient government's aid dependency and causes structural distortions of their economy. Whether positive or negative, the central role of foreign aid in Indonesian economy and politics, however, cannot be ignored.

7.1.2. History of Foreign Aid in Indonesia

7.1.2.1. Colonization and the Politics of Foreign Aid

Whereas freedom is the inalienable right of all nations, colonialism must be abolished in this world as it is not in conformity with humanity and justice

(The first sentence of the Preamble of the 1945 Constitution of the Republic of Indonesia)

Indonesia's political and historical legacy continues to have an influence on the current debate over national development plans and perspectives on foreign aid in many ways. In this sense, we need a historical lens to understand the mechanisms of foreign aid in Indonesia and its development policy. Foreign aid has been an important component of Indonesian domestic politics and economy since the period of colonization. At the same time, it has been considered a diplomatic tool for donor countries to seek their own military, political and economic advantage since the establishment of Indonesia as a nation state (Hindley 1963). Remembering the

discussion in Section 2.3, “we need to stop pretending that aid is not a political issue”.

Indonesia was a Dutch colony named the Dutch East Indies, *Hindia Belanda* in Bahasa Indonesia, for three and a half centuries, until the Dutch Army surrendered to the Japanese military without pre-condition in East Java in 1942 during the Second World War¹⁰⁵. The Japanese government was first welcomed by Indonesian nationalists due to its propaganda ‘Greater East Asia Co-Prosperity Sphere’ (GEACPS: 大東亜共栄圏), which sounded like an antithesis to Western imperialism and appeared as a new momentum for Indonesian development. The vision was first introduced in a radio speech by Foreign Minister Arita Hachiro in 1940:

The countries of East Asia and the regions of the South Seas are geographically close, historically, racially and economically very closely related to each other. They are destined to cooperate and minister to one another’s needs for their common well-being and prosperity, and to promote peace and progress in their regions. The uniting of all these regions in a single sphere on the basis of common existence and assuring thereby the stability of that sphere is, I think, a natural conclusion.¹⁰⁶

(Japanese Foreign Minister Arita Hachiro’s speech, 29 June 1940)

Before long, Indonesian nationalist leaders, however, began to realize that the Japanese vision of GEACPS was nothing but the constructed rationale for justifying the invasion and exploitation of Indonesia. When Indonesia declared its independence from the Japanese Military Imperialism on 17 August 1945, two days after Japan’s surrender, its independence and national development were not simply a domestic matter, but an important issue to major players in the international political economy such as for the US, Japan, China, the Netherlands, as well as the USSR (Ricklefs 2001).

¹⁰⁵ Kalijati Agreement, signed on March 8, 1942

¹⁰⁶ 29 June, 1940 (from the citation in ‘Sources of East Asian Tradition: The modern period, Vol.2 edited by Theodore De Bary, 2008, Columbia University Press)

The ‘*dwitunggal* (united duo)’ Sukarno and Mohammad Hatta proclaimed Indonesia’s independence, and were immediately appointed as the first President and Vice-President of Indonesia upon its independence. As soon as the Hague agreement¹⁰⁷ with the Netherlands was signed in 1949, the very first foreign aid of \$40 millions to Indonesia was scheduled to be delivered via the US Marshall Plan. In the following year, the foreign aid from the Western world, including \$53 millions of the Dutch foreign aid as well as \$74.9 million from the US, were delivered to Indonesia. Foreign aid from Western countries, however, decreased during the early period of Sukarno’s regime in 1950s. The hesitancy of Indonesian government to admit its planned alignment with the Western world was an important reason for this decrease (Friend 2003; Hindley 1963).

7.1.2.2. Sukarno’s Leadership in the Non-Aligned Movement (1945-1967)

As a state led by strategy and bureaucracy, Indonesia arguably profited from the Cold War context. Although Sukarno relatively strengthened the ties to the Communist bloc, including to the Soviet Union and China in his late presidency¹⁰⁸, Sukarno’s era is more known for being neutral towards receiving aid from both the West and the East, as well as allying the state in the Non-Aligned world. In the wake of World War II, the hegemony of imperial powers was diminished by anti-colonial movements in the Third World, as previously discussed in Chapter 2. In spite of rising tensions of bipolarity that emerged between the US and the Soviet Union, as well as pressure to align with either capitalist or communist ideology, the leaders of the Third World arguably had little interest in taking a particular side within this contention (Tomlinson 2003; Berger 2004). The situation of Indonesia was not different, as Vice President Mohammad Hatta expressed:

¹⁰⁷ The Indonesian-Dutch Round Table Conference held in Hague from August to November in 1949. The conference ended with the Dutch agreeing to transfer sovereignty to the Republic of the United States of Indonesia (RUSI). There had been international pressure via the UN on the Dutch to officially withdraw their intention to reoccupy Indonesia and grant independence.

¹⁰⁸ Sukarno’s Independence Day speech on 17, August, 1965. He suggested “the Axis of Jakarta-Phnom Penh-Hanoi- Beijing-Pyeongyang.

Have the Indonesian people fighting for their freedom no other course of action open to them than to choose between being pro-Russian and pro-American? Is there no other position that can be taken in the pursuit of our national ideals? The Indonesian government is of the opinion that the position to be taken is that Indonesia should not be a passive party in the area of international politics but that it should be an active agent entitled to decide its own standpoint.¹⁰⁹

(Indonesia's Vice President Mohammad Hatta's speech on 2 September 1948,
Translated)

Defending its right to neutrality and pursuing an independent diplomatic policy, Indonesia initiated the Non-Aligned Movement, playing an active role in the international arena by consolidating the Third World. Indonesia hosted the Asian-African Conference in Bandung, also known as the Bandung Conference, in 1955. The Conference is widely perceived as the first attempt to establish the foundations of Third World unity, where 29 newly independent countries shared their opposition to colonialism and concerns about Western powers (Asian-African Bandung Conference 1955). The Bandung conference promoted the attitudes of newly independent countries from colonization towards the Cold War by laying the foundation of the Non-Aligned Movement to counter both the influence and power of the US and the USSR (Acharya 2016). More importantly, the Conference provided the underpinnings for the development cooperation within between the Third World, also later commonly referred to as South-South Cooperation (SSC). In the Final Communiqué of the Asian-African conference of Bandung (24 April 1955):

The Asian-African Conference recognised the urgency of promoting economic development in the Asian-African region. There was general desire for economic cooperation among the participating countries on the basis of mutual interest and respect for national sovereignty.

(Final Communiqué of the Asian-African conference of Bandung, Article 1)

The participating countries agreed to provide technical assistance to one another, to the maximum extent practicable, in the form of: experts, trainees, pilot projects and equipment for demonstration purposes; exchange of know-how and establishment of national, and where possible, regional training and research institutes for imparting technical knowledge and skills in co-operation with the existing international agencies.

(Ibid, Article 2)

¹⁰⁹ In the then Vice President Mohammad Hatta speech made before the Central Indonesian Committee (KNIP) on 2 September 1948.

This Bandung vision endorsed by the 29 countries succeeded and was institutionalized in a larger space toward Non-Aligned Movement. Building on the solidarity within the South and the real fear of war after the Korean War, the Non-Aligned Movement was established in 1961 in order to institutionalize their efforts within the field of international development and address the structural challenges in development – such as organizing the Group of 77 in the United Nations, and the UN Conference on Trade and Development (UNCTAD) to focus on the economic disparity between the North and South. Within this, Sukarno portrayed himself as the leader and head of the Non-Aligned Movement, which he later described as the “newly emerging forces”. The started legacy still permeates to Indonesian politics nowadays, as shown in the second Asian-African Conference Summit in 2005, chaired by Sukarno’s daughter Megawati Sukarnoputri¹¹⁰, and the third Summit in 2015, chaired by the current President Joko Widodo (2014-present)¹¹¹, where Indonesia actively propagate South-South Cooperation.

This alliance with non-Western countries echoed the notion of ‘*Berdikari* (standing in one’s own feet)’¹¹², the self-reliance doctrine declared by President Sukarno. It was officially introduced in his ‘*Tahun Vivere Pericoloso* (Year of Living Dangerously)’, Independence Day speech, delivered on 17 August, 1964, where he suggested *Trisakti*¹¹³, i.e. economic self-reliance, political sovereignty, and cultural identity. Interestingly, quoting North Korean leader Kim Il-Sung’s speech in June 1947, Sukarno highlighted:

(...) without the foundation of an independent economy, we can neither attain independence, nor found the state, nor subsist.¹¹⁴

(Sukarno, Presidential speech at the Independence day, 17 August 1964)

¹¹⁰ Indonesia’s first female President (2001-2004), and the current head of Indonesian Democratic Party of Struggle (Partai Demokrasi Indonesia Perjuangan, PDI-P)

¹¹¹ The theme was ‘Strengthening South-South Cooperation to Promote World Peace and Prosperity’. 109 Asian and African countries, 16 observer countries and 25 international organizations participated.

¹¹² Abbreviation of *Berdiri di atas Kaki Sendiri*, literally meaning ‘standing in one’s own feet’.

¹¹³ ‘three energies’ or ‘three principles’ in Sanskrit.

¹¹⁴ Wilson Center Digital Archive, <http://digitalarchive.wilsoncenter.org/document/116520>, accessed 19 April 2017.

He proposed that Indonesia should '*banting stir* (turn the wheel)' from depending heavily on multinational firms to 'exploit' national resources and labour forces. In his well-known Independence Day speech in 1965, also known as, '*Raihlah Bintang-Bintang di Langit: Tahun Berdikari* (Reach for the Stars in the Sky: Year of Berdikari)', or shortened as just '*Takari*',¹¹⁵ he again clarified *Berdikari* rejects the dependency on imperialism, but instead "*expands international cooperation, especially among all the new independent nations.*"

Without this stance, Indonesia would not have attempted to leave the United Nations. When Malaysia was appointed to serve on the UN Security Council, Indonesia declared the withdrawal of its membership from the UN as a sign of protest. In Sukarno's view, the existence of Malaysia, a commonwealth nation, was the Britain's way to sustain a colonial influence in the region. Indonesia then consistently refused to recognize the existence of Malaysia and pursued a policy of aggression towards the new state (Livingstone 1965). This might seem contradictory, to oppose the neighbour's independence from imperial power while leading Non-Aligned Movement. Sukarno, however, viewed Malaysia 'as a puppet country of the Commonwealth', and hoped Indonesia to remain a power in the region. Sukarno maintained that real independence can only be achieved by '*standing on its own feet*', not by trying to gain legitimacy from international powers such as the United Nations. He affirmed that:

[T]he crowning of independence is not the membership of the UN, but the ability to stand on our own feet (*Berdikari*)¹¹⁶.

(Sukarno, Presidential speech at the 20th Independence day commemoration, 17 August 1965)

Indonesia is the first member state of the UN to either have withdrawn membership or to have threatened to do so. Its decision brought huge political repercussions within the UN and raises a number of crucial questions of a legal, practical and academic nature – to what extent does a state actor have the right to withdraw from the UN, or more broadly, to deinstitutionalize itself from the international regime? What are the strategic effects of the action? (Livingstone 1965)

¹¹⁵ At the 20th Independence Day commemoration, on 17 August 1965.

¹¹⁶ In this speech on 7 January 1965.

In this context, foreign aid was employed a tool for the positioning of Indonesia, as well as for reinforcing the boundaries of the state in the region of territorial disputes (Pollard 2009). Indonesia leveraged its strategic neural position and thereby can be said to have arguably ‘enjoyed’ the Cold War dynamic (Hill 2000). Indonesia received aid from both the Soviet Union and the US during the late 1950s, as attempts were made to exploit local fault lines within the archipelago through military aid (Friend 2003). At certain times, Sukarno arguably knew how to play his cards as aid recipient, realizing that his nation has a potential to find leverage, as

Indonesia’s *geographic position along the strategic Straits* of Melaka and the South China Sea, its status as the most populous Muslim country in the world, and its possession of extensive oil reserves made it an important prize pursued by both Western and Soviet strategists. Under its flamboyant independence leader Sukarno, Indonesia went through *numerous policy shifts* as it attempted to position itself vis-à-vis both blocs.

(Van Dijk et al., 2008: 437, Emphasis added)

After the conflict with the West on the issue of Malaysia, Indonesia finally broke its aid relations with the West in the mid-1960s due to the geopolitical contingency. Sukarno’s message to the then American Ambassador Howard P. Jones, “*go to hell with your aid*”¹¹⁷ and his confident speech that Indonesia would not collapse without foreign aid, emblemize Indonesia’s acrimonious goodbye to Western donors.

¹¹⁷ Chicago Tribune, 26 March 1964, <http://archives.chicagotribune.com/1964/03/26/page/12/article/sukarno-says-u-s-can-go-to-hell-with-aid>

7.1.2.3. Suharto's New Order and Continued Tension with the West (1967-1998)

The break of aid relations with the West did not last for very long. After the disorder and violence in 1965 and 1966, the new President Suharto came into office and pushed for the complete opposite direction of Sukarno's diplomacy (Vickers 2005; Friend 2003). Suharto was a leader in the army, the military branch with close ties to the West, compared to the relations of the navy and air force (Van Dijk et al. 2008). The overarching goal of the '*Orde Baru (New Order)*' was again to ally Indonesia with the West rather than with the Soviet Union, and to develop amicable relations with its Western donors (Vickers 2005; Hadiz 2006). In addition, Indonesia returned to the UN in September 1966, by sending the message it "*has decided to resume full co-operation with the United Nations and to resume participation in its activities.*"¹¹⁸ Interestingly, it was not required to reapply for membership although Indonesia had not been included in the General Assembly and not been treated as a member state during its 'absence'. Instead, the Chairman of General Assembly stated that "*[i]t would therefore appear that the Government of Indonesia considers that its recent absence from the organization was based not upon a withdrawal from the United Nations but upon a cessation of co-operation.*" (Blum 1967; American Society of International Law 1966).

Indonesia's changing Cold War affiliations in international relations were pivotal in re-organizing the dynamics for aid coordination. Importantly, the shift led, in 1967, to the establishment of the first dedicated mechanism for coordinating donors, the Intergovernmental Group on Indonesia (IGGI) (Friend 2003). This brought together all of Indonesia's non-communist creditors, and was chaired by a former colonial power, namely the Netherlands. They made arrangements to reschedule Indonesia's debt repayments to lenders. Indonesia began to receive significant

¹¹⁸ Telegram dated 19 September 1966 from the Ambassador of Indonesia to the United States of America Addressed to the Secretary General. See UN Doc S/7498 http://www.un.org/en/ga/search/view_doc.asp?symbol=S/7498

amounts of foreign aid from the West, with a group of officials trained in the West “The Berkeley Mafia”¹¹⁹ (Ransom 1970).

The Suharto administration continued to ‘*reformasi* (reform)’ align economic policy with the World Bank and IMF in the 1970s and adopted so-called reform measures¹²⁰ to attract foreign direct investment with strict domestic state-led controls (Hill, 2000, O'Rourke 2002). In 1969, Indonesia’s joining the anti-Communist world of capitalism was symbolized by several head of state visits, including one by then US President Richard Nixon (Pollard 2009). Suharto drove a large scale deregulation of financial sector and privatization in the 1980s. The government received a large amount loan from the World Bank without any conditionality attached in 1980s. However, Indonesia’s total debt rose sharply to almost US\$80 billion between 1988 and 1992 (Chowdhury & Sugema 2005). Indonesian nationalists became concerned that their country was becoming vulnerable to outside pressure from foreign donors (Ricklefs 2001; Pollard 2009).

In 1992, the 25-year long existing donor coordination body chaired by Netherlands, IGGI, was dissolved. Tension then increased between Indonesia and donors unexpectedly, when international criticism grew over the Santa Cruz incident¹²¹ in East Timor on 12 November in 1991. Although the Netherlands and Indonesia had historically been involved in several frictions, the triggering event of fierce dispute was the return of the former Dutch Minister of Development Cooperation, Johannes Jan Pronk¹²² (1973-1977 and 1989-1998) to the Ministry as well as the then chair of the IGGI.

¹¹⁹ “The Berkeley Mafia refers to a group of five U.S educated Indonesian economists who studied and earned PhD at the University of California, Berkeley. They were appointed in the beginning of the Suharto’s ‘New Order’. They brought Indonesia back to strategic cooperation with the US and led liberal approach in development policy in Indonesia. For more information, see Ransom (1970) “*The Berkeley Mafia and the Indonesian Massacre*”, Ramparts, Vol. 9, No. 4, October 1970, pp. 26-28, 40-49. PDF available at <http://la.utexas.edu/users/hcleaver/357L/357LRansomBerkeleyMafiaTable.pdf>

¹²⁰ Based on Parliamentary Decree (Tap MPRS No.XXIII/MPRS/1966).

¹²¹ Also known as the Dili massacre, which has arguably been considered as the East Timorese genocide during the Indonesian ‘occupation’ of East Timor.

¹²² Picture in the figure below

The two personalities of Suharto and Pronk, as well as their “history of bad blood between two men”, also played an important role in these historical developments (Gillies, 1996: p.186). Dutch Minister Pronk proposed an international ‘human rights’ investigation on the Santa Cruz incident. Suharto’s perceived the Netherlands had “*exaggerated eagerness to resort to the use of development assistance as a tool of intimidation*”.¹²³ From the perspective of the Indonesian government, Pronk, born in 1940, was considered as the post-World War II generation who does not feel the guilt from “*the heap of ashes of an exceedingly painful historical past resulting from centuries of inhuman colonial subjugation as well as from barbarous atrocities carried out by colonial forces during the war of independence*”¹²⁴. Suharto, who then was already in his 6th presidential term in 1992, has been particularly sensitive in coping with critiques towards the New Order Regime and his dictatorship. Thus, when Suharto heard that Pronk visited Dili in East Timor, and met with leaders of anti-Suharto movements in several cities, the relationship between the two reached it to the worst point. This idiosyncratic contingency seemed significant as Suharto decided to dissolve the IGGI in early 1992.

The official letter signed by Indonesia's Coordinating Minister of Economy, Radius Prawiro, requested the Dutch to completely terminate all development assistance to Indonesia, and also to refrain from convening another IGGI meeting. The letter eloquently conveys obvious anger in a polite manner. One of the interviewees, senior government officers in Ministry of National Development Planning (hereafter, Bappenas)¹²⁵ proudly still calls the letter “*what a beautiful letter!*”¹²⁶

However, relations between Indonesia and the Netherlands have recently deteriorated sharply as a consequence of the reckless use of development assistance (by the Netherlands) as an instrument of intimidation. Such reckless use of development assistance as a tool of threatening Indonesia has resulted in a rapid deterioration of relations between our two nations (...)

¹²³ The letter from the government of Republic of Indonesia to the Government of Netherlands, on 24 March 1992. The copy of the original official letter sent to the Prime Minister of the Netherlands was obtained from the field work, on 24 March 1992.

¹²⁴ Same letter

¹²⁵ Abbreviation of Badan Perencanaan Pembangunan Nasional

¹²⁶ Same letter

Therefore, since this exaggerated eagerness to resort to the use of development assistance as an instrument of intimidation seems to continue unabated, the only remaining option to prevent further erosion of relations between our two nations is to terminate completely all development assistance from the Netherlands to Indonesia (...)

Accordingly, this letter formally conveys the wish of the Government of Indonesia to have the Government of the Netherlands terminate the disbursements of all on-going development assistance in the form of loans as well as grants from the Netherlands to Indonesia immediately, at the latest one month after the date of receiving this letter.

(Letter from the Government of Republic of Indonesia to the Government of Netherlands, 24 March 1992)

With the collapse of the Soviet Union, the alliance with Indonesia became less important as a strategic priority for Western countries. Thus, it may not be easy for a recipient state to manage the aftermath of this crisis with the help of major donors, as well as to simultaneously develop a new post-Cold War relationship with donors. Indonesia's strategic action and its assertive aid policy to donors, however, arguably worked quite well. Suharto administration was able to immediately replace the IGGI with the Consultative Group on Indonesia (CGI).

Domestically, the nationalistic action against the former colonial power and political rhetoric of 'self-reliance' and 'independence' gained enormous support from the public. Indonesia has also successfully lobbied other donors to replace the IGGI by the CGI, chaired by the World Bank (Anwar 1995). The Netherlands, in spite of its chairmanship, only contributed less than 2% of IGGI's total commitment. Indonesia smartly approached other main donors – such as the World Bank, Asian Development Bank (ADB), and Japan – who had contributed to 80-85% of IGGI's annual commitment.¹²⁷ Furthermore, it was finally successful to attract new donors including South Korea, Saudi Arabia, Denmark, Kuwait Fund for Arab Economic Development, and the Nordic Investment Bank. While the IGGI only had 17 donors as members, the CGI has 29 members, including the new donors mentioned above.

¹²⁷ 'Selamat Tinggal IGGI, Selamat Datang CGI (Goodbye IGGI, Welcome CGI)' in *Kompas*, 26 June 2015, p. 66. Also available online <http://print.kompas.com/baca/polhuk/politik/2015/06/26/Selamat-Tinggal-IGGI%2c-Selamat-Datang-CGI>

‘Suharto’s timing was impeccable (Gillies 1996). He may have made up his mind to liquidate the Dutch Program as early as in December 1991, but in order to score points, he waited until March 1992 before going public.’ It was when Indonesia had taken over the chairmanship of the Non-Aligned Movement, which was set to meet in Jakarta in May 1992, where he would also address the trend of tying political strings to aid. Nevertheless, Suharto had carefully calculated the economic consequences of his political decision.

On the same day of the appeal to bring the IGGI to an end, Indonesia was able to officially request the World Bank, a much bigger donor, to host and chair the new donor coordination body, CGI. A letter was sent to World Bank President, signed on 24 March 1992 by Indonesia’s Finance Minister, J.B. Sumarlin on behalf of the Indonesian government¹²⁸. It was perceived that Indonesia “would be well served by adopting the predominant international model for aid coordination” and by doing so would secure the benefits “of a neutral, informed, multilateral chair to oversee the coordination of assistance to Indonesia from all sources”. Indonesia further expanded its aid relationship with other major donors such as the World Bank, ADB, Japan and Australia in the 1990s.

So far, I have illustrated the historical context of aid in Indonesia and its domestic policy change. Figure 7-2, in the next page, present a summary of the milestone of foreign aid to Indonesia (1942-1998). This section also identifies the dynamic relationship between major donors and Indonesia. As previously discussed, aid is not apolitical. It is never as linear nor simple as a donor country just giving resources to a recipient country; rather it is the complex mechanism with diverse stakeholders, heterogeneous practices, and conflicting but intertwined values. This section confirms the centrality of this complexity as well as the historical and geopolitical nature of aid. Although it may be a story of the past, the Indonesia’s vision discussed in this section – *‘Pancasila’*, *‘non-align movement’*, and *‘independence’*, *‘ownership’* has often been revisited by political leaders and the people of Indonesia. In addition, from the events throughout the dissolution of IGGI, there is growing recognition that human rights issues have become the concern for donor

¹²⁸ The copy of the original official letter sent to the President of the World Bank, on 24 March 1992.

countries. After the fall of Suharto dictatorship and the 1997 Asian Financial Crisis, the new generation of Indonesian politics put much effort into being a respected member of the international community, and aligning its domestic policy to global common goals and norms. In the following sections, I will discuss how the history of aid in Indonesia and seemingly dormant logics shaped recent aid reforms and influenced the implementation of AIMS.

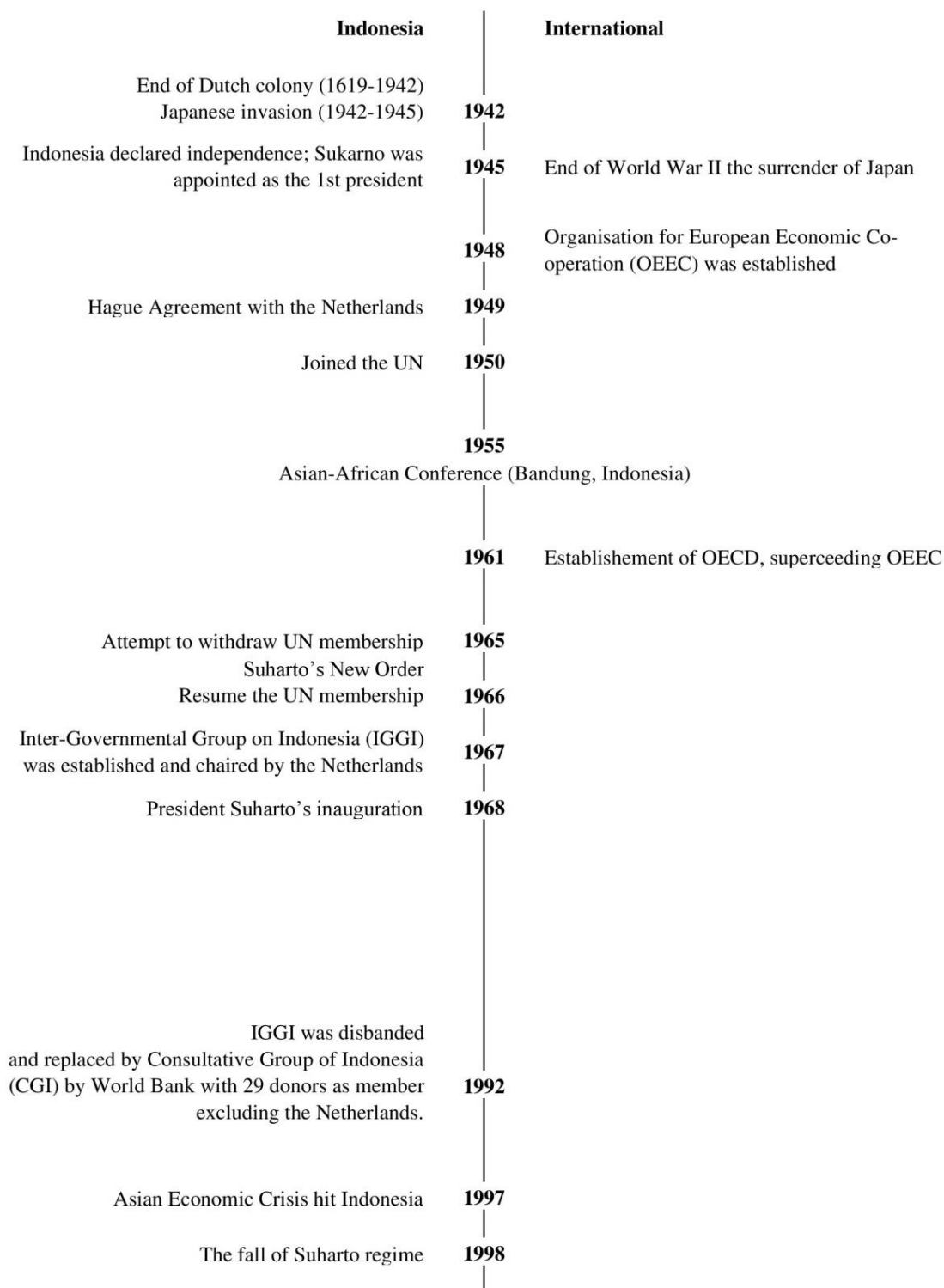


Figure 7-2. Milestones in Foreign Aid to Indonesia (1942-1998)
(constructed by author)

7.2. Shifted Goals in Aid Management in the Yudhoyono Presidency (2004-2014)

The inauguration of Indonesia's first directly elected president, Susilo Bambang Yudhoyono (SBY) as 6th President in 2004¹²⁹ could be marked as a turning point in managing aid flow in two ways:

- 1) Domestic reform, focusing on government's better aid management with stronger ownership, and
- 2) Internationally, expanding Indonesia's role in the global field of aid.

Indonesian development policy is greatly influenced by the 1997 Asian Financial Crisis that caused President Suharto to step down and terminate his dictatorship of 32 years. The Crisis caused volatile inflation, 65% in the prices of the basic commodities, and the GDP growth rate to dramatically shrink by 13.6% (Hill 2000). Shortly after, during the presidencies of Bacharuddin Jusuf Habibibi (B.J. Habibibi) (1998-1999), Abdurrahman Wahid (1999-2001) and the first female President Megawati Sukarnoputri (2001-2004), the country had moved from an autocracy to democracy. Media and academia enjoyed much greater freedom of speech; the number of political parties dramatically increased to more than forty, compared to three during the Suharto era.

Under Suharto's New Order era, foreign aid played a big role as 'budget support' to supplement the domestic economy by helping the government to maintain fiscal stimulation and the increasing budget for defence systems and infrastructure. Foreign aid was considered 'development income' and was used to create the illusion of 'balanced budget'. During the Crisis, the amount of foreign aid increased

¹²⁹ The first direct presidential election was held in 2004, based on the fourth amendment of the 1945 Constitution (*Undang-Undang Dasar 1945*), under the spirit of political reform. Prior to that, the constitutional mandate for presidential election was carried out by the People's Consultative Assembly (*MPR: Majelis Permusyawaratan Rakyat*).

from 2% in 1997 to 4.5% of total GDP ¹³⁰ as well as up to 28% of government revenue in 1999, which contributed to Indonesia's being a highly-indebted country (Chowdhury & Sugema 2005). The IMF's prescription for the Indonesian debt crises, which was agreed to by the government towards the end of the Suharto administration, was often criticized for its effectiveness and conflicting financial and political objectives (Nanda 2006). Indonesian scholars raised concerns about the government's management of foreign aid and its adverse effects on the Indonesian economy during the Crisis (Chowdhury & Sugema 2005). Furthermore, recovery of the country's image from the Crisis and its political turmoil followed became an emerging priority in SBY's era (Fitriani 2015). The following sections will discuss the government's efforts in finding a best way in managing aid as well as positioning Indonesia as a respected member in the international community.

7.2.1. Domestic Ownership: Focusing on Aid Management and Regulation Change

In 2004, SBY, the retired Lieutenant General as well as the former Mining and Energy Minister and Coordinating Minister of Political and Security Affairs, won the majority vote of 60.62% defeating the incumbent President Megawati in the final round of Presidential elections, held on 20 September 2004¹³¹. Although devastated Indonesia's economy was dramatically recovered after the Crisis during SBY's first term (2004-2009), foreign aid remains an important part of the government's revenue. During the SBY's tenure, aid dependency in Indonesia¹³²

¹³⁰ This does not include the IMF loan which went to the Bank of Indonesia (BI) as a 'supplementary funds'. If this is included in the statistics, the aid dependency meaning aid-GDP ratio will be around 10% (Chowdhury & Sugema 2005).

¹³¹ SBY also served as the Coordinating Minister in Megawati's cabinet (2001-2004). However, he established a new party, Democratic Party (*Partai Demokrat*) in 2001, and ran for the office. For details: <http://www.demokrat.or.id/sejarah>. With his perceived communication skills, his reputation grew as Minister. By positioning himself as an underdog against Megawati, he gained popularity very fast. Lesmana (2009) described how resentful the relationship between Megawati and SBY has been. This could be one of the reasons that the power transition in 2004 have gone far from smoothly with the absence of communications. Megawati didn't even attend SBY inauguration in October 2004.

¹³² Net ODA received (% of GNI). Source: <http://data.worldbank.org/indicator/DT.ODA.ODAT.GN.ZS?locations=ID>, accessed 7 July 2017.

was not high, but the total net aid flow to Indonesia was still higher compared to other developing countries¹³³. Indonesia's access to highly favourable loan terms was declining. Net ODA to Indonesia was USD 2.842 billion in 2005, but dramatically decreased and reached minus USD 381.8 million in 2014 (Source: OECDStat 2017). Since 2005, net ODA had averaged 0.4% of GNI (World Bank 2011). As of 2015, the top five donors are Japan International Cooperation Agency (JICA), World Bank, ADB, Australia and Germany. Against this backdrop, the SBY administration made efforts to improve governance and focus on building the capacity to effectively manage aid and decrease aid dependency.

To achieve better aid management, his administration shifted the Indonesian government's stance on foreign aid. The government viewed it as a means to supplement domestic finance, but as a catalyst for enhancing socio-economic development; improving institutional capacity; and promoting knowledge transfer by sharing best practices in development, as well as technical assistance and vocational training from development partners (Bappenas, 2011). The administration introduced two main measures that provided the impetus for implementing the principles, which I will discuss in detail in the following section.

1. **National Development Plan:** the government established the five-year National Medium Term Development Plan (*RPJMN: Rencana Pembangunan Jangka Menengah Nasional*) under the 20-year National Long Term Development Plan (*RPJPN: Rencana Pembangunan Jangka Panjang Nasional*).
2. **Aid management regulations:** the government issued a particular regulation in aid management: Government Regulation No.2/2006 (PP No.2/2006) which was later amended in 2011 as PP No.10/2011.¹³⁴

¹³³ Source: <http://data.worldbank.org/indicator/DT.ODA.ODAT.CD?locations=ID>, accessed 7 July 2017.

¹³⁴ Under the Government Regulation, the implementing regulation - State Ministry of National Development Planning (Bappenas) Regulation (*Permen PPN*) No. Per. 005/M.PPN/06/2006 and *Permen PPN* No.4/2011 was also enacted respectively.

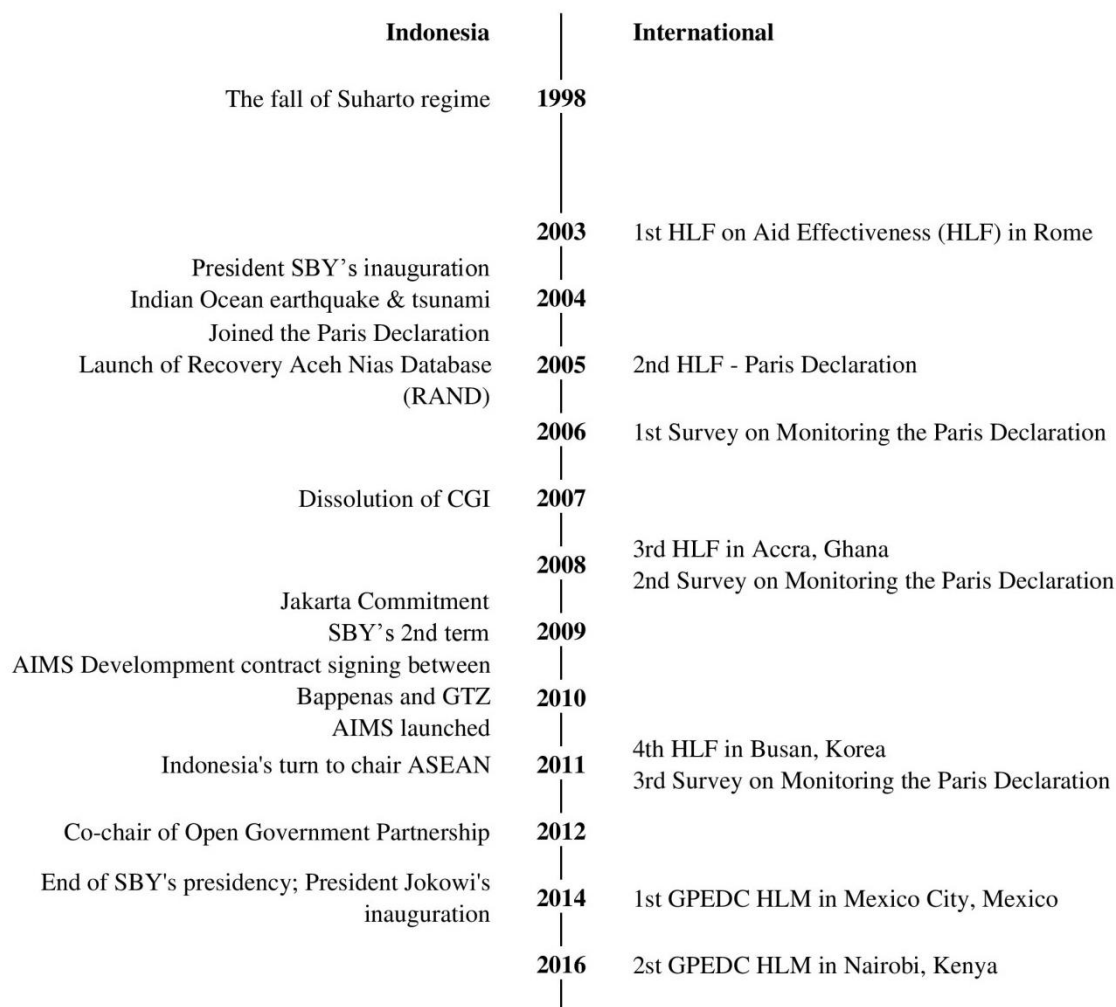


Figure 7-3. Milestones in Foreign Aid to Indonesia (1998-2016)
(constructed by author)

7.2.1.1. National Development Plan

First, the principles for aid management are outlined in the national development planning. In fact, the idea of short and long-term planning for national development is the heritage of the Suharto administration¹³⁵. Building on previous experience and the emerging focus on aid management, SBY enacted the Law No.25/2004 on the National Development Planning System. Under this Law, SBY established the 20-year RPJPN (2005-2025), five-year RPJMN (2005-2009 and 2010-2014) and

¹³⁵ Also see “Megawati sindir kepemimpinan: Ganti orang, ganti visi misi (Megawati quips on leadership: New leader, new vision and mission)”, accessed on 9 July 2017 from <http://www.rappler.com/indonesia/118680-visi-gbhn-megawati-soekarnoputri>

Annual Government Work Plans (*RKP: Rencana Kerja Pemerintah*) at each of the three levels of government administration—national, ministerial and provincial.

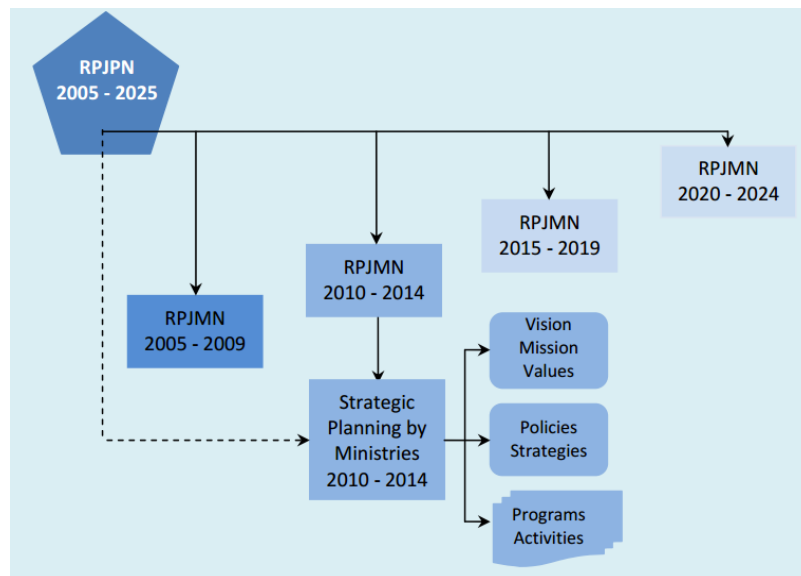


Figure 7-4. Conceptual Development Planning Plan
(Source: Bappenas, 2010)

RPJPN (2005-2025): This is the 20-year long-term national plan that elaborates the vision and mission of the establishment of the Republic of Indonesia, set forth in the 1945 Constitution mandate, as discussed in the previous section. The RPJPN, thus, is meant to be neutral and can serve for two to four presidents, that is to say, four presidential terms. An initial draft was presented by Bappenas to the National Development Planning Stakeholder Forum (*Musrenbang: Musyawarah Perencanaan Pembangunan*), in 2004. Based on discussion at the Musrenbang, the Head of Bappenas confirmed the final version of RPJPN and submitted it to the President for approval. The RPJPN 2005-2025 was finally affirmed by Law No.17/2007¹³⁶, after the President presented it to the House of Representatives.

RPJMN: The 5-year plan is more influential on the development practice. RPJMN refers to the vision, mission, and direction set by the corresponding term of RPJPN. It also incorporates presidential priorities and international commitments, as

¹³⁶ Source <https://www.bappenas.go.id/files/pendanaan/regulasi/uu-07-2007.pdf>, accessed 28 August 2017.

described in Figure 7-4. The key components of the SBY's RPJMN include national priorities including policy reform and better aid management, as well as macroeconomic framework and broad resource allocation. The preparation of RPJMN starts with research undertaken by Bappenas on "situational analyses of Indonesia's development context", followed by an "evaluation and unaccomplished targets from the previous term RPJMN, as well as all stakeholder input" (Datta et al. 2011). Bappenas then prepares the draft of RPJMN for submission to the president, and the Musrenbang. As RPJMN is to be approved by President no later than three months after the president's inauguration, RPJMN 2004-2009 was affirmed by Presidential Regulation No.7/2005, which instituted a reduction in the amount of foreign loans as fiscal policy direction and called for improvement on the government loan financing and management program, to achieve the objective of macroeconomic stability strengthening.¹³⁷

7.2.1.2. Establishment of Government Regulations

The second major effort of the government was the legislating of a series of regulations. The strong emphasis on the role of government in aid management and its reform continued the most significant change in aid governance at the national level under the SBY administration. To achieve this, the *Government Regulation No.2/2006 on the Procedures for Receiving and Forwarding Foreign Loans / Grant (PP No. 2/2006)* was issued under Law No.1/2004 on State Treasury. It was aimed at improving the domestic management of foreign aid and offers general guidance for policy makers to negotiate with bilateral and multilateral lenders (Bappenas 2011).

Under the Government Regulation No.2/2006, an implementing ministerial level regulation – *the State Ministry of National Development Plan Regulation on the Planning, Proposing, and Assessment of Foreign Loans and Grants* (Permen PPN No. Per. 005/M.PPN/06/2006) – was subsequently established, as a practical guide

¹³⁷ Chapter 24 of the Presidential Regulation No.7/2005 on National Medium Term Development Plan (RPJMN) 2004-2009.

for helping decision makers in planning and proposing aid-funded programs/projects to donors, as well as in implementing aid activities.

Other important regulations in aid management in SBY's era include:

- Government Regulation No.54/2005 on Regional Government Loans to prohibit regional government to enter any agreement on foreign aid
- Minister of Finance Decree Number 447/KMK.06/2005 to place strategy of debt management
- Government Regulation No.39/2006 on Procedures to control and evaluate implementation of development activities

In 2011, Government Regulation No.2/2006 was replaced by Government Regulation No.10/2011 with the aim of improving the effectiveness and efficiency of the process. The new regulation accommodated provisions on the authorities and responsibilities assigned to each institution involved in the management of foreign loans and grants; updated the concept of a maximum limit for foreign loans as a controlling tool in managing an optimum debt portfolio and financing needs; introduced the concept of selecting financing source flexibility; outlined a foreign loans usage plan; and established a trust fund as a means of accepting grants. The new regulation also further clarified the policy on forwarding foreign loans to finance local government budgeting plans, both as loans and grants.

The new regulation specifically highlighted the procedure for accepting grants, both from domestic and foreign sources. There was the need for the grant-accepting mechanism to be simplified and made easier, to avoid disincentives for donors. Therefore, the new regulation set up two alternatives for grants, i.e. planned grants and direct grants. Planned grants must follow a certain planning process, while direct grants could skip the planning stages although they must still be registered and follow the administration mechanism. The two alternatives were expected to bridge the interests of both donors and the government, and to accommodate grants with a simplified procedure along with improved accountability to all stakeholders.

The establishment of these regulations serves as reference for the government in conducting dialogue and negotiation with diverse bilateral and multilateral donor agencies. Dialogue and negotiation are also underway in order to sort out the donor-funded activities encountering obstacles that need to be handled with extra care by the reallocation and even cancellation of residual, partial or total funds given. These processes are as indicated below ¹³⁸

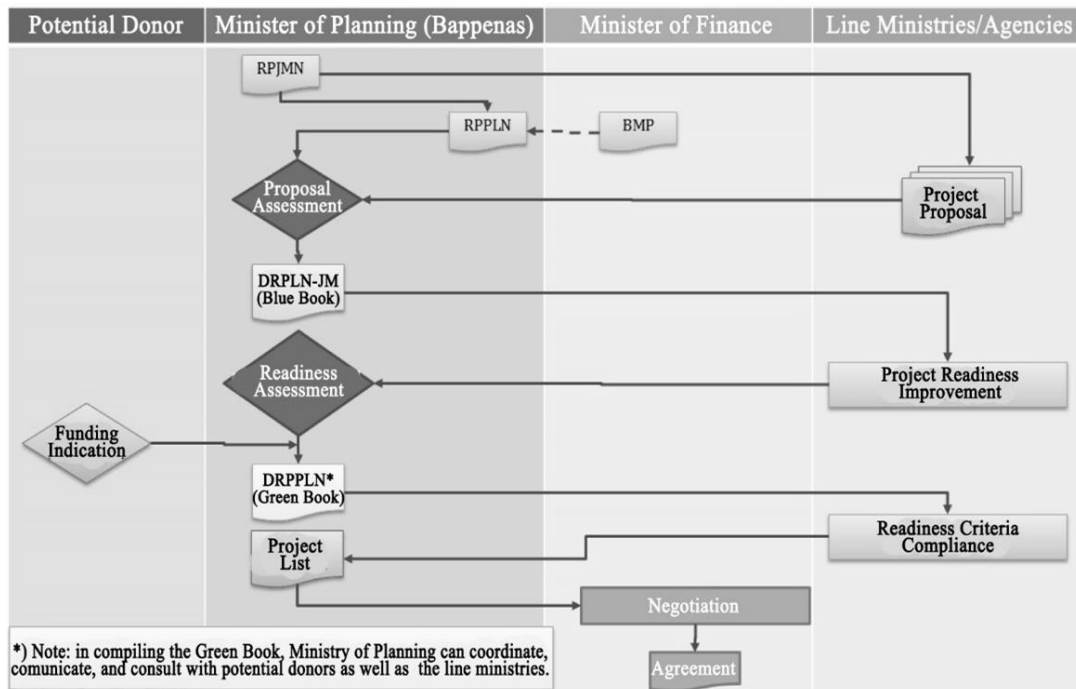


Figure 7-5. Foreign Aid Project Planning Flow Chart¹³⁹
 (Source: Government Regulation (PP) No. 10/2011 & Minister of National Development Planning Regulation No.4/2011)

As illustrated in Figure 7-5 above, during the planning stages, line ministries/agencies propose activities to be financed with foreign grants/loans based on the RPJMN, taking into account the Foreign Loans Usage Plan (*RPPLN: Rencana Penggunaan Pinjaman Luar Negeri*) by fulfilling certain prerequisites. Bappenas then conducts an assessment of the proposed activities by considering the technical feasibility and the alignment with the RPJMN, to enlist them in the ‘Blue

¹³⁸ Based on the Government Regulations No. 2/2006 and Government Regulations No. 10/2011.
¹³⁹ Note: this flow chart is based on the later issued regulation series of 2011, not the 2005. It does not have significant differences in terms of foreign aid project planning procedures.

Book' or List of Medium Term Loans (*DRPLN-JM: Daftar Rencana Pinjaman Luar Negeri – Jangka Menengah*). The Blue Book enlists activity plans which would be funded by foreign loans for the medium term period. Subsequently, the proposing ministry/agency has to improve the readiness of the listed activities based on the readiness criteria. Those activities which have completed readiness assessment and have earned indication for foreign funding would then be included in the 'Green Book'¹⁴⁰ by Bappenas. The Green Book would be a reference for potential donors, to follow up during the project funding negotiation process, which may or may not end up in loan or grant agreements (Bappenas 2011).

7.2.1.3. Key Actors in Aid Management and Coordination

The Ministry of Finance (MoF) has the leading role with the mandate to sign all foreign loans and grants agreements based on the Law No.1/2004 on State Treasury. Bappenas, however, plays key roles in development planning, coordinating donor agencies and leading intra-governmental coordination, in particular, between MoF, State Secretariat (Setneg), and Ministry of Foreign Affairs (MoFA). In coordination with Bappenas, MoF ensures aid effectiveness and avoids an adverse effect on the country. Other ministries, non-departmental agencies and regional governments are not authorized to enter any aid agreement or any cooperation which leads to an obligation to have loan projects (Bappenas 2011).

Bappenas: Historically, since independence Bappenas has had a primary role in aid management, in particular, development planning and aid coordination. Bappenas is one of the largest ministries with a total of 40 directorates.¹⁴¹ Under the Deputy of Development Funding there are two directorates with responsibility for the specific functions of aid coordination with donors - Directorate for Bilateral Foreign Funding and Directorate for Multilateral Foreign Funding. It plays key roles in terms of aid coordination in bilateral and multilateral development cooperation by following the procedures of assessing the project proposals to be funded by foreign

¹⁴⁰The official name is *Daftar Rencana Prioritas Pinjaman Luar Negeri (DRPPLN)*

¹⁴¹ Source: <https://www.bappenas.go.id/id/profil-bappenas/chart-struktur-organisasi/>, accessed 30 July 2017

loans and grants (1), drafting and issuing the Blue Book (2), conducting periodic meetings with potential donors (3), coordinating project implementation readiness (4), and issuing the Green Book (5). Bappenas is also actively involved throughout agreement negotiation process with the donors (6). Subsequently, after the disbursement of loans and grants, Bappenas serves the monitoring and evaluation function by receiving periodical reports on loan and grant usage submitted by the line ministries or agencies (7).¹⁴²

Ministry of Finance (MoF): As discussed previously, the Minister of Finance, or the appointed government official on behalf of the Minister of Finance, has the mandate to sign all foreign loans and grants agreements, according to Law (*Undang-Undang*) No.1/2004. The MoF is also involved during the series of discussions on the drafting of both the Blue Book and the Green Book. The proposals for loans and grants are then submitted by the Minister of Finance to the potential donors, by referring to the Green Book and government loan allocation limit. The MoF is responsible for the negotiation process with donors prior to the agreement signing, by also involving the Bappenas and other line ministries or agencies. In general, The Minister of Finance is responsible for receiving the loans and cash grants by designating the account, and for the administration of both loans and grants. In terms of loans, the MoF is responsible of allocating the loans payback in APBN (State Budget) and reporting for the payback realization. The Minister of Finance serves the monitoring and evaluation function by receiving periodic reports of loans and grants usage submitted by the line ministries or agencies, and is also responsible for timely publication of information regarding to loans and grants.

Ministry of Foreign Affairs (MoFA)¹⁴³: In terms of conducting foreign relations and cooperation, MoFA would of course plays an important role in the coordination process to incorporate all the potential in order to create a synergy, and even as an initiator to seek for new breakthroughs. MoFA provides the necessary data and

¹⁴² See also Figure 7-5. Foreign Aid Project Planning Flow Chart (p.40)

¹⁴³ Ministry of Foreign Affairs, *Buku Panduan Umum Tata Cara Hubungandan Kerjasama Luar Negeri oleh Pemerintah Daerah* (General Handbook of Procedures for Relations and Cooperation Abroad by Local Governments), (Jakarta: Ministry of Foreign Affairs, 2012) p.8

information related to the foreign relations and cooperation. Other roles would include mediating with foreign partners, promoting domestic potential abroad, and facilitating the foreign relations and cooperation activities itself. It also serves the role as protector and consultant, so that the cooperation could be effective.

Ministry of State Secretariat (Setneg)¹⁴⁴: Setneg is responsible for the coordination of technical cooperation between the government and development partners. Another key role is the administration of foreign service agreements and tours of duty including issuing visa and custom services.

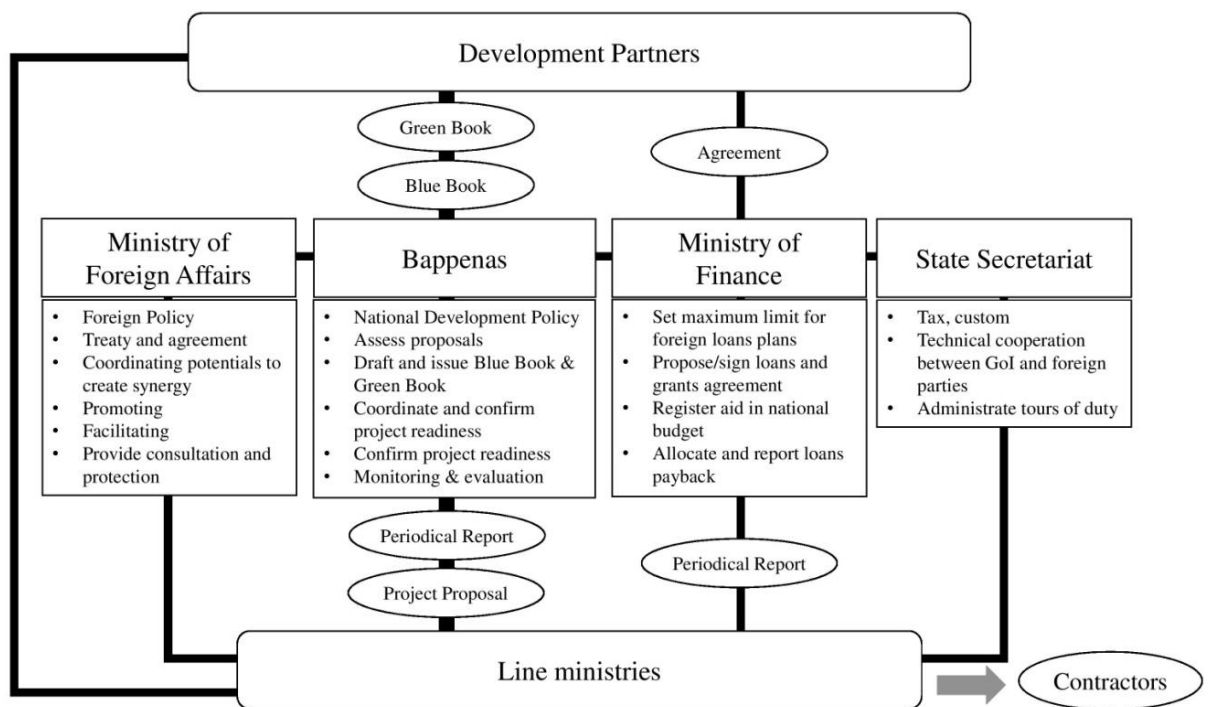


Figure 7-6. Aid Governance in Indonesia
(Constructed by Author)

¹⁴⁴ https://setneg.go.id/index.php?lang=en&option=com_content&task=view&id=1&Itemid=31, accessed 30 July 2017.

7.2.2. International Role: Aspiration to Be a Respected Player in Global Community

7.2.2.1. ‘A Million Friends and Zero Enemies’

During the SBY’s administration (2004-2014), Indonesia became a lower-middle income country with a GDP of USD 3,475 per capita (2013), and a member of the G20, which represents the largest economies in the world. Building up on the economic achievements, SBY desired for Indonesia to have a more active role in international society. ‘A million friends and zero enemies’¹⁴⁵ symbolizes his foreign policy that originates from a long-standing legacy of ‘non-alignment’, and well reflects his willingness to reflect ‘Pancasila’ and pay attention to the common values of international community such as democracy, peace, and humanitarianism. In his inaugural speech¹⁴⁶, SBY also declared that he would be consistent with the efforts of international community for common goals:

(...) Indonesia would be the voice of conscience to promote peace, to improve welfare, and to fight for justice. Indonesia would continue to grow as a democratic, open, modern, plural, and tolerant nation.

(SBY’s Presidential inaugural speech, 10 October 2004)

Speaking at the Meeting on Financing for Development in New York, September 14, 2005¹⁴⁷, SBY again welcomed its commitment to global norms of aid effectiveness, while recognizing and appreciating efforts made by international donors, particularly in the areas of ODA and debt reduction:

We welcome commitment to enhance the quality of aid, which is based on a recognition of the needs of the recipient countries.

(SBY’s Remarks at the Meeting on Financing for Development Forum, in New York, 14 September 2005)

¹⁴⁵ In his inaugural speech for the second term in 2009.

¹⁴⁶ SBY’s inaugural speech, 10 October 2004 retrieved from http://kepuustakaan-presiden.perpusnas.go.id/uploaded_files/pdf/speech/normal/susilo21.pdf, accessed 10 July 2017.

¹⁴⁷ SBY’s Remarks at the Meeting on Financing for Development Forum, in New York, 14 September 2005, retrieved from http://kepuustakaan-presiden.perpusnas.go.id/speech/?box=detail&id=54&from_box=list_245&hlm=1&search_tag=&search_keyword=&activation_status=&presiden_id=6&presiden=sby, accessed 8 July 2017.

In accordance with SBY's vision, the SBY government incorporated global issues, such as climate change, gender equality, disaster management, and human rights into this RPJMN, particularly, in Bab 8 (Section 8): *Consolidating Foreign Politics and Enhancing International Cooperation*.¹⁴⁸ Accordingly, line Ministries develop their Strategic Plans (Rencana Strategis - Renstra) including of goals, vision, policies, and programs based on RPJMN which is broadly developed on the general long term 25-years national development goals, RPJPN (Bappenas 2011).

7.2.2.2. South-South and Triangular Cooperation (SSTC)

One of the notable efforts of the Indonesian government to achieve an international reputation during the SBY's era was the active engagement in South-South and Triangular Cooperation (SSTC). SSTC is a term used by political leaders and academics to describe knowledge sharing and development cooperation between developing countries, commonly called 'global South' as briefly discussed in Section 2.3.1. There are two reasons for emergence of the SSTC in the field of international development. First, there was growing disappointment towards the mainstream development cooperation which has been driven by 'global North'. Second, the 'global South' has become increasingly active participants in the global economy. The Working Group on Technical Cooperation among Developing Countries (TCDC) created by the UN General Assembly in 1972 may be the origin of SSTC. In 1978, the UN endorsed the *Buenos Aires Plan of Action (BAPA) for Promoting and Implementing Technical Cooperation among Developing Countries* in order to promote, coordinate and support SSTC globally and within the UN system. Since 1980s, Indonesia has engaged in SSTC program, however, the contribution was not very significant until mid-2000s.

It was the SBY administration when Indonesia became actively engaged in SSTC, particularly, during SBY's second term in office (2009-2014). The SBY government saw an opportunity to promote Indonesia's position in the global field

¹⁴⁸ Available at https://www.bappenas.go.id/files/9814/2099/2543/RPJMN_2004-2009.pdf, accessed 10 July 2017.

of aid through SSTC. It established the National Coordination Team (NCT) of SSTC in 2010. The Indonesian effort to lead SSTC saw the country host the International South-South Cooperation High Level Meeting on Country-led Knowledge Hubs in Bali 2012. At the Meeting, Minister of Bappenas Armida Salsiah Alisjahbana declared:

Indonesia is no longer a recipient country, but Indonesia is gradually becoming a donor country in those three areas - development; democracy, governance and peace-building; and economic management policies for both macro and micro finance."

(Bappenas Minister Armida' speech at the International South-South Cooperation High Level Meeting in Bali 2012, Translated)¹⁴⁹¹⁵⁰

In 2010, Indonesia established a National Coordination Team (NCT) of South-South and Triangular Cooperation (SSCT) to cope with Indonesia's growing number of programs and activities. The NCT "coordinates programs from the line ministries, connects and formulates cooperation with development partners, and monitors the implementation of SSTC programs. It also serves as the national contact point of Indonesia's SSTC¹⁵¹" Similar to aid management, the governance structure of the NCT comprises four ministries that work closely with local government, NGOs and the private sector shown in Figure 7-7. Under this The NCT's technical team is responsible for three working groups, namely 1) Capturing demand, 2) Program and Funding, and 3) Monitoring and Evaluation, Publication, and Knowledge Management¹⁵².

- *Ministry of National Development Planning/Bappenas*: Responsible for setting priorities for national development, funding and cooperation.

¹⁴⁹ Original quote is "*Indonesia sekarang bukan lagi sekedar negara penerima bantuan dari negara donor, namun Indonesia secara bertahap menjadi negara donor pada tiga bidang [pembangunan; demokrasi, pemerintahan dan pembangunan perdamaian; dan kebijakan pengelolaan ekonomi baik makro maupun keuangan mikro.*"

¹⁵⁰ 'Menteri: Indonesia Jadi Pusat Pengetahuan Dunia (Minister: Indonesia Becomes the World's Hub of Knowledge)', Antaranews.com, 10 July 2012, retrieved on 17 May 2017 from <http://www.antaranews.com/berita/320755/menteri-indonesia-jadi-pusat-pengetahuan-dunia>

¹⁵¹ SSC Indonesia (Accessed 25 May 2017). "Indonesia South-South and Triangular Cooperation: National Coordination Team on South-South and Triangular Cooperation of Indonesia." http://ssc-indonesia.org/ksst/index88b6.html?page_id=1095, accessed 14 July 2017.

¹⁵² *Ibid.*

- *Ministry of Foreign Affairs*: Responsible for diplomacy and foreign policy
- *Ministry of Finance*: Responsible for resource allocation to Indonesia's international development and cooperation budget.
- *Ministry of State Secretariat*: Supports and facilitates foreign technical cooperation.

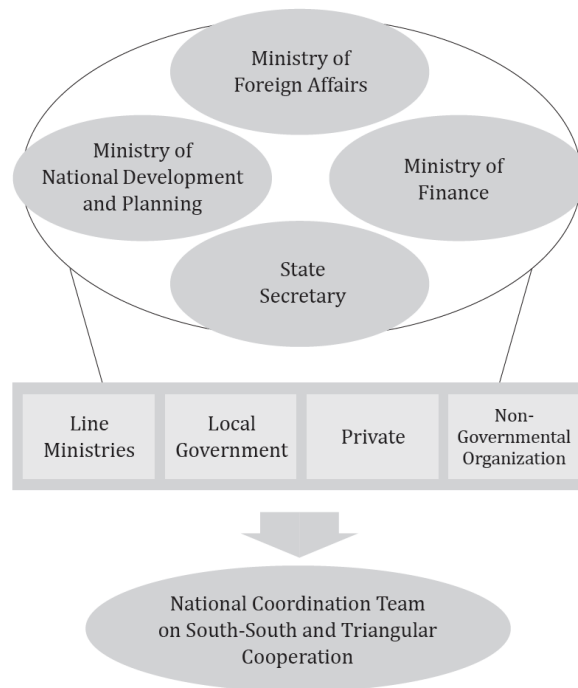


Figure 7-7. Role and Functions of Ministries on SSTC in Indonesia (Source: Centre for Strategic and International Studies (CSIS) p.47)

7.3. Indonesian Aid Information Management System (AIMS)

The technological object of this study is the Indonesian Aid Information Management System (AIMS), the national level aid management system implemented in 2009, used and abandoned in 2012. The AIMS, however, was not Indonesia's the first experience with an AIMS. The Recovery Aceh Nias Database (RAND) was implemented in 2005 after the 2004 Tsunami, with the purpose of managing humanitarian assistance. The experiences with RAND provided significant lessons to the Indonesian government, particularly, how the importance of ownership is in implementing such systems.

7.3.1. Previous Experience: The Recovery Aceh Nias Database (RAND) for Managing Humanitarian Aid

On 26 December 2004, the magnitude 9.1 earthquake occurred in the Indian Ocean and the Tsunami struck Aceh Province, on the north-western coast of Sumatra, Indonesia. The region was severely devastated and suffered the worst impact with an estimated 108,000 deaths, while 127,700 people were reported missing and 426,000 displaced by the catastrophe¹⁵³. SBY subsequently set up the *Rehabilitation and Reconstruction Agency (BRR: Badan Rehabilitasi dan Rekonstruksi)* for Aceh-Nias, on April 16, 2005. SBY's trusted technocrat Kuntoro Mangkusubroto, who later become the Head of the *Presidential Delivery Unit for Development Monitoring and Oversight (Unit Kerja bidang Pengawasan dan Pengendalian Pembangunan: UKP4)*, was appointed to lead BRR and oversee the coordination of the post-Tsunami rehabilitation and reconstruction program.

The BRR received funding of approximately USD 655 million from Multi-Donor Trust Fund (MDTF) executed by the World Bank¹⁵⁴. In this humanitarian emergency, the government established the authority, the BRR, with its special powers and limited mandate that was, arguably, politically less difficult, as explained by the then Head of BRR, Kuntoro:

President gave me a special authority to do things. I asked the President extra (ad-hoc) organization and part of the cabinet – my staffs were the highest rank in the ministries at bureaucracy level. I set up BRR, and this BRR is basically an organization that I can design by myself....

(...) when it comes to visa extension for 8,000 volunteers, then I have to deal with Minister of Foreign Affairs. First it can be slow. At the same time they would not help me. So, I set up my own unit in Banda Aceh to deal with this. I even extended their visa in BRR.

(Interview with the Head of BRR)

¹⁵³ According to US Geological Survey, 'Indian Ocean Tsunami Remembered — Scientists reflect on the 2004 Indian Ocean that killed thousands', accessed on 13 July 2017 from <https://www.usgs.gov/news/indian-ocean-tsunami-remembered-scientists-reflect-2004-indian-ocean-killed-thousands>

¹⁵⁴ 'After Tsunami, An Aceh Surprise: Good Government', Wall Street Journal, 2 November 2005, retrieved on 2 September 2017 from <http://www.wsj.com/articles/SB113089754732385956>

Nearly 500 aid agencies, including donor government agencies, international organizations, hospitals, and NGOs, flooded the area, providing funds and resources, whilst creating multi-layer logistical problems. This proliferation of actors and aid heterogeneity dramatically increased the complexity of managing aid, making it increasingly difficult to monitor ‘aid flow’ (Mavrotas 2005; Ngamassi et al. 2011). Realizing the need for aid coordination among the proliferation of players, the BRR started considering an AIMS that could facilitate information sharing and the tracking of humanitarian funds in the region. Due to time constraints, the BRR tried to implement a ready-made AIMS. In this process, mimetic isomorphism is apparent as Kuntoro illustrated:

I have six hundreds NGOs. I have fifty five countries. I have eight thousand volunteers, and I have so much equipment coming from abroad. Now the question is: where should I allocate all these, right? Where's the database? I don't have a database. I cannot develop it myself. Why? Time is pressing. I need it next week. So I look around and I find one--the one that's used in Afghanistan by Synergy International. UNDP also recommended the system.

(Interview with the Head of BRR)

The government chose to implement an AIMS known as the Development Assistance Database (DAD), developed by Synergy International, an Washington DC-based IT service provider, with financial support from the UNDP. As discussed in Chapter 5, in the end, UNDP rolled out the DAD to four of the tsunami-affected countries – Thailand, Sri Lanka, Maldives and Indonesia.¹⁵⁵ They all utilized Synergy International’s DAD platform, and all have the same light-blue coloured layout.

Compared to other tsunami-affected countries where a generic, ready-made DAD was implemented, the Indonesian RAND had experienced the shaping process of the AIMS, in particular by hiring local IT consultants to change the interface and add GIS-based mapping components. The system was arguably customized by the

¹⁵⁵ In addition, the Vietnam DAD was adapted to track regular ODA flows unlike the DADs of the tsunami countries. Although the Vietnam’s DAD was not implemented for managing humanitarian assistance, mimetic isomorphism on AIMS implementation can be seen in ASEAN region during this time.

BRR staff and local IT consultant with substantial system modification, and finally inaugurated in November 2005 and re-named RAND. The RAND enlisted and published the names of 621 institutions and individual donors with the total donation sum of US\$3.8 billion. The Head expressed pride in the configuration process by his staffs. The BRR staff considered RAND as a different Indonesian owned system, while realizing challenges in collaborating with foreign service providers. How the Indonesia's first experience of AIMS, the RAND, influence the decision making of the second AIMS implementation will be further discussed in Section 8.1. To avoid confusion, I present a summary of two AIMS in Table 7-1.

	Recovery Aceh Nias Database (RAND)	Aid Information Management Systems (AIMS)
Implementation	November 2005	June 2010
Main objective	Humanitarian assistance	ODA
Current status	Accessible but not being used	Shutdown
Provider	Synergy International Systems	Local IT consultants
Funder	MDTF: Flash Appeal, UNDP, WFP and ADB	GTZ (German Development Agency)
Gov agency	Rehabilitation and Reconstruction Agency (<i>BRR: Badan Rehabilitasi dan Rekonstruksi</i>) (Ad Hoc)	Bappenas (Ministry)

Table 7-1. A Summary of the RAND and the AIMS in Indonesia

7.3.2. Jakarta Commitment

The Jakarta Commitment, initiated by Indonesia and signed by 22 development partners on 12 January 2009, represents a milestone in the development of the Indonesian AIMS, the technological object of my research. This section traces the rationale for implementing AIMS in SBY's administration. There were two main reasons for the growing need in aid coordination and establishing the Jakarta Commitment.¹⁵⁶

¹⁵⁶ Initial signatory countries as of January 12 2009 are 22 development partners which consists of # bilateral donors i.e. Australia, Austria, Belgium, Canada, China, Finland, France, Germany, Italy, Japan, New Zealand, Netherland, Norway, Poland, South Korea, Spain, Sweden, UK, and the USA as well as # multilateral donors i.e. ADB, EC-EU, Global Fund, IDB, IFAD, IFC, IMF, UNDP, World Bank. Six more donors participated in the commitment later.

First, the increasing number of development partners and aid heterogeneity were the threats to aid management (Mavrotas 2005). The Indonesia Country Report Survey on Monitoring the Paris Declaration 2011 listed 25 development partners.¹⁵⁷ In 2010, Bappenas reported that 73% of Indonesia's total loans came from three major development partners, i.e. Japan International Cooperation Agency (JICA), World Bank and ADB (Bappenas 2011). Those three retained their position as Indonesia's top three development partners during SBY's presidency.

However, new donors, particularly, non-OECD DAC emerging donors, NGOs and mega philanthropies greatly contributed to the proliferation of donors and the increased aid heterogeneity. In addition to loans from DAC countries, SBY's administration developed cooperation with more than 15 non-DAC countries, and in 2006 enjoyed a substantial increase from USD 3.41 million in 2000 to USD 50.09 million in net ODA from non-DAC countries (Bappenas 2011:24).

The proliferation of donors and aid activity is perceived as an impediments to the coordination and effectiveness of aid (Winters 2012). In spite of the establishment of regulations in aid governance discussed in the previous section, compiling information from diverse aid agencies was extremely difficult. In principle, the Bappenas approves all aid activities by donor agencies and keeps a central registry, however, in reality, donors often bypass Bappenas (McCormick & Schmitz 2011). Thus, *"its database is incomplete and out of date, forcing researchers to search for information in ministries or from the donor agencies"* (McCormick & Schmitz, 2011: p.4).

Secondly, there was increasing need internally for better donor coordination. As discussed in Section 7.1.2.3, most aid was coordinated through the Intergovernmental Group on Indonesia (IGGI) chaired by the Netherlands from 1967 to 1992 (Bappenas 2011). Immediately after the IGGI was disbanded in 1992,

¹⁵⁷ Consist of 17 bilateral donors i.e. Australia, Canada, Denmark, France, Germany, Italy, Japan, Netherlands, New Zealand, Norway, Poland, South Korea, Spain, Sweden, Switzerland, UK, and USA; and also 8 multilateral donors i.e. ADB, European Community – European Union (EC-EU), Global Alliance for Vaccines and Immunizations (GAVI), Global Fund, Islamic Development Bank (IDB), International Fund for Agricultural Development (IFAD), World Bank, and the UN.

the donor coordination forum was replaced by the Consultative Group on Indonesia (CGI) chaired by the World Bank. In January 2007, SBY surprisingly announced that the 15-year-long CGI was going to be dissolved. The CGI was criticized by civil society, as well as Indonesian government insiders, for having donor-driven tendencies (Edi & Setianingtias 2007). Donors, however, did not have serious practical impact on their areas of work, because the coordination body, CGI, was described as “little more than ceremonial” and “waste of time” (Pollard, 2009: p.128). The absence of the CGI implied a shift of focus in aid coordination from multilateral to bilateral, which is arguably considered a more balanced relationship between a donor and the government, as well as more ‘independence’. In this sense, the dissolution of CGI was widely supported by the media and civil society organizations. However, this resulted in confusion within the government, as well as an additional coordination burden since the government had to deal with several bilateral agencies respectively. In Chapter 8, I will also discuss how the dissolution of the CGI and the Indonesia’s quick turnaround with the Jakarta Commitment and the implementation of AIMS can be interpreted as the Indonesia’s strategic step to respond to the collective pressure from development partners and find a legitimacy in the global field of aid.

Against this backdrop, SBY began a new stage of collaboration with donor countries and international organizations in 2009. The Indonesian government took the leadership in establishing the Jakarta Commitment, the roadmap with a specific action plan to bring the Paris Declaration (PD) and the Accra Action Agenda (AAA) to the local government level. The commitment of the most important process of norm localization of aid effectiveness, which I will further discuss in Chapter 8 (Acharya 2004). In summary, it was the response of Indonesia to the criticism of non-participatory behaviour in globally endorsed aid principles, as well as to internal challenges in aid management.

One of the key activities was the implementation of AIMS. The rationale of AIMS was to help the government manage aid flows, and donors coordinate better for effective aid. The AIMS was created as a single window system for monitoring and evaluating ODA,

To support the review of progress in the Jakarta Commitment and progress towards associated targets, the government will establish an integrated Aid Information Management Systems.

(Jakarta Commitment III-b)

As discussed in Chapter 2, the expected role of the Indonesia's AIMS is not different from other cases in other countries. The need for AIMS arose from the difficulty in maintaining information on detailed and consolidated loans and grants, as well as allocation planning and forecasting. In general, the reporting and management of loans and grants and the preparation of financial and management reports were produced by using Microsoft Excel. Even the communication between government institutions and development partners used an Excel spreadsheet. Nevertheless, the use of spreadsheets could only be functional at the beginning. When it became complex, it was certainly impossible to rely on the use of Excel. The expected managerial role of the web-based AIMS was collecting and tracing aid information as well as providing analytical tools such as chart, graphs and maps.

Based on this discussion, the Chapter 8 will further discuss the process of norm localization of aid effectiveness in detail, and how the process justifies the Indonesia's implementation of AIMS.

7.3.3. AIMS Implementation

In 2010, the Indonesian government implemented the AIMS and operationalized it within the Bappenas as a single-window system for the monitoring and evaluation of ODA. Primarily, the systems comprising database of aid commitments, expenditures and detail activities. As the Jakarta Commitment affirmed, the AIMS was intended to assist Indonesia, a recipient country, with the incorporation of aid flows into the national budget, and enhance overall alignment of aid with the government's priorities in RPJMN. By using the centralized information system, it was also aimed at strengthening aid coordination among stakeholders and was expected that the government and donors would engage in a process of joint evaluation of Paris Declaration, most importantly, the Survey on Monitoring of the Paris Declaration (PD Survey). The AIMS implementation was grounded by the

Jakarta Commitment; however, the planning for the systems had already been discussed in Bappenas in 2008 during the preparation of the Jakarta Commitment. The AIMS was initially suggested listed as one of the new programs in the Green Book 2008 under the section ‘Strengthening Capacity to Improve Aid Effectiveness’ (BAPPENAS 2008), which would again continue to be in the Green Book 2009 with the change regarding funding source from KfW to GTZ (BAPPENAS 2009).

The chronology of the implementation of AIMS, based on information collected from documents and semi-structured interviews conducted with AIMS developers, officers from Bappenas, State Secretariat, MoFA, donors including UNDP and the GTZ is delineated below. As I analysed in Chapter 5, there is significant homogeneity in AIMS in terms of the planning and implementation processes. Although generalization is not possible since each stage is not one hundred percent mutually exclusive, the common process of AIMS implementation that can be deconstructed follows seven stages; 1) political process, 2) financial process, 3) design/development, 4) data input, 5) implementation, 6) usage and evaluation, and 7) policy. The case of Indonesia’s AIMS generally followed the stages.

Stage 1. Political Process

1. On 12 January 2009, 22 development partners signed the Jakarta Commitment. The A4DES was established in April in 2009, and within the A4DES, the ‘Working Group for Monitoring and Evaluation (WG Monev)’ commenced conducting coordination meetings with line ministries and the development partners to support AIMS. The terms of reference (TOR) for AIMS had been developed by Bappenas during a series of interim meetings that followed the UNDP-led four-day workshop on ‘Effective Aid Management’ in October 2008.

2. SBY won the Presidential election on 8 July 2009 and resumed his second term of office as President on 20 October.¹⁵⁸ In his inauguration speech, he highlighted his nation's intention to honour international commitments:

We will continue to be pioneer in the efforts to save the earth from climate change; in the World Economic Forum, especially through the G20 in striving for the Millennium Development Goals; in advancing multilateralism through international organizations, and in encouraging harmony among civilization.

(SBY's Presidential inauguration speech, 20 October 2009, translated)

Stage 2: Financial Process

3. Although the expected funding source for the AIMS implementation was documented as KfW (German Development Bank) in Green Book 2008 and GTZ (German Technical Cooperation Agency) in Green Book 2009, there was final negotiation and confirming process with GTZ. In addition, after the contact by the AIMS service provider, Synergy International, which developed the RAND, the government made a decision of having contract with local IT providers and finally confirmed receiving a grant from GTZ. The technology artefact was evident in the persistent negotiations with relevant social groups. In the final negotiation with GTZ and other potential funders, Bappenas strongly expressed their preference for hiring local IT consultants – a decision that may have been influenced by the previous experience with RAND. The AIMS Task Force Lead in Bappenas emphasizes:

[During the tsunami reconstruction] we were not happy with Synergy International, in particular, due to communication problem. Of course, they continued approaching us. We need more ownership on the system.

(Interview with the AIMS Task Force Lead)

4. On 12 February, 2010, the first Coordination Meeting was held with members of the Task Force AIMS (members from Bappenas, MoF, Setneg,

¹⁵⁸ His landslide victory in his second election (SBY:60.8%, Megawati:26.79%, Jusuf Kalla 12.41%) arguably confirms his successful first term that enables SBY earning more public trust.

Bank Indonesia, and the Secretariat of A4DES) and GTZ. The purpose of the meeting was to formulate AIMS activities for the fiscal year of 2010. The official contract between Bappenas and GTZ entered into force on 22 February in 2010.

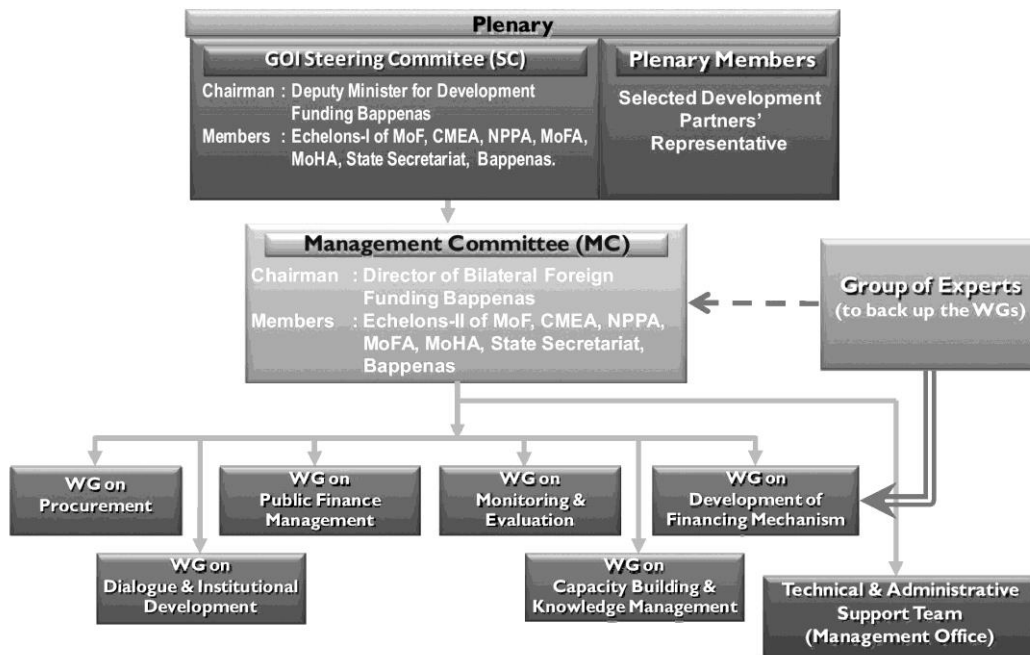


Figure 7-8. A4DES Organizational Structure
(Source: Jakarta Commitment Annual Report 2009)

- In mid-February, the recruitment process was carried out to establish the AIMS IT team, appointed by GTZ. The IT team members were Kodrat Mahatama (Senior Analyst), Bayu Waseso (Software Analyst), and Yusuf Firdaus (Programmer). In due course, the team was assigned two activities focusing on building an online Survey Module and finalizing one of the Bappenas' existing database (Dit. Renbang/ Directorate of Development Planning - Bappenas).¹⁵⁹

¹⁵⁹ Jakarta Commitment Annual Report 2010 (p.120-126)

Stage 3. AIMS Design and Development

6. The target deadline – 12 April 2010 was established for completion of the initial version of the AIMS Online Survey ‘Module’, often referred to as the ‘AIMS Prototype version’ in documents and interviews. Weekly coordination meetings were held between the Task Force AIMS and the IT Team. Subsequently, coordination meetings with GTZ were held once every two weeks at the task-force level.
7. The ‘Workshop and Training - Module Aid Information Management Systems (AIMS)’ was convened on 23 April 2010 in Jakarta and more than 20 development partners attended. The AIMS IT team leader recalls:

The AIMS prototype was showcased and tested by participants from donor countries. I finally realized this (developing and implementing AIMS) is a big project.

(Interview with AIMS Developer)

8. For another one and a half months, the AIMS prototype was further tested by donors including the World Bank, GTZ, and AusAid. The operating system (OS) was re-designed and configured by the AIMS IT Team. At the meeting organized by Director for Utilization of Development Funding in Bappenas on 2 June, the finalization of the OS of the AIMS ‘Beta version’ was discussed¹⁶⁰. Later, on 25 June, AIMS ‘Production version’ was installed on the Bappenas server.

Stage 4. Data Input & Stage 5. System Launch

In the case of Indonesia, there is no clear-cut step between the ‘Data Input’ stage and ‘Implementation’ since modifications to AIMS and requests for donor participation in aid data provision occurred simultaneously. The *official launch of AIMS* was held on 29 June 2010. However, it was actually an event that demonstrated the readiness of AIMS for use by donors and data collection rather

¹⁶⁰ Bappenas Letter No. 202/Dt.8.5/05/2010

than for public users to find useful information on the system. The short-term target was ensuring that development partners and the Indonesian government participated and completed the PD Survey by 2011. However, one of the reasons for the early launch event might have been government's willingness to meet the deadline. In spite of time constraints, the government set a tight deadline for the launch. We can find a clue from an interview with Bappenas:

It was actually already delayed. Jakarta commitment was signed in early 2009. But we had the presidential election in October. So, it was all stopped during the election. We need to prove we are working so hard. The deadline for the Paris Declaration Survey was also approaching.

During the months following the launch, system configuration and data provision occurred at the same time. As discussed in Chapter 5, this often happens in AIMS cases in other recipient countries as well.

9. On 29 June, the AIMS was officially launched just a couple of days before the deadline of 1st July based on the GTZ contract¹⁶¹.
10. The 'Launching event of the Module for Online Survey on Monitoring of the Paris Declaration' was held at Le Méridien Hotel in Jakarta. Aid information on the system was incomplete at this stage. Invitation letters were sent to development partners actively participating in using AIMS, as well as officials from ministries and government agencies, A4DES WG Monev, AIMS task-force staffs and the media. In-house training on the system use and data provision for each of the development partners was provided, and followed by visits to donor agency by the AIMS IT Team between June and August.
11. On 16 July, a coordination meeting was held in Bappenas, involving members of the A4DEC WG Monev, AIMS task force, representatives of

¹⁶¹ Contract with GTZ

the A4DES, as well as the AIMS IT Team, to discuss performance monitoring of the Online Survey Module.¹⁶²

12. On 22 July, Joint training on the Online Survey was convened at the GTZ office in Jakarta with representatives of several development partners. It was organized by Bappenas' Director for Utilization of Development Funding¹⁶³
13. On August 2, the official request on the aid data was sent by Bappenas' Director for Utilization of Development Funding, to all development partners, requesting to expedite the data filling process.¹⁶⁴ During this time, UNDP played a key part in aid data collection and coordinating donors as a donor focal point.
14. The offline version of the AIMS Module was finalized. MS Excel spreadsheet forms were distributed to all development partners in an effort to speed things up and deal with the donor's browser incompatibility issues.
15. On 23 August, the letter signed by Bappenas' Deputy of Development Funding was sent to several development partners, as a reminder concerning incomplete data submission and a request to expedite the data filling process with the full version AIMS Module¹⁶⁵. The same letter was also addressed to the following specific recipients with an additional note: 1) Counsellor Commercial and Trade Embassy of The People Republic of China - thanking for the support for the AIMS program and inviting participation in the AIMS online Survey. China was not actively participating in AIMS and there was also the issue of donor coordination in a broader environment, as China is not an OECD DAC donor; 2) Other development partners - thanking them for the timely completion of data submission, and wishing for the continuation of the AIMS online Survey 2011; 3) The Commercial

¹⁶² Bappenas Letter No. 4389/Dt.8.5/07/2010

¹⁶³ Bappenas Letter No. 4670/Dt.8.5/07/2010

¹⁶⁴ Bappenas Letter No. 4926/Dt.8.5/08/2010

¹⁶⁵ Bappenas Letter No. 5420/Dt.8.5/08/2010

Counsellor at Spanish Embassy and Austrian Embassy – reminder, because the two had not given any response on the AIMS module within the set deadline.

16. From 29 to 30 September, the Focus Group Discussion (FGD) was held at the Grand Permata Hotel in Bandung. It was an intensive meeting to discuss the results of AIMS implementation as a test run for the pilot PD Survey. The meeting also discussed the draft Report of PD Survey from 2009 data. Invited participants included public officers from Bappenas, MoF, Central Bank (Bank Indonesia), and also representatives from the ADB, JICA, UNDP, A4DES, European Commission, USAID, GTZ, and members of the Evaluation Team for the PD Implementation in Indonesia.

17. On 5 November, the Try-Out Event for the AIMS Module was held at Santika Hotel. Participants included the AIMS IT Team and several staffs from Bappenas and A4DES, to test the AIMS module. The trial run was also to prepare the AIMS module to serve as a tool for the Survey on Monitoring the Paris Declaration Phase 3, earmarked for 2011. A coordination meeting was later held on 10 November in Bappenas to discuss the progress of each of the indicators in the PD Survey.

Stage 6. Use and Evaluation

18. On 29 November 2010, the National Launch for the implementation of the PD Survey Phase 3 was held. The event was similar to one in Siem Reap, Cambodia, where the PD Survey was launched for the Southeast Asian region. The Indonesian launch was held at Nikko Hotel, and all bilateral and multilateral development partners were invited. The event's key-note speaker was the Vice Minister of Bappenas.
19. On 1 December, a training session on the AIMS Online Survey Module was conducted at Aryaduta Hotel in Jakarta. Staff representing 12 development partners participated in the training, which was organized to test the AIMS module for the implementation of the PD Survey by development partners.
20. Technical Meeting for the 2011 PD Survey was held in Jakarta. Afterwards, in February 2011, Bappenas issued the *AIMS 2011 Online Survey on Monitoring the Paris Declaration User Guide Book*¹⁶⁶. This 41-page guide was intended to help users in the “*donor community and the Government of Indonesia use the system, understand the outcome and support the process of data collection using the AIMS*” (Bappenas 2011, p.6). Terms and definitions used in the guidebook exactly follow the official guidance of the 2011 Survey on Monitoring the Paris Declaration published by the OECD-DAC.

AIMS Publications: Bappenas published a series of important official documents on AIMS in 2011. First, as mentioned above, the AIMS User Guide was published online, and distributed to the aid communities in Jakarta. In June 2011, the *Business Process* and *AIMS Technical References* were published.¹⁶⁷ The *Business Process* is said to ‘present project information structure, stakeholders involved, and stakeholders role in the AIMS’. Although the first part of the document provides a general, and

¹⁶⁶ Bappenas Document Code: AIMS-OS-2011

¹⁶⁷ Bappenas Document Code: AIMS-BPS

redundant explanation of AIMS, the second half is more useful in explaining the different stakeholder roles and detailing the data collection process. These two documents reflected previous feedback from stakeholders in terms of the role of each development partners and the government's efforts to minimize confusion in terms of data collection and procedure. The publication of the AIMS Technical Reference Document followed in June.

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The Bappenas AIMS User Guide v4.0 Document and AIMS Administrator Guide v2.0 Document were published at the end of September alongside the Final AIMS Handover report for Bappenas. In the User Guide, the extensive role of AIMS in the coming years as a national single-window aid management system is described, and the role of stakeholders is also explained. However, most of the technical information is redundant.

21. On 1 April 2011, Indonesia submitted the Country Report with results of the 2011 PD Survey by using AIMS. On 22 June, Bappenas received the first draft of Indonesia's Country Chapter, produced by the OECD, based on the Country Report. In order to obtain feedback on the draft, Bappenas sent a letter to Development Partners - *Re: The Monitoring Survey of Paris Declaration – Draft of Country Chapter*.
22. On 13 July, the Workshop for the review of the Indonesia Country Chapter on the PD Survey in Jakarta was organized by Bappenas with the participation of the development partners¹⁶⁹, CSO, related working groups, members of the AIMS task force, data analysts, and A4DES.

¹⁶⁸ Bappenas Document Code: AIMS-TR

¹⁶⁹ Bappenas official invitation letter (No.3832/Dt.8.5/07/2011) says – The Head of UNDP and Ambassadors' of Australia, Austria, Belgium, Canada, Denmark, UK, France, Germany, Japan, Korea, Netherlands, New Zealand, Norway, Spain, Sweden, Swiss and US were finally invited.

Stage 7. Policy

23. On 30 September 2011, the Final Handover Meeting between Bappenas and the AIMS stakeholders, including the AIMS IT Team, A4DES and GTZ was held.
24. On 24 October, the Minister of Bappenas Armida Alisjahbana, issued Ministerial Regulation No. 4/2011 discussed in Section 6.2.1.2.¹⁷⁰ It was a revision of Ministerial Regulation (PP) No.2/2006 reflected the use of AIMS.

7.3.4. Functionality of AIMS

Although the short-term objective of AIMS was a computerization of the Survey on Monitoring of the Paris Declaration Phase 2, with Phase 3 to be completed before the Busan HLF in 2011, the fundamental rationale and expected outcome of AIMS was presented as a national computerized system for long term aid management. Thus, AIMS was designed to provide an overview of loans and grants by geo-mapping donors' activities and produce a visual presentation and analysis of aid data. It was a web-based intended to allow all citizens and aid workers to access aid information and to provide greater transparency. The purpose of the AIMS is explained in the User Guide – Aid Information Management System (Republic of Indonesia Doc Code: AIMS-UG) as stated below:

Visibility: Provide a way for all initiatives in Official Development Assistance (ODA) to be recorded in a unique central repository visible to all stakeholders, Government of Indonesia, Development Partners, Line Ministries and the public.

Monitoring: Give a common platform to monitor aid effectiveness following the rules of the Paris Declaration by measuring the 12 indicators for Aid Effectiveness and verifying alignment and correctness among participants.

Information Sharing: Fulfil the commitment established with the Jakarta Commitment and provide data and project-related information from Development Agencies and Line Ministries.

¹⁷⁰ Bappenas Regulation No. 4/2011 on Procedures for Planning, Proposal Submission, Assessment, Monitoring and Evaluation of Activities Funded by External Loans and Grants.

Publication: Provide reports on the Paris Declaration Indicators and continuous assessment of aid effectiveness. Provide an evidence-based system for monitoring ongoing project and planning of future project. Geographical and Sectoral mapping of ODA initiatives.

(Republic of Indonesia, 2010,
User Guide – Aid Information Management System)

Indonesia, however, did not participate in the first PD Survey. As discussed in Chapter 5, the OECD Survey on Monitoring the Paris Declaration (the PD Survey) assesses the aid effectiveness and the progress in PD indicators. In the very first PD Survey 2006 (results published in 2007), 34 recipient countries and 55 donors participated, but Indonesia did not. In the second follow up PD Survey 2008 (results published in November 2008), it assesses progress in 55 recipient countries including Indonesia. By adopting the Jakarta Commitment in 2009, Indonesia announced its full commitment to improving aid effectiveness and to implementing global aid governance, including the PD Survey.

In June 2010, prior to the PD Survey launched in November 2010, the Indonesian government implemented AIMS for the online survey to monitor progress of the Paris Declaration indicators. As opposed to the previous 2008, Survey which was conducted manually by using paper a questionnaire and MS excel spreadsheet, development partners directly accessed AIMS with the given password and protected ID and entered aid data into the system. This intermediary survey, commonly known as AIMS 2009 Online Survey, but executed in 2010, was conducted by using aid data from 2009 and managed on the AIMS for the first time, in order to review the progress of PD indicators since 2007.

The goal of using AIMS was two-fold, firstly in the short term, to enable the government and development partners to prepare for the next PD Survey and coordinate discussion on progress in the aid effectiveness agenda. Secondly, in the long-term, to examine the current portfolio of aid activities and its quality as well as enhance aid coordination among stakeholders.



Figure 7-9. Main Page of AIMS Website¹⁷¹

AIMS provided an analytical tool for research and reporting. As discussed in Chapter 2, one of the reasons for collecting and integrating aid data on the common platform was the preparation of analysis that would influence decision making to promote aid coordination and enhance effectiveness of aid. Data presentation and the GIS based system was an important element in this respect. As shown in Figures below, AIMS provided charts, tables, and graphs based on diverse categorizations by location, development partners, RPJMN priorities, aid classifications – sector, type and modalities, as well as based on different indicators, including yearly disbursement amounts, development indicators and other socio-economic indices. Visualization tools based on GIS, as well as report publishing tools, are featured in the AIMS. There are two ways to access and create charts. First, by using the ‘AIMS Charts & Statistics’ menu, users can select one of the pre-made chart from the list. Secondly, by using the ‘AIMS Chart Panelboard’, the user can create the charts needed for analysis by using ‘parameter combination’ and combining diverse indicators.

¹⁷¹ The URL was <http://aims.bappenas.go.id> but it is not accessible. As discussed in Section 4.4.3, I gained the access to the AIMS and its database with a help from AIMS developers who downloaded the entire pages and data from the ftp server, and kept the systems.

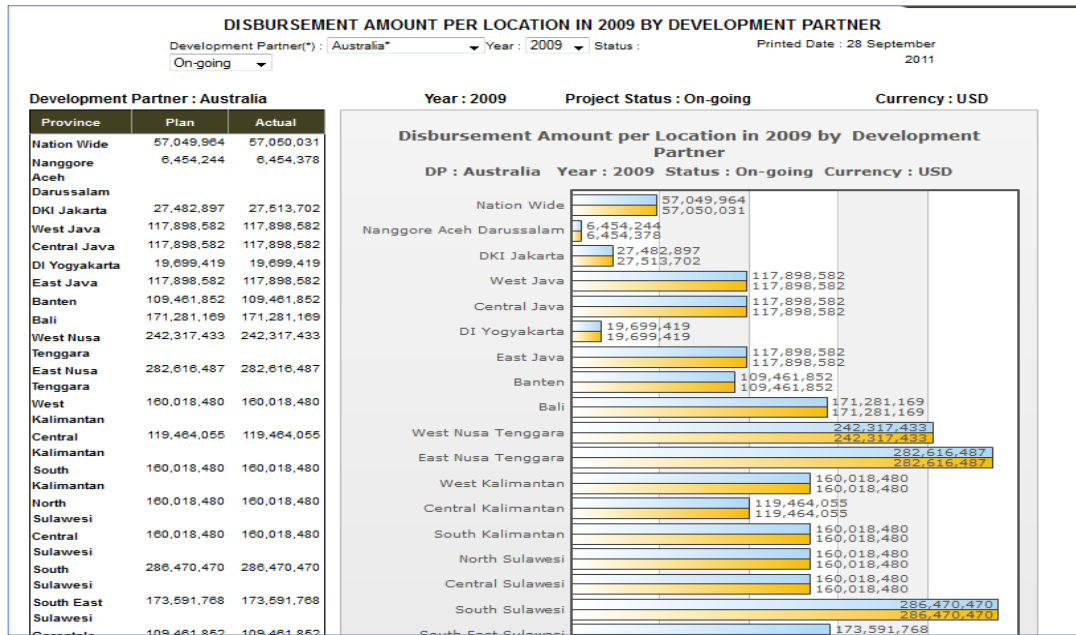


Figure 7-10. Sample of AIMS View – Disbursement Amount per Location by Development Partner



Figure 7-11. Sample of AIMS View - Project Location Map Interface

7.4. Summary

In this chapter, I have illustrated the case of Indonesia's AIMS, the technological object of my case study and its historical and political context. Indonesia's aid governance reform, in the mid-2000s during the SBY term, focused on 'better management with stronger ownership', which was inherited through the historical legacy of the notion of 'independence'. Alongside domestic reform, the emerging norm of 'aid effectiveness' in the global field of aid influenced the implementation of AIMS with hopes that it would 1) enable Indonesia to manage aid effectively, and 2) allow development partners to easily share aid information as well as to enhance aid coordination among stakeholders. Although the progress that AIMS achieved in implementation and the completion of the PD Survey from 2009 to 2011 looks significant, it did not fulfil one of the most important expected outcomes, namely sustainability as a national single-window aid management system. This sustainability failure cannot be fully understood from the perspective of micro-situational struggles such as gaps between 'knowledge and organizational practice' (Basu 2004), 'design and reality' gaps (Richard Heeks 2002a; Heeks 2003; Masiero 2016a) or 'interaction failure' (Lyytinen & Hirschheim 1987). Thereby, using the macro perspective lens provides some helpful insights and pointers. As Indonesia became a leading actor in the global field of aid, in particular in South-South Cooperation as well as in regional development collaboration in ASEAN, the AIMS as a 'donor-driven' system became increasingly irrelevant with the rapidly changing environment. In order to address my research question, the following Chapter 8 will discuss the sustainability failure of the Indonesian AIMS, based on data collected from the fieldworks conducted.

Chapter 8. AIMS in Indonesia as a Global-Level Event

In the previous chapters, I discussed the existing literature on aid, development, and technology, and presented the conceptual framework and methodology of my research. I then introduced the empirical analysis in Chapter 6, which reviewed AIMS implementations in recipient countries, and investigated *how do we understand the global diffusion of AIMS and its role in aid effectiveness?* The institutional analysis highlighted the complexity of AIMS, as well as the need for in-depth study to understand *why do aid information management systems fail?* This question has been illustrated by the single case study of Indonesia in Chapter 7. Building on the historical understanding of foreign aid in Indonesia, the narrative explaining AIMS implementation in Indonesia was presented.

In this chapter, I integrate the framing of the analysis and discuss the findings that emerged from data analysis to answer the research questions. My questions, grounded on the theories discussed in the early chapters, have been further formulated and converted into three specific questions related to the case study presented in this chapter:

- How has the global norm of aid effectiveness *emerged, cascaded*, and been *internalized* in Indonesia?
- In this process, how has AIMS been resisted, implemented, used, disused and shut down by the state of Indonesia?
- What roles have AIMS played in this process?

The analytical focus is three-fold. First, I have identified the major lacuna of ‘missing aid’ in ICTD research in Chapter 2 and 3. Therefore reflecting the importance of the political nature of aid, the analytical focus is on the global-level dynamics. Second, reflecting the lack of understanding on the role of the state in information systems failure in the existing ICTD research, specific attention is paid to the role of the state as an agency in this chapter. Third, from the socio-technical

perspective, I focus on the role of technology in the process of AIMS implementation and abandonment.

This chapter presents the deconstruction of the process of AIMS in Indonesia by focusing on the role of state in its implementation and sustainability failure. This deconstruction can be split into the following five phases:

- Phase 1: Norm emergence and cascade in the global field of aid (-2005)
- Phase 2: Reluctance (2006-2008)
- Phase 3: Norm localization and AIMS (2009-2011)
- Phase 4: Disuse managerially but use symbolically (2012-2013)
- Phase 5: Finding an alternative legitimacy (2013-)

A summary of each stage is illustrated in Table 8-1.

I argue that understanding the AIMS failure requires a shift in attention from the process of aid management within a country to a more comprehensive view that centres on the global level. Both the implementation and abandonment of AIMS can be justified by tracing the norms and power dynamics of global aid and by the ways in which Indonesia, not only as a *norm taker* but also as the state itself, strategically seeks legitimacy in the global field of aid. Furthermore, in the dynamics of global power relations, the role of technology is multifaceted – made up of a mixture of managerial and rationalizing, as well as symbolic and political roles.

When we examine AIMS implementation, we should not ignore global aid governance structure and its institutionalization. As discussed in Chapter 6, the Paris Declaration on Aid Effectiveness (PD) marked a *tipping point* of norm diffusion, as well as a process of institutionalization through the establishment of a set of codes (like rules e.g. aid reporting and the PD Survey), and symbols, which constitute a paradigmatic scheme of rationalizing the implementation of AIMS. The emergence of AIMS as a ‘must-have tool’ for achieving aid effectiveness in the global field of aid, as well as their adoption in recipient countries, were driven by

powerful actors in the field, in particular by the OECD DAC donors and international organizations.

In this institutionalized context, recipient countries, which are subject to *isomorphic pressures*, are generally expected to accept global norms and practise the codes in managing aid activities. As discussed in Section 6.2, the aid effectiveness norm was further localized by adopting AIMS (Acharya 2004). Reflecting this scenario, the state of Indonesia, in the context of the established aid field, becomes rather peculiar. Indonesia's strategic actions of reluctance, compliance, and pursuit of an alternative legitimacy in the shifting global field of aid are worthy of investigation for further implications.

In this Chapter, I will not repeat the explanations of norm emergence and cascade of aid effectiveness in the field of aid, which were analysed in Section 6.1.2 and 6.1.3. Rather, building on the norm dynamics (Finnemore & Sikkink 1998), I will explain norm localization and subsidiarity in the case of Indonesia. I specifically focus on the role of the state, and investigate how AIMS was implemented, used, and abandoned by the state of Indonesia. Chapter 3 discussed the apparent absence of the nation state as being analysed analytically in institutional accounts of information systems (Clegg 2010). In order to address this analytical absence, this chapter will pay particular attention to the macro dynamics of global aid institution associated with the active role of the state in the global field of aid.

	1	2	3	4	5
Phase	Norm emergence and Cascade	Reluctance	Compliance 'Hello AIMS'	Disuse managerially but use symbolically	Alternative legitimacy 'Good bye donor-driven AIMS'
Time	-2005	2005-2008	2008-20011	2012-2013	2013-
Milestones (Global)	Paris Declaration (05)	Diffusion of AIMS PD Survey 1 st (06)	Accra Action Agenda (08); PD Survey 2 nd (08), 3 rd (11)	Busan Partnership Document, End of HLF (Dec, 11)	Global Partnership for Effective Development (14)
Milestone and contingency (Local)	SBY's inauguration (Oct, 04), Tsunami (Dec, 04)	Government Regulation 2/2006 (06)	SBY's second term (Oct, 09)	Host of South-South Cooperation (12)	Co-chair of OGP (13) Co-chair of GPEDC (14)
Institutional Change (Local)		CGI dissolution (07)	Aid for Development Secretariat (09)	A4DES dissolution (12)	NCT on SSTC
Strategic Action	Endorsement of PD (05)	Negotiating, Keeping 'ownership' in aid governance	Jakarta Commitment (Norm localization)	Building new leadership on SSTC	Finding an alternative legitimacy
Norm Dynamics	Norm Emergence, Norm Cascade	Resistance	Norm Internalization Norm Localization		Norm Subsidiarity
Role of technology			Managerial and symbolic	Symbolic	Managerial

Abbreviation – HLF: High Level Forum on Aid Effectiveness; **OGP:** Open Government Partnership; **GPEDC:** Global Partnership for Economic Development Cooperation; **A4DES:** Aid for Development Effectiveness Secretariat; **NCT-SSTC:** National Coordination Team on South-South and Triangular Cooperation

Table 8-1. Five Phases of Indonesia's AIMS Life Cycle

8.1. Phase 1- Norm Emergence and Cascade: Indonesia's Endorsement of the Paris Declaration (2000-2005)

Finnemore and Sikkink's (1998) framework provides a useful analytical device to investigate which transnational norms emerged and how they have gained momentum.

Norm Emergence: I discussed details of *norm emergence of aid effectiveness* in Section 6.1.2. At the heart of the norm emergence phase, norm entrepreneurs played the most important role. Among them, the OECD DAC was highly instrumental in the convening of the First High Level Forum on Aid Effectiveness (HLF) in Rome (2003). With the signing of the Rome Declaration on Harmonization by 28 aid recipient countries and more than 40 multilateral and bilateral development institutions, the aid effectiveness framework was formalized. (OECD 2003). Indonesia did not participate in the first HLF in Rome, but in the second HLF in Paris in 2005.

Norm Cascades: As discussed in Chapter 6, the Paris Declaration on Aid Effectiveness (PD) signed in 2005 is the most influential milestone in the global field of aid, and became *the tipping point of norms cascade*, as well as subsequent global AIMS diffusion as a mechanism for achieving aid effectiveness.

As discussed in Section 6.1, one of the most important dimensions of the PD is a shift toward joint responsibility for aid effectiveness. This shift, which seemingly represents a balance between donors and recipients, enabled norm entrepreneurs' attempts to socialize other states – typically recipient countries - to become norm followers (Finnemore & Sikkink 1998). In fact, in the PD, the word 'mutual' often appears, including in one of the five core principles referring to 'mutual accountability' (between donors and recipients):

A major priority for *partner countries and donors* is to enhance *mutual accountability* and transparency in the use of development resources.

(Article 47, emphasis added)

Developed in *a spirit of mutual accountability*, these Partnership Commitments are based on the lessons of experience. We recognize that commitments need to be interpreted *in the light of the specific situation of each partner country*.

(Article 13, emphasis added)

Work together to establish mutually agreed framework that provide reliable assessments of performance, transparency and accountability of country systems (Indicator 2).

(Article 19)

Use mutually agreed standards and processes to carry out diagnostics, develop sustainable reforms and monitor implementation.

(Article 28)

Against this backdrop the number of participant recipient countries dramatically increased from 28 in Rome to 138 in Paris (OECD 2003; OECD 2008c). The motivation for each state's participation in the PD and implementation of AIMS, in which the aid effectiveness norm *cascades* through the rest of states, may vary. However, the combination of isomorphic pressures, the desire to achieve legitimacy, and "the desire of state leaders to enhance their self-esteem, facilitated norm cascades" (Finnemore & Sikkink, 1998:895).

Indonesia's response to the aid effectiveness norms and rules, as well as the adoption of AIMS, unfolded differently from the typically accepting attitude of other recipient countries. Indonesia signed the PD in 2005 (Phase 1) but did not participate in the first round of the PD Survey in 2006 (Phase 2). A common underlying analytical focus of institutional theories is the role of the institutional context, which Meyer & Rowan (1977) refer to as rules, norms, and ideologies of the wider society, and institutional conformity and its processes. However, the practical response of states in the global field often varies. Thus, it is important to understand how Indonesia engaged when the aid effectiveness norm emerged and was institutionalized, and how this global norm and the

implementation of AIMS implementation were accepted by Indonesia differently than by other countries.

Indonesia's endorsement of the PD can be considered as evidence of its motivation for conformity, and the desire of its leader. As discussed in Section 6.2, Susilo Bambang Yudhoyono (SBY) (2004-2014) pursued domestic stabilization with stronger state ownership in aid, as well as active engagement in international cooperation. It would be unjust to forget the contributions of the three Presidents during the crisis (1998-2004), which had brought successful democratic political transformation with the first direct Presidential election in 2004.

He was not the one in charge for renovating the damaged house, but he was the one responsible for opening the door of the new renovated house.

(Interview with an Indonesian journalist)

As 'a door opener' of Indonesia to the international community, SBY's personal aspiration to make his country a respected member of the international community is well-presented in his inaugural speech on 20 October, 2004,

As a responsible member of the international community, Indonesia would be the voice of conscience to promote peace, to improve welfare, and to fight for justice. Indonesia would continue to grow as a democratic, open, modern, plural, and tolerant nation.

(SBY's Presidential inaugural speech on 20 October, 2004)

'Restoring the country's badly tarnished image' by political instability, economic hardship and security threats in the last decade, became a key priority of his presidency (Fitriani, 2015:73). Signing the internationally agreed Declaration and supporting the norm symbolically was a simple but effective foreign policy motivation for SBY.

According to Finnemore and Sikkink's norm dynamics, at the end of norm cascade stage, *norm internalization* takes place in a given state. That is, at this stage, global norms acquire a taken-for-granted level of stability and are no

longer debatable in the field. Since the adoption of the PD in 2005, successive High Level Forums on Aid Effectiveness in Accra (2008) and Busan (2011) contributed to norm internationalization in many countries.

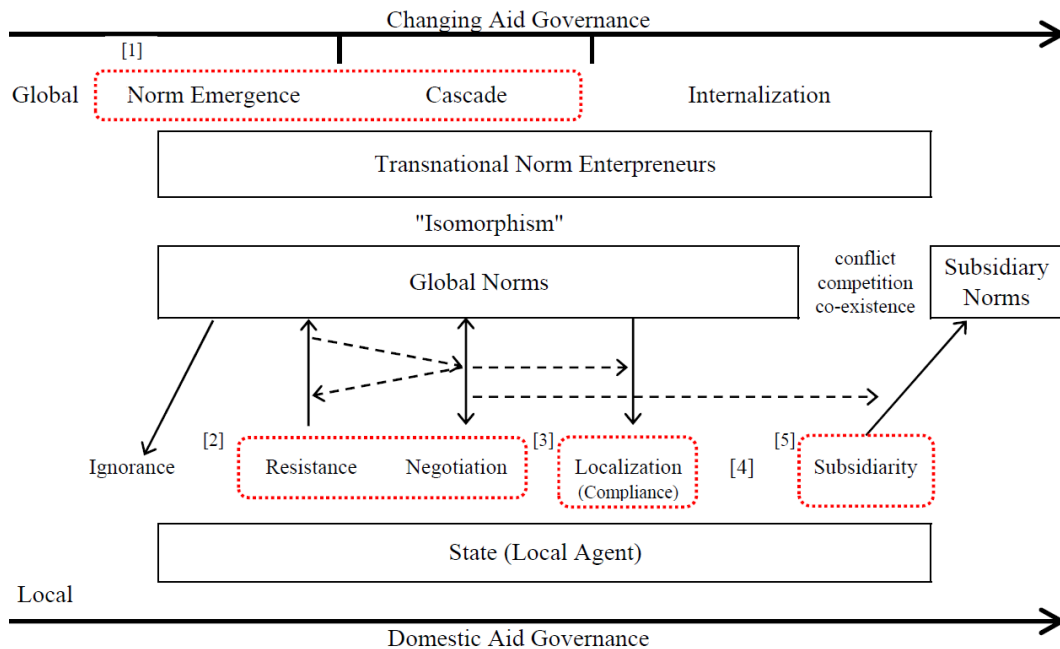


Figure 8-1. Norm Dynamics and the Response of the States (Explained in Figure 3-2)

In the following sessions, I discuss how the seemingly well-defined global norm of aid effectiveness has been reinterpreted and negotiated by Indonesia, and how during this process the state sought to gain alternative legitimacy in the global field of aid.

8.2. Phase 2: Reluctance (2005-2008)

The PD marked a new process of institutionalization through the establishment of a set of rules, which rationalized the concept of aid effectiveness. This process prescribes a set of legitimate principles for governing aid activities (the Paris Principles discussed in Section 6.1.3), and establishes protocols agreed to by all signatories to coordinate aid efforts (PD Surveys). The PD particularly emphasizes that aid information is fundamental in the diagnostic review aimed

at improving aid coordination and decision-making for aid targeting (Paris Declaration Article 43).

[T]o coordinate the international monitoring of the Indicators of Progress' and 'to enable consistent aggregation of information across a range of countries to be summed up in a periodic report. (Article 11)

In this sense, donors “commit to providing timely, transparent and comprehensive information on aid flows in order to enable partner authorities to present comprehensive budget reports to their legislatures and citizens” (Article 48). In addition, donors are strongly encouraged to use an existing country information system (Article 17 and 18) (OECD 2008c). The OECD DAC Working Party held a series of meetings on sharing aid information including its eighth meeting ‘*Role of Aid Information Management Systems in Implementing the Paris Declaration on Aid Effectiveness at the Country Level*’ in July 2006, and actively promoted the implementation of AIMS in developing countries.

As analysed in Chapter 6.2, there was strong coercive pressure on participation in the PD Surveys and AIMS implementation was a ‘must have tool’ for conducting the Surveys. 34 recipient countries participated in the first PD Survey in 2006. The Surveys based on five PD principles and 12 indicators, are emerging institutional frameworks orchestrated and driven by powerful actors, particularly the OECD DAC countries and the MDAs. In this institutionalized context, recipient countries are generally expected to accept and practise these codes in their aid management.

In this context, Indonesia’s response was rather peculiar. Indonesia became a signatory member state of the PD in 2005, but opted not to participate in the first round of the PD Survey in 2006. Given Indonesia’s participation in the PD in 2005, how did the state justify its actions, particularly its decision to distance itself from the actual institutional work prescribed and expected by the international PD community?

The most important reason for Indonesia's non-participatory behaviour in the first PD Survey is that not much opportunity was given to actively engage in the process of shaping the PD principles and the PD Survey in 2006. More concretely, three major reasons can be identified:

Tsunami Recovery and Learning from Legacy Technology: The first important factor identified is the Indian Ocean Tsunami, which hit Indonesia in December 2004. This incident had the Indonesian government focus heavily on the reconstruction process in Aceh in 2005 and 2006, as the former officer at the Coordinating Ministry recalls.

We were too busy with Aceh in 2005. Other Tsunami-affected countries also didn't do [the Survey on Monitoring the Paris Declaration on Aid Effectiveness]. But, we once discussed at the CGI meeting with development partners, and might have been able to do the survey. But, it was too much burden for us.

(Interview with a government officer at the Coordinating Ministry)

As discussed in 6.3.1, the Recovery Aceh Nias Database (RAND) systems was developed by Synergy International and implemented in the ad hoc agency, Rehabilitation and Reconstruction Agency (BRR), in 2005. It had been used for managing humanitarian assistance to the Aceh area. The evaluation of this AIMS has been largely varied and mixed with international praise and critiques.

According to the BRR Book Series – 'Book 1 Story: Feat of the Daunting Launch' and the Synergy International webpage, it appears that the RAND has achieved international acclaim as a good practice of AIMS¹⁷²¹⁷³:

The Alphabet Media¹⁷⁴ awarded the BRR 'Best Practice of Information Management' for its application of the Recovery Aceh -Nias Database

¹⁷² BRR Book Series – Book 1 'Story – Feat of the Daunting Launch'(P.9)

¹⁷³ It also seems this news was covered by Kompas, one of the major Indonesian local newspapers, on 29 October 2008. However, the original article was not found in Kompas website but appeared in a blog: <https://syukriy.wordpress.com/2008/10/29/futuregov-informasi-pemerintah/>

¹⁷⁴ Mumbai based IT business group. See <http://www.alphabetmedia.in> for more information.

(RANdatabase) at the FutureGov - IV event held at Hotel Grand Hyatt, Bali, in October 2008. The BRR had beat out 450 nominees from 15 countries to take the honour. The RAND was considered superior in terms of its goals, functionalities and productivity. The project management was deemed innovative, particularly because the online data fed into it fulfilled the transparency and accountability principles.

(BRR Book Series, Book 1, 2009:9)

However, the story on the system from the field sounds contradictory. The detailed observations on the RAND in the monitoring and evaluation reports on the tsunami reconstruction process published by the Brookings Institute are not very different from the typical managerial and technical challenges of ICT coordination in the specific context of humanitarian relief (Saab et al. 2012; Ngamassi et al. 2011; Bharosa et al. 2009). Masyrafah & Mckee (2008:36) also discusses managerial challenges in their Brookings' Working Paper:

The level of detail required by the system was challenging for many agencies and, in order to satisfy the arduous monthly reporting requirements, the credibility of project data began to suffer.

(Brookings Working Paper 6, 2008:36, *Post-Tsunami Aid Effectiveness in Aceh*, edited by Masyrafah & Mckee)

A 'design-reality' gap, comprising a lack of usability and information accessibility, and a lack of clear guidelines and user friendly interface are discussed by Agustina (2007: p.7) at the World Bank with focus on the functional roles of the RAND and its challenges:

The RAN database is equipped with reporting tools based on the MS Access application, but is accessible only on the government intranet. The database does not have an online archive folder to conduct a time-series analysis. Users must save their own data for each time period to conduct a time-series analysis. At the request of BRR, the RAN data are classified into sectors following BRR's organization structure. A methodology for cleaning and processing data, including funding-gap data, is still lacking. A clear link to a user manual and a definition of terms (glossary) are also not provided.

(World Bank 2007:7, *Tracking the Money: International Experience with Financial Information Systems and Databases for Reconstruction* authored by Agustina)

Similarly, Bharosa et al. (2009:57) argue that a major issue at the micro-individual level in the field is that “no emergency responder has enough time and cognitive resources to absorb and process all information that becomes available during an emergency”. Likewise, the World Bank report by Mckeon (2007) points out much of the staff’s time was spent on updating project information in the RAND and addressing the technical, methodological and micro-situational challenges. Mckeon (2007:27) observes:

[T]wo years post-tsunami, the RAND was still unable to provide BRR with the required overview of financial commitments, allocations and expenditures from donors and NGOs, and there was a continued need for the Bank’s methodology to operate in order to provide the big picture overview required by most stakeholders. As BRR continued to require agencies to submit data to the RAND, there remains some duplication of effort for data providers as they provide data to both the World Bank, and to the RAND.

(World Bank 2007:27, Using Data for Ex-Ante Preparedness for Disaster Management, authored by Mckeon)

However, political challenges including tension between stakeholders, or institutional challenges like conflicting principles and ambiguous mandates, are rarely discussed. One commonly-shared reflection on the government side reflects these missing dimensions, positing that the government encountered many communication and coordination problems with the service provider, and accusing the foreign AIMS provider of its lack of accountability and continuous efforts in the system. There was the shaping process of the RAND, shaping to some degree at the BRR’s request based on a series of meetings with Synergy International. The staff at the BRR faced challenges when the initial ready-made DAD was implemented. This actually later become a major constraint on policy options and a source of reluctance to have a contract with a foreign AIMS provider. The Head of BRR recalls:

We took the DAD and started from there. But it’s not working. The purpose is different. The DAD is designed for managing regular ODA. It’s ready-made system. But Synergy (International) was not very responsible for customizing it to fit into our situation. Lots of communication and coordination problems occurred. We hired local IT people. That’s the way we took six months of it

with our own software engineers and technology. The root is the one from Afghanistan, but it's ours.

(Interview with the Head of BRR)

Still, evaluating whether the humanitarian assistance and reconstruction program in Aceh and Nias was successful is not the purpose or focus of this section. More importantly, we can see clearly that assessments of the program as well as the use of AIMS, surprisingly, have been largely varied and mixed with honours and criticism from different stakeholders. As discussed in Chapter 3, ascribing success to a given policy or program is a social process and depends on the particular perspective of the relevant social group (Wilson & Howcroft 2002). While the World Bank, as one of the major donors in the reconstruction program, showcases the program as a “highly successful reconstruction efforts,”¹⁷⁵ a couple of media articles severely criticize the inefficiency and lack of transparency of the program¹⁷⁶¹⁷⁷. Likewise, on the matter of assessing ICT projects in recipient countries, a success-failure dichotomy is still dominantly present in reality between donor-recipient, and developer-user. Thus, an ascription of ICT success and failure in recipient countries must be considered as stakeholder-dependent, as well as a property of broader institutional processes rather than the specific functions, use, and managerial conditions of the technology at hand. In particular, the RAND, and government's interpretation of their experience using it, later greatly shaped their reluctant behaviour to a foreign AIMS provider when they planned and implemented the AIMS in 2009.

Lack of Participation in Shaping Process of Paris Declaration: Secondly, and more importantly, in the year 2004 when the aid effectiveness norms and framework were sufficiently communicated among stakeholders, Indonesia did not actively engage in the process of shaping the PD principles. It also did not participate in Rome in 2003 during the period of on-going political uncertainty.

¹⁷⁵ Source: <http://www.worldbank.org/en/news/feature/2012/12/26/indonesia-reconstruction-chapter-ends-eight-years-after-the-tsunami>, accessed 7 July 2017.

¹⁷⁶ Source: <https://www.theguardian.com/global-development/2014/dec/25/where-did-indian-ocean-tsunami-aid-money-go>, accessed 7 July 2017.

¹⁷⁷ Source: <http://www.nytimes.com/2006/07/27/world/asia/27indo.html>, accessed 7 July 2017.

Indonesian domestic politics was at that time engrossed in the first presidential election in its history. This led to lacking attention towards the global aid agenda within the government. Lukita Dinarsyah Tuwo, the then Vice Minister of Bappenas, says:

[L]imited campaign on Paris Declaration principles in the country contributed for *limited awareness among groups in the government* and development partners of the importance of aid effectiveness. Having said that, the 2nd phase of Paris Declaration evaluation has alerted the government to take proactive actions toward aid effectiveness. More campaign on the implementation of PD principles is strongly recommended.

(Government of Indonesia, 2011, *Joint Evaluation of Paris Declaration Phase 2 Final Report*, Foreword, pp. vii-viii, emphasis added)

When the first PD Survey began, the then newly established government was still under the internal policy consolidation process. As discussed in Section 7.2, the government only established a new regulation — Government Regulation No.2/2006 on Managing Foreign Aid — in early 2006, after a series of inter-governmental coordination meetings. The Bappenas officer who had responsibility for multi-national cooperation noted:

We didn't know what the Paris Declaration Monitoring Survey is exactly (...) We were not participating in meetings except the Paris forum. At the meeting, the Indonesian Ambassador to the OECD was present. As I recall, we didn't have many discussions on this (PD) in Bappenas. I went to the meeting before the Accra Forum (in 2008) and suddenly realized that 'Wow! This is a big thing.'

(Interview with Bappenas officer, Explanation added)

The fact the OECD Ambassador was sent to the Paris Meeting may be considered as an irrelevant or meaningless action in terms of aid policies, or rather diplomatic action by aid experts in the government. The ambassador did not have a role in development cooperation, except Bappenas' participation.

Evidently and as one of the largest recipient countries to historically benefit from foreign aid, the SBY symbolically signed the PD in acknowledgement of the importance of supporting the global norms for 'aid effectiveness'. Indonesia,

however, did not submit to the new global aid governance by the institutionalizing of the codes of the PD – like the PD Surveys, or the OECD CRS aid reporting standard. The sudden realization about the importance of the PD Surveys only came later during the preparation meetings for the Third HLF in Ghana, where the Indonesian government strove to find its strategic position in complying with the global aid institutions, which by then were already organized.

Taking Ownership in Domestic Aid Governance: Instead of adopting the PD principles and joining the PD Survey, as discussed in Section 7.2.1.2, Indonesia established the Government Regulation No. 2/2006 on Managing Foreign Aid in an effort to institutionalize domestic aid governance. Furthermore, it was anticipated to enhance aid management as a means of fully taking ownership, without direct involvement in and accountability for the PD institutions. The norm internalization process did not occur in Indonesia at this phase. The PD did not have an actual effect on aid management domestically in this phase; rather, it was a more symbolic meaning contributing to the achievement of legitimacy in the global field of aid:

Equally important, the Paris Declaration provides important principles and actions that the government could instantly use to improve management of development activities, in particular toward aid effectiveness. From different angle of analysis, *Paris Declaration might not have any effect on the way the government place efforts toward aid effectiveness until the Jakarta Commitment is signed. For example: Development of Government Regulation No. 2/2006 on Managing Foreign Aid would be considered as a follow up of commitment state in the RPJMN in 2004, rather than effect of Paris Declaration.*

(Bappenas 2011:28)

The new regulation was aligned with the five-year domestic plan (RPJMN) starting in 2004. The establishment of this Government Regulations can be considered a follow-up of the state's commitment in the RPJMN in 2004, rather than an effect of PD. Similarly, the continuous efforts aimed at revising government information systems was a part of government effort in SBY's

‘reformasi’ (reformation) and eradicating corruption with the establishment of the KPK (Corruption Eradication Commission) (Bappenas 2011).

As briefly explained in Chapter 7.2.1, the foundation of the new Government Regulation on aid management in 2006 was set by Presidential Regulation No. 7/2005, which is grounded on the RPJMN 2004-2009. Therefore, the concept of National Development Planning System (RPJMN and RPJPN) was actually set in Megawati’s term, but the content of RPJMN 2004-2009 was set by SBY. All of those regulations focus on government ownership in aid management.

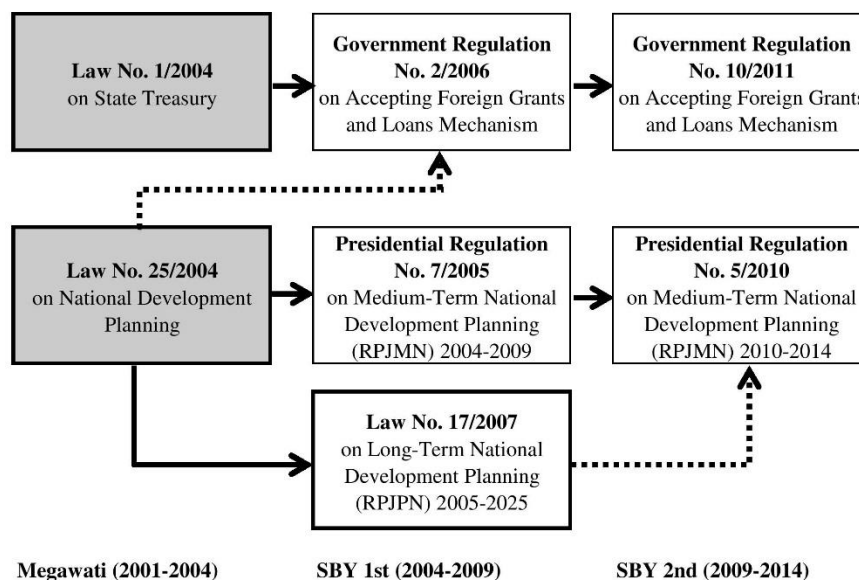


Figure 8-2. Domestic Aid Governance in SBY Administration (Constructed by author)

As a senior Bappenas officer observed,

We felt that the PP (government regulation) was sufficient to accommodate the needs of managing grants and loans at that time.

(Interview with an officer at Bappenas, explanation added)

Indeed, Indonesia was embedded in a situation where two sets of norms and codes were established: the norms enshrined in the Paris Declaration, and the domestic norms. These were created to help to understand the state’s challenges

with global aid governance reform and to justify its actions. Indonesia did not submit to the emerging global aid institution of the PD in 2006, by withholding participation in the first-round Survey. Instead, the SBY administration opted for the utilization of domestic institutions in the reform of aid governance. This can either be interpreted as an expression of full confidence over aid management, or as an eagerness to take full government ownership.

In fact, the decision to utilize domestic institutional capacity-building to manage aid and the emphasis placed on ‘ownership’ resonated well the notion of ‘independence’, which was a historically powerful discourse that generated political credit. Indonesia had been a fast-recovering economy since the Crisis in 1997, and was on-track to be recognized as a middle-income country, implying that ‘ownership’ of its development agenda was essential for SBY in establishing the legitimacy of aid reforms.

The tension between ownership and donor influence, and conflicting interpretations on coordination between the government and donors, was dramatized by the dissolution of the Consultative Group on Indonesia (CGI) in January 2007. As discussed in Section 7.3.2, the long-established donors’ group to help coordinate the flow of foreign aid to Indonesia, was dissolved by President SBY without any beforehand signal and came as a surprise to both donors and government officials. The sudden dissolution of the CGI remains somewhat secretive, as one of senior Bappenas officer recalls:

It was indeed all of sudden. It was right after the meeting with the Head of the IMF (Managing Director Rodrigo de Rato). Even my minister heard the news on the way back to Bappenas from a meeting with SBY (at Presidential Palace Complex).

(Interview with Bappenas officer, Explanation added)

However, the government perceived this long-established donor coordination body as a venue of advantage for donors to increase their visibility and collude against the government, as well as to hinder ‘*berdikari* (standing its own feet)’.

A clue about the CGI dissolution can be found in the explanation from the Head of Bappenas:

Since 2006, in order to improve efficiency and effectiveness of foreign funding utilization to support national development priorities, *Bappenas has intensified bilateral meetings with creditors and donors*. With such regards, the dissolution of [the] CGI forum is *a strategic step to reduce the collective pressure* from the donors. (...)

(Bappenas, Press Release: Head of Bappenas' *Explanation about the Post CGI Foreign Funding Utilization*, 1 February 2007, Document Translated and emphasis added)¹⁷⁸

The tone of this press release is somewhat 'defensive'. Perhaps it was the intention to refute the attacking comments that CGI dissolution had occurred impulsively without proper considerations.

In order to reduce the burden of repayment of foreign loans by the government amounting to about 60 billion USD (as of September 2006), Bappenas also *encourages bilateral talks* with donors, as has been done with Germany and Italy, for the debt swap mechanism.

(Ibid, emphasis added).

Apart from a debate on the government's action toward resisting global norms on aid coordination and the rules set by the global aid principles, the government took the chance of setting the country's own development agenda with preparations being done in advance to the upcoming 2009 RPJMN. Arguably, this development highlights that Indonesia had already been capable of planning its own national development policy. However, the statement "implicitly confirmed the allegations addressed to the Government about Indonesia's development design having been the result of pressure from international financial institutions and bilateral donors all along" (Wahyu 2007).

The absence of the CGI implied a shift in aid management and coordination from donor-driven multilateral platforms to bilateral proceedings. Arguably, this can

¹⁷⁸ Source: https://www.bappenas.go.id/index.php/download_file/view/10894/3206/

be considered a more balanced relationship between a donor and the government, taking more ownership and independence by having one-to-one negotiation with a donor. The government's strategic action was widely welcomed by the domestic media and Civil Society Organizations (CSOs). It was viewed as a symbolic event, marking Indonesia's growing independence in aid management as a state actor which assumed full ownership of its own development agenda.

In sum, one reason for Indonesia's non-participatory behaviour in the PD Survey may be the contingency from the Indian Ocean Tsunami and subsequent recovery efforts in Aceh. However, this cannot constitute a complete explanation. What needs to be further understood is the government's reluctance and ignorance caused by Indonesia's lack of opportunities to shape the global agenda and protocols, eagerness to ownership in aid management, and conflicting principles of PD. SBY's dissolution of the donor coordination body also reflects the historically evolved tension between donors and the government, which has exhibited a strong state identity of ownership and individuality since becoming independent in 1945.

8.3. Phase 3: Compliance and AIMS (2009 - 2011)

Emphasis on ownership in the Accra Agenda for Action (AAA): The AAA adopted at the 3rd HLF in Accra, Ghana in 2008, concluded with a supplementary provision to the PD principles, highlighting the role of recipient countries in building domestic institutional capacity. Specifically, as seen from the excerpt below, the principle of 'ownership' is emphasized in the AAA:

(...) stronger leadership (of recipient countries) on aid coordination and more use of country systems for aid delivery

(OECD 2008c).

The AAA was a result of a series of preparatory meetings and workshops, during which the agenda-setting and amendment of the PD principles for the 3rd HLF

were sufficiently communicated among stakeholders in the global field of aid. The implementation of the AAA was followed by full Indonesian endorsement in 2008. Unlike Rome and Paris, it was evident that Indonesia, as a recipient government, had increased its involvement in the process of shaping the AAA. Indonesia achieved this by finding common ground with the norm entrepreneurs of aid effectiveness, as well as with other emerging actors in the global field of aid, while attempting to secure the legitimacy to justify its preference for the domestic reform agenda. This emphasizes the discourse of ‘ownership’ in aid management. Through the series of meetings for the 3rd HLF in Accra, the macro-level negotiations to understand the positions, actions and intentions of both the Indonesian state and the global aid governance structure (led by key norm entrepreneurs of aid effectiveness), respectively, took place (Hayman 2009; OECD 2008c). The efforts to reach an agreement on the AAA involved the modification of policies without undermining the essential principles of both parties.

There was, however, rising concern and pressure from the international aid community concerning Indonesia’s non-participatory stance on the PD Survey and its low-score in the 2nd PD Survey.

AIMS [was] born primarily due to the feedback and critic expressed after the 2nd monitoring of Paris Declaration implementation in 2008 and progress of Indonesia towards achieving the roadmap set for 2011 by the OECD measured by the 12 indicators for aid effectiveness.

(GTZ, Final Report on a TC-Measures: Capacity Control to Improve the Effectiveness of Development Cooperation, *Schlussbericht zu einer TZ-Maßnahmen: Kapazitätssteuerung zur Verbesserung der Wirksamkeit der Entwicklungszusammenarbeit*, 2011,7)

From Indonesia’s perspective, the increasing criticism heightened the risk of veering further away from the global aid effectiveness norm and the rules defined by the PD Survey, as SBY’s administration was trying to avoid being seen as submitting to international pressure. Indonesia expected the PD community to respect and accept its concerns about ‘ownership’. The emphasis on ‘ownership’ in the AAA provided the legitimacy for Indonesia to start

engaging in the second PD Survey in 2008 and to maintain relations with development partners under the AAA, including the implementation of an AIMS that had been recommended by both the PD and the AAA.

Norm localization - Jakarta Commitment: With this backdrop of internalizing the process of aid effectiveness norms, norm localization is first evidenced in January 2009. The Indonesian government and its development partners signed a local declaration – the Jakarta Commitment – which commits all stakeholders to the implementation of aid effectiveness norms and rules underpinned by the PD and AAA. Once Indonesia made the decision to turn back to the global aid governance, Indonesia sought the leadership in the norm localization process. The government took the leadership in returning to the aid coordination table and commissioned the Jakarta Commitment, signed by 22 development partners, to bolster the implementation of the AAA principles at the national level. The Commitment defines all participating development partners’ policy direction towards better aid management, as well as enhanced donor coordination among stakeholders.

The government took the initiative to frame the external norm of aid effectiveness and to partly reconstruct it so it would fit into the local context. In the preface, the Commitment particularly highlights Indonesia’s role in the global field of aid:

Indonesia is a signatory to the Paris Declaration on Aid Effectiveness, and is committed to the aid effectiveness principles and commitments contained in the Declaration. Indonesia has been an active participant in the regional preparations for the Third High Level Forum on Aid Effectiveness, by engaging with global mechanisms (including the OECD DAC), and through dialogue with other countries in the Asia region. The Government is committed to take forward the Accra Agenda for Action as well as the Monterrey Consensus and the subsequent of the 2008 Doha Declaration on Financing for Development.

(Jakarta Commitment, 2009)

In Section I – ‘Strengthening Country Ownership over Development’, the document confirms the importance of aid effectiveness and the government’s capacity building in terms of aid management.

The Government will establish a mechanism at country level to determine, and to review, *how effectively the Government and development partners can and do contribute to capacity development*. This mechanism will be transparent and evidence based, involving country level stakeholders, and covering the range of capacity development partners. The Government and development partners will make use of this mechanism to monitor, measure, and potentially correct the *effectiveness of their support to capacity development*.

(Jakarta Commitment 2009, emphasis added)

This emphasis on the emerging roles and government ownership was supported by domestic stakeholders, including the media and the Parliament, in spite of the competitions in the then upcoming Presidential election on 8 July 2009.

All donors, both bilateral and multilateral institutions agreed on a commitment of independence and the authority to use foreign loans or grants. (...) Under such agreement, donor’s assistance policies must be in line with [Indonesia’s] national interests and priorities. The development and implementation is led by the Indonesian development program. Donors are to systematically reduce their tied assistance activities. (...) later on, all incoming aids must follow national scenarios, procedures, and requirements.

(Tempo.co, 13 January 2009, Foreign Donors Can No Longer Dictate, *‘Pendonor Asing Tak Bisa Mendikte’*)¹⁷⁹

In order to provide support in the facilitation and coordination of activities to achieve the objectives of the Jakarta Commitment, the ad hoc governmental agency, the Aid for Development Effectiveness Secretariat (A4DES) was established.¹⁸⁰ The Transitional Multi Donor Fund (TMDF) for A4DES was setup and managed by the UNDP (UNDP 2009):

¹⁷⁹ Accessed on 22 August 2017. <https://m.tempo.co/read/news/2009/01/13/056154992/pendonor-asing-tak-bisa-mendikte>

¹⁸⁰ Bappenas Minister issued a Ministerial Regulation No. 33/M.PPN/HK/04/2009 on the Establishment of A4DES on 2 April 2009.

[T]o ensure that the *government of Indonesia's institutions have the capacity to take full ownership and to lead the aid coordination and aid management processes*, the Aid for Development Effectiveness Secretariat (A4DES) is established.

(UNDP 2009, *Transitional Multi Donor Fund for A4DES*, emphasis added)

One of the key activities following the establishment of the Jakarta Commitment was the implementation of the AIMS. The AAA reaffirmed the need for AIMS in aid management and coordination to strengthen “*the quality of policy design, implementation and assessment*” (Article 23-a); to ensure that donors aligned their monitoring exercises with the recipient government and support the building of national statistical capacity and information systems, including those for managing aid’ (Article 23-c); and to conduct mutual assessment reviews (Monitoring Survey and DAC Peer Reviews) “*based on country results reporting and information systems complemented with available donor data and credible independent evidence*” (Article 24-b) (OECD 2008c).

AIMS as a Symbol of the Government's Efforts in Aid Effectiveness: The implementation of the AIMS was part of a series of efforts by the Indonesian government to localize the aid effectiveness norm. The government seems to have been a willing actor in the domestic internalization of the global norm and its adaptation to the local context, as it recognized the significance of ODA as a major funding source of Indonesia's development activities, and more importantly, the importance of ownership in the aid mechanism.

The AIMS was a demonstrative technological artefact of the norm localization of global aid principles. It was designed according to the global aid principles (the PD and the AAA). By using AIMS, it was anticipated that implementation of the Paris Principles would be as follows:

1. *Ownership*: providing a decision-making tool for the government to coordinate development activities in the respective country;
2. *Alignment*: evaluating the alignment of donor-funded projects with the national strategies and priorities;

3. *Harmonization*: enhancing donor coordination by identifying the pattern of aid flows, gaps, duplication of activities, and priority areas, so as to enable effective distribution of aid funds;
4. *Managing for Results*: tracing the results of development projects, in order to support decision making and evaluation;
5. *Mutual Accountability* among recipient government and development partners.

In addition, the AIMS was designed to electronically conduct the PD Survey in accordance with 12 PD indicators and the CRS aid reporting standards. In 2009, there was growing discussion on the validity of the CRS and on the formation of the emerging aid reporting standard, the IATI, which had been shaped by the interactions of powerful actors in the global field of aid¹⁸¹. However, there was no significant reluctance from the government or other domestic actors in accepting the rules given by the global aid institutions in the domestic arena. The AIMS used the international meta-data standards on aid reporting and classification of aid activities (CRS) for structuring and storing aid data, and the reporting functionalities of AIMS, which followed the PD indicators.

The AIMS was set up as a single-window system for monitoring and evaluating ODA. As explained in detail in Section 7.3, the AIMS was implemented and managed by Bappenas. The AIMS was intended to assist the Indonesian government with the management of aid flow, and donors with improved coordination for effective aid. In particular, the system was used by development partners and the government of Indonesia for completing the Online Survey on Monitoring the PD in 2011.

“To support the review of progress in the Jakarta Commitment and progress towards associated targets, the government will establish an integrated Aid Information Management System”

(Jakarta Commitment III-b)

¹⁸¹ For the comparison of the OECD-DAC Creditor Reporting Systems (CRS) and the International Aid Transparency Initiative (IATI) standards, please see ‘

The AIMS was designed according to the global aid principles (the PD and the AAA) as well as according to the Jakarta Commitment. In the establishment of AIMS, the convergence of two distinctive codes of sense-making, whose meanings become simultaneously inscribed into the design of technological systems, was identified. The design and use of AIMS, and its attendant, serve to justify the legitimacy of global aid governance at the local government level, while advocating for ‘stronger leadership’ by the recipient government in shaping AIMS.

We therefore, would like to start with the Official Development Assistance (ODA), which is *under government control*. There are three parallel measures currently undertaken in A4DES to improve the accountability and transparency of aid in Indonesia. First is the establishment of dialogue with a wider stakeholders, second is the improvement of aid registration mechanism and regulation to administer aid into government budget and lastly the development of *our own Aid Information Management System (AIMS) ... as a single system for implementation and monitoring and evaluation of external assistance*.

(Dr. Dedi Masykur Riyadi, Bappenas, Indonesian Delegation at High Level Symposium on Accountable and Transparent Development Cooperation, in Vienna, 12-13 November 2009, emphasis added)

Technical rationality does not govern the construction of teleological artefacts – contrastingly, what appears significant are the external forces originating from the global arena, according to the socio-technical point of view. These, as well as domestic politics both play a vital role in structuring technology in its shape and form. From the perspective of the SBY administration, the AIMS served to endorse the political campaign for ‘independence/ownership’ and ‘stronger international leadership’, while keeping the commitment to the PD process intact. The willingness to commit to global aid governance while emphasizing ownership, as well as, the symbolic role of AIMS to achieve both, is well presented below:

This agenda is furthermore driven by the *strategic role Indonesia can play in international forums as a major Middle Income Country* ensuring the development paradigm while focusing on poverty eradication also addresses concerns and critical development issues of this large group of countries receiving ODA. (Ibid, emphasis added)

Furthermore, advertising its efforts in aid effectiveness and the AIMS implementation, Indonesia expanded its role in shaping the global aid agenda, and became a co-country chair on the Working Party on Aid Effectiveness hosted by the Development Assistance Committee (DAC) in preparation for the HLF in Busan 2011. The Committee for Assessing Progress, co-chaired by Ikufumi Tomimoto (Japan) and Benny Kusumo (Bappenas), published the report on Progress in Implementing the Paris Declaration 2011. Through its involvement, Indonesia gained a chance to not only show its efforts and commitments to the global aid governance, but to also show leadership in Busan in 2011.

Although the Indonesian government was willing to lead both the process of the localization of aid effectiveness norms and the implementation of AIMS, it was not very active in shaping the technology artefact. As soon as Bappenas secured the disbursement of the funding by GIZ and took ownership in hiring local IT personnel, the level of engagement coming from the government in shaping AIMS did not increase. At least in part this reflects that the government was relatively more focused on funding, keeping its ownership in the process of AIMS implementation, and participating in the Survey to achieve legitimacy in the global field of aid, than the on actual shaping process of AIMS and its continuous development for managerial purposes. An AIMS developer recalls:

Sometimes I was also not sure whether this [AIMS] is important for them [government] or not, because I thought that survey needed to be a success, and they used this AIMS as survey tools. The daily support and guidance from them was less than I expected. But later, when it was finished for the handing over and launched with the formal ceremony, then I just thought, ‘wow, so this is important for them’. (...) [Our] team all went there together. A lot of donors’ experts came to the event.

(Interview with an AIMS developer)

8.4. Phase 4: Disuse but Use (2012-2013)

As discussed, the Indonesian AIMS was designed as a web-based system with the goal of allowing all donor agency workers and citizens to access aid information, and to therein provide greater transparency and better coordination.

(...) The goal is two-fold. Firstly, to examine the current portfolio of project and its quality in terms of long term Aid Effectiveness. Secondly, to enable the Government as well as development partners to discuss the Aid Effectiveness agenda and prepare for the next edition of the OECD survey.

(AIMS Progress report prior to the OECD Survey 2011)

The short-term objective of AIMS, however, was a computerization of the Survey on Monitoring of the PD Phase 3 prior to the Busan HLF in 2011. After completion of the Survey Phase 3, for which the government and donors used the AIMS, the transition to utilising the system as a long-term aid management platform was not very successful. The following discussion about this goal transformation is based on three sub-sections.

Resistance to Change: The AIMS was intended to be transitioned and to be sustainably used as a national single window aid management system. However, there was challenge in converting the major role of the AIMS from conducting the PD Survey, to the role of a monitoring and evaluation system of ODA. The challenges may have been the result of social and material inertias of the past. The AIMS developer recalls:

Before the end of the project, there is a point from Bappenas asking for M&E (monitoring and evaluation) function. But, [a representative of GTZ] said it must be a big thing which could not just be implemented into the software. We would have needed to discuss details before starting AIMS. But, Bappenas maybe thought that maybe some part in AIMS could reflect what we newly need for further purpose (...)

There was a chance to develop AIMS further as an M&E system. For me as a developer, creating a system that can work for people's need is interesting. So, we discussed with the GTZ but they thought it was not possible. It needed to be a new different project for M&E part. But, [a Bappenas officer] saw that it could be inserted here and there.

(Interview with an AIMS developer)

Conflicting Interpretations: As discussed, the shaping process of technology is not purely technical, but rather social; the bigger challenge comes from social and institutional inertia. While the AIMS was actively used for the PD Survey, several challenges were identified. The use of AIMS had only confirmed the challenges, but also did not convince stakeholders that AIMS would successfully solve the identified problems. The internal report, titled ‘Progress report prior to the OECD Survey’ written by the AIMS Task Force Team, summarized five “lessons learned” from the preliminary online survey 2009 for aid effectiveness analysis as below:

- *Low level of data completion:* Seven development partners out of 21 participating in the survey are unable to fill the data due to various reasons. Some of the data is inaccurate because the figure is either incomplete or incorrect.
- *Difficulty in meeting deadlines:* (...) donors were given two months to complete the data. However, some of them were unable to meet the deadline due to various reasons, including the difficulty of providing data at the project level.
- *Lack of accuracy and uneven understanding of the questionnaires:* Some were unable to provide accurate figures for certain indicators. Lack of understanding and coordination also caused inaccuracy of data and incomplete scope of the survey.
- *Lack of resources among donors:* Lack of resources is mentioned as a cause of their inability to meet deadlines. (...) but some [who are in charge of aid reporting] are from less relevant areas of work. Many of them work full-time in the exercise, while others only partially dedicate their time.
- *Donor fatigue:* Some donors already have their own system of aid monitoring. Major donors such as the World Bank, ADB, JICA, and some other donors for example, have an existing system of aid monitoring - internal or external - which records information around their assistance in Indonesia at the project-level. The online exercise means these donors have to dedicate additional resources to fill information required in AIMS

(AIMS Task Force, 2011, 27-28).

The report primarily focuses on managerial challenges on donor's reporting of aid data. However, more fundamental institutional problems can be derived from this too, such as contradictory pressures from the PD, conflicting interpretations on aid effectiveness norms, in particular on aid coordination and the donors' reluctance to share information (Thornton & Ocasio 2005; Barnett 2005).

As pointed out previously, the PD was sometimes criticized for the challenges experienced in the achievement of goals in practice (Sjösted 2013), its technocratic orientation, conflicting or misleading principles (Hayman 2009), as well as the lack of involvement of non-OECD DAC emerging donors and CSOs.

Indeed, there were conflicting interpretations of the aid effectiveness norms between the government and donors. It might derive from the heterogeneity of beliefs and views specifically on aid coordination. There is certainly a strong epistemic community in the donor's side that supports the notion of aid coordination as a rational choice mechanism to minimize transaction cost. Many of government officials I interviewed, however, appeared to be somewhat skeptical about the PD principles.

There are always people who say that we need to have better coordination. Because (aid) projects are not collaborated. And we can work together better. I don't ascribe that.

(Interview with a Bappenas officer)

Donors can bring different project and suggest a good way and bid for competition. We can choose the best one among them like shopping.

(Interview with a Setneg officer)

Interestingly, even officials in donor agencies, who seemingly appeared to be in agreement with the global aid principles, openly expressed hesitation their validity and on the effects of aid effectiveness norms in their interviews. One stated:

Why do we have to have a coordination? Why not having a health project cluster and overlaps between donors in a region with higher infant mortality?

(Interview with a Bappenas officer)

Ideally, the multilateral development funds and donor coordination body would provide a platform for healthy competition between donors and collaboration:

One of the purposes of the multilateral trust fund is actually energizing competitions between donors to financially support the best proposal submitted by the government.

(Interview with a Bappenas officer)

However, Birdsall (2004:9) comes to mind who observed,

The donors are neither competing nor collaborating. They are in effect colluding – something easy to do for suppliers in the absence of a competitive market. The proliferation of colluding donors (i.e. the tendency of donors to operate in many countries and in many sectors within countries) creates what is now called “fragmentation” at the recipient country level.

(Birdsall, 2004:9)

It is not a matter of how competition or coordination can enhance effectiveness of aid, but rather of who has institutional power and control in the aid mechanism. Different interpretations from stakeholders were identified including from the government, AIMS developers, and funders.

Donor’s reluctance to information sharing: Donors were in general not very pro-active when it came to aid reporting to the AIMS. The politics of donor coordination has often been discussed (Chandy & Kharas 2011; Winters 2012). In addition, another reason explaining the reluctance to information sharing may have been the emerging trend toward the donors’ open aid platform, as discussed in Section 6.2.3, since the World Bank started the open data initiative and ‘open aid’ platform visualizing all of the Bank-financed activities for the first time in 2011. In 2012, some donors started to establish their own information system of monitoring their worldwide aid activities, which also included the project-level information in Indonesia. For some donors, continuous use of the AIMS implied the need for donors to dedicate additional resources in order to input the information required by the AIMS. One of A4DES officers recalls:

Managerial logic was gone, and only a symbolic one remains: After the completion of the third PD Survey, the AIMS remained like a ‘zombie’ without any ‘fresh’ data. Nevertheless, the implementation of the AIMS and Indonesia’s experience with the use of the system in the Survey of the PA as a ‘symbol of the aid effectiveness effort’, played an important role in achieving legitimacy as well as good relations with the external environment in the global field of aid. In addition, utilising the AIMS, the Online Survey was conducted using 2009 data, and the analysis of the quantitative indicators demonstrated the notable improvement made by Indonesia in some indicators (Bappenas, 2011).

With the AIMS as a ‘zombie’, Indonesia’s government officers created legitimacy in its disuse, and criticized the donors’ lack of commitment in providing comprehensive and timely aid information.

For the 2009 exercise, donors were given two months to complete the data. However, some of them were unable to meet the deadline due to various reasons. One reason has been the difficulty of providing data at the project level. Unlike the previous survey where donors were requested to provide total figures for the Paris Declaration indicators, the online exercise using the AIMS module requires more detailed information at the project level.

(Bappenas, 2011 Progress Report prior to the OECD Survey)

Moreover, the lack of a clear timeline for the completion of the survey as well as newly introduced alternatives to fulfil the task such as the short and offline version of the Online Survey have caused the delay of the exercise.

(Ibid, 2011)

Despite clear messages from the government that the 2009 Survey is ultimately important for monitoring aid effectiveness in Indonesia, apparently some donors understood erroneously that the exercise was optional and that the ‘real’ survey would be conducted by the OECD in 2011 with data from 2010.

(Bappenas 2011, Online Survey 2009 Preliminary Aid Effectiveness Analysis for the Paris Declaration Monitoring)

It is crucially important that the donors reaffirm their commitment to participate in the 2010 Survey and fulfil their initial commitment agreed with the Jakarta Commitment of January 2009.

(Ibid, 2011)

According to several donors, challenges arising from the lack of resources resulted in their inability to meet deadlines. Donor agencies typically assigned responsibility for the PD Survey and data provision into the AIMS to one or two persons. Many of them were from the monitoring and evaluation unit, but some were from divisions with little or no connection to the work of aid data reporting.

(...) we didn't have a fulltime employer in the exercise, like statistician or economist. We only partially dedicate our time for the exercise.

(Interview with aid expert in KOICA)

What is important is not 'whose fault was bigger', but that no stakeholder was actively making an effort to solve the commonly identified problems. Since the launch of the AIMS in Jakarta in June 2011 and the subsequent meetings for completing the third PD Survey, no meeting was initiated, or arranged by either donors or the government side. Rather, all stakeholders arguably agreed, passively, with the status 'disuse'.

This section has discussed three aspects of the contrasting short and long-term goals of AIMS. With the AIMS not being used significantly in 2012 and 2013, the government's lack of capacity to manage the systems and further develop came at risk of criticism. In the next section it will be discussed how Indonesia as the strategic agency found alternative legitimacy in the global field of aid, through shutting down AIMS and norm subsidiarity.

8.5. Phase 5: Moving Away from Donor Driven Systems and Norms Subsidiarity (2013 - Present)

After the completion of the PD Survey in 2011, AIMS was obviously not successful in taking the next step to becoming a long-term ODA management system, as initially had been hoped. The results of the Survey were published in the Fourth HLF in Busan, Korea in December 2011 in which I also participated as one of the representatives of the World Bank.

The *Busan High Level Forum on Aid Effectiveness* in 2011 and year of 2012 marked a paradigmatic shift in the institutional logic of global aid governance (Mawdsley et al. 2014). The Busan Forum was the culmination of a year-long process of consultations and negotiations, involving not only major OECD DAC donor countries and international organizations, but also diverse stakeholders such as civil society organizations (CSOs), the private sector, and emerging powers (Kim & Lee 2013). This last HLF, characterized as the move towards ‘inclusive development’, resulted in the conclusion of the Busan Partnership Document which highlighted two significant changes (4th High Level Forum on Aid Effectiveness 2011). The first is the shift in focus from ‘aid effectiveness’ to ‘development effectiveness’. In more detail,, traditional aid, ODA, is just one of many development initiatives, alongside trade, foreign direct investment, and technology transfer, in which convergence is needed to create synergy. Another shift was the growing emphasis on the role of the ‘emerging powers’ including CSOs, the private sector, and most importantly, emerging non-DAC donors. These new shared understandings become the logic of a new institutional arrangement – the *Global Partnership for Effective Development Cooperation (GPEDC)*, officially launched in 2014 (GPEDC 2014).

In this transformation from the global field of aid from the HLFs on Aid Effectiveness to the GPEDC, Indonesia sought to establish its position in the field and find alternative legitimacy. One of the domestic bases for this was the changing relationship between the government and its donors (Prizzon et al. 2017). The aid landscape to Indonesia and the relationship between the government and its development partners, also shifted during this transition. For example, the volume of ODA fell when Indonesia graduated from the International Development Association (IDA) in 2009. Prizzon et al. (2017:24) argue that “Indonesia seems to have adopted the more pragmatic ‘management’ of the consequences of an ever-changing context.” After SBY was re-elected in October 2009, new government priorities and negotiations on foreign aid reflected Indonesia’s new middle-income country status.

As the Chair of ASEAN from 2011 to 2012, and the host of *South-South Cooperation High Level Meeting on Country-Led Knowledge Hubs* in Bali, on 10 July 2012, the state saw an opportunity to promote Indonesia's leading roles in the global field of aid. At the SSTC meeting in Bali, the Head of Bappenas, Armida Salsiah Alisjahbana boldly announced that:

Indonesia is no longer a recipient country of aid from the donor countries, but we are gradually becoming a donor country in those three areas [of development, democracy, governance and peace-building; and economic management policies for both macro and micro finance.

(Antaraneews.com on 10 July 2012, Translated)¹⁸²

Indonesia's advancing status to middle income country (MIC) and the G-20 membership has helped it to play its role in various international forums to achieve national development targets. The SSTC is one of the means of empowering Indonesia's role as donor to developing countries. The SSC facilitates cooperation amongst developing nations to build collective independence which would strengthen developing countries' position in international forums.

(Interview with a Bappenas official)

In fact, as discussed in Section 7.1, Indonesia's leadership in the SSC can be traced back to the Bandung Conference in 1955 as the milestone of the establishment of Non-Alignment Movement (NAM) in 1961 and as the origin of the SSC, discussed in the previous section, The SSC is a continuation of the idea of development cooperation among developing countries that originated from the Bandung Conference in 1955.

With this strategic turn, Indonesia continued to actively engage in taking a leadership role in international arena. In 2013, Indonesia also became the Co-chair of the Open Government Partnership, a new initiative aimed at promoting the use of open data and enhancing 'transparency', 'participation' and 'collaboration'. This also greatly influenced the shaping of the emerging notion

¹⁸² 'Menteri: Indonesia Jadi Pusat Pengetahuan Dunia [Minister: Indonesia Becomes the World's Hub of Knowledge]', Antaraneews.com, 10 July 2012, retrieved on 17 May 2017 from <http://www.antaraneews.com/berita/320755/menteri-indonesia-jadi-pusat-pengetahuan-dunia>

of ‘open development’ in the global field of aid (Linders 2013; Smith & Reilly 2013).

In this turn, the local institution which had localized global norm of aid effectiveness, the Aid for Development Effectiveness (A4DES) Secretariat, gradually lost its position in domestic aid governance as well as in donor coordination activities. One person who used to work for the Secretariat recalls:

It was unfortunate. I was really sad when we realized that nobody cared what we do. We couldn't get the funding either. Our champion (in Bappenas) had other things in mind, so it was like, too bad. Plus the GPEDC started getting really hectic, that's basically the last six months of A4DES was to support GPEDC. That was not our original mission at all. (...) It is funny that A4DES was dissolved in 2013. Because Jakarta Commitment was supposed to be active at least up until 2014. We were closed in December 2013. Like, literally a year before. We were confused. What was the purpose of A4DES then?

(Interview with an aid expert at development agency, who formerly worked for the A4DES, Clarification added)

From the perspective of A4DES, the expected organizational outcomes, aid effectiveness and coordination had not been achieved with incomplete missions. However, from the perspective of the government, the story ironically shows how the government strategically and adjustably shifted its focus in the global field of aid.

In 2013, there were a lot of the steering committee meetings on the way to GPEDC. It was not an open- member meeting. Indonesia hosted, I think, the second meeting in Bali. It was chaired by Bappenas Minister Armida and other co-chairs, Justin Greenly from the UK and Ngozi Diwala from Nigeria. This was why exactly BAPPENAS was busy with GPEDC. Even staffs in A4DES and other ministries were mobilized to support the GPEDC.

(Interview with an officer at Bappenas, Clarification added)

Until the first GPEDC in Mexico City in 2014, Indonesia, together with the UK and Nigeria, played the role of Co-Chairs of GPEDC. As the A4DES staff recalls, the head of Bappenas, Armida Alisjahbana, was appointed as Co-Chair of a 15-member Steering Committee, and pushed forward the South-South Cooperation agenda as a main theme for GPEDC 2014. The new vision of

Indonesia was affirmed by high-level government officers across Ministries including the MoFA the Director for Technical Cooperation, Siti Nugraha Mauludiah, emphasized in a media interview in Jakarta, 5 June 2014:

Indonesia at the moment is not only a recipient country, but we have also been able to become a donor country.¹⁸³

(Sindonews.com, 5 June 2014, Interview with Director Mauludiah, Ministry of Foreign Affairs, translated)

Interestingly, Indonesia's administration frankly admitted to political motivations in its efforts in providing aid in the SSTC. Director Mauludiah mentioned in an interview¹⁸⁴:

Although our donations (Indonesian South-South cooperation) are only limited to technical assistance, the benefits can be in political and economic terms.

Political, of course, for the purposes of the candidacy in the UN, if we have the African Union [support], of course it's for a political purpose. Secondly, for the economic potential of a market or investment opportunities.¹⁸⁵

(Ibid, translated and modified for readability)

Accordingly, Pujayanti (2015:1) argues that under the SBY administration, foreign policy focused on the implementation of soft power policy by offering assistance and performing its new role as donor to developing countries through SSTC. Indonesia's active role in the SSTC was viewed by political leaders as a means of yielding political benefit or creating a positive image for the country.

¹⁸³ 'Tak Cuma Menerima, Indonesia Kini Jadi Negara Donor [Not Just Accepting, Indonesia is Now a Donor Country]', Sindonews.com, 5 June 2014, retrieved on 17 May 2017 from <https://international.sindonews.com/read/870497/40/tak-cuma-menerima-indonesia-kini-jadi-negara-donor-1401958925>

¹⁸⁴ 'Sebagai Negara Donor, Indonesia dapat Keuntungan Politik dan Ekonomi [As a Donor Country, Indonesia Earns Politics and Economic Gains]', Metrotvnews.com, 5 June 2014, retrieved on 17 May 2017 from <http://news.metrotvnews.com/politik/4KZ7W8wN-sebagai-negara-donor-indonesia-dapat-keuntungan-politik-dan-ekonomi>

¹⁸⁵ Original quote: "Politis tentu saja, untuk keperluan pencalonan PBB, kalau kita pegang Afrika Union, tentu saja ini tujuan politis. Kedua, potensi ekonomi peluang pasar atau investasi."

As Indonesia became the leading actor in the reform of global aid institution since 2011, it particularly pushed its subsidiary norms of South-South cooperation. Indonesia's AIMS, which had been acting as a symbol for Indonesia's commitment to donor-driven norms of aid effectiveness, became increasingly irrelevant in the changing environment. The environment was characterized by new codification schemes to justify the legitimacy of aid governance, which stressed alignment with new codes such as 'aid heterogeneity', and 'emerging powers'. The system was shut down in 2013 with parts of its databases moving to another division in Bappenas, which attempted to make use of remaining resources for internal aid management purposes, including the SSC.

The current administration, led by President Joko Widodo (2014-present), built on the strides made during the SBY administration. The former Bappenas Minister, Andrinof Chaniago (2014-2015), re-affirmed the increasing relevance of the SSTC both in Indonesia's foreign policy strategy and in overall global welfare (Ministry of Foreign Affairs 2015). The notion of SSTC challenges a conventional imbalance of donor-recipient relationships. Indonesia continues to pursue norm subsidiarity, arguing the SSTC is a mutually beneficial solution that benefits donors as well as recipients (Ministry of Foreign Affairs 2015).

There are opportunities to enhance and improve the bridges between North-South and SSC. Triangular cooperation could serve to promote *win-win-win* solutions, in which all partners (traditional donors and developing countries) learn, contribute and share responsibilities. We define SSTC as an arrangement under which donor and international organizations support and complement specific South-South cooperation programs or projects by providing technical, financial, and material assistance.

(Task Team on South-South Cooperation (2011), *Unlocking the Potential of South-South Cooperation: Policy Recommendations from the Task Team on South-South Cooperation* p.1)

Minister of Foreign Affairs, Retno Marsudi, also emphasized the importance of the SSTC. She indicated that the sharing of knowledge and technology among countries served to strengthen their solidarity, and thereby provided a way to achieve the mandate articulated in the Constitution Preamble:

(...) to participate toward the establishment of a world order based on freedom, perpetual peace and social justice, therefore the independence of Indonesia shall be formulated into a constitution of the Republic of Indonesia which shall be built into a sovereign state (...)

(The 1945 Constitution of the Republic of Indonesia, *Pembukaan Undang-Undang Dasar*)

Indonesia renewed its commitment to the mandate on the 60th anniversary of the Bandung Conference, when it hosted the Asia-Africa Summit and the Exhibition of SSTC in Jakarta in 2015.

The discussion of institutional change for aid management in government, particularly the need of a single agency, dealing with SSTC as an emerging donor, as well as domestic management of foreign aid to Indonesia, is a current issue. However, the idea has not been realized due to the complexity arising from the dynamics of institutional resistance including internal politics and varied ministerial responses, particularly by the ‘big 4’ – MoF, MoFA, Bappenas and Setneg as discussed in Section 7.2.1.3 in aid management, and internal politics (Jermier et al. 1994; Oliver 1991). Bappenas, which has been leading aid management and SSTC, is arguably active in becoming the national single agency, while other ministries seem reluctant to give into this institutional change, having turf protection, particularly between Bappenas and the Foreign Ministry regarding the SSTC.

During the process in which the international community searched for new sources of legitimacy to justify the institutionalization of aid governance, the Indonesian state agency can be clearly seen as influencing the understandings of contingent situations while at the same time being shaped by the same international context in which it participates. In this process, the contingency that caused the shutdown of the AIMS comes from the shifting discourses of aid governance that call for the ICTD researcher’s critical engagement with the structures of global political economy.

8.6. Summary

I have de-constructed and explained the process of AIMS implementation, its use, and shutdown in the case of Indonesia. So far I argue that understanding the failure of AIMS in Indonesia requires a shift in focus from the project's local context to the recursive relationship between the global field of aid governance and the state agency. Tracing the structure-agency relationship between the macro global aid governance and Indonesia as a state characterized by the enduring, contesting, negotiating, and collaborative relationship between the state and the institutional structures of aid, effectively justifies both the implementation and abandonment of the information system. Despite the fact there had been substantial investment and coordinative efforts on the AIMS project, the eventual disuse and abandonment of AIMS is not attributable to anyone in particular. Rather, no stakeholder may be held justifiably responsible for adapting the system to the contingency caused by institutional changes in the global field of aid. Instead, all stakeholders were working together to define and implement a shifting consensus of aid governance characterized by the emerging powers and heterogeneous aid partners.

Chapter 9. Conclusion

This chapter presents the conclusion to the thesis with its final remarks by summarizing key findings and arguments that have emerged from the analyses presented in Chapter 5, 6, 7 and 8. It also discusses the implications of the thesis. It has been found that this study at hand seems to be one of the first comprehensive studies of information systems in the aid sector. I demonstrate that my findings from the review of AIMS and the interpretive case study can be extended to a broader scope of studies, while keeping in mind certain limitations. The findings and results have empirical transferability beyond the single case of Indonesia, to further contexts of emerging economies; they can be transferred outside the domain of AIMS specifically, but can also be applied to better understanding the sustainability failure of information systems.

This chapter consists of five sections and starts with summary of key findings and main arguments of the thesis as a whole.

The second section demonstrates the ‘empirical transferability’ of the findings of this thesis, and discusses how I aim to build on the insights and further develop them. The section extends the theory of technology through investigating the sustainability failure of information systems. It also discusses the implications drawn from the case study of Indonesia to a wider set of phenomena.

The third section then outlines the contributions that relate to information systems research, development practice, and research methodology. Building on the discussion in the first and second section, I discuss the implications that have emerged throughout this study for the field of information systems, more specifically implications for ICTD. Policy-related contributions are made with respect to the implementation and use of AIMS. These are not only limited to Indonesia and emerging economies, but are also relevant more broadly to the field of information systems in developing countries. Beyond theoretical and practical contributions, also the methodological implications are discussed.

Having presented the implications, the fourth section discusses the limitations of this thesis, which are closely connected to the emerging avenues of research which are discussed in the final section.

Reflecting on the limitations encountered during the course of this doctoral research, the fifth section elaborates the future research agenda.

9.1 Key Findings and Central Arguments

This thesis aims to contribute to the understanding of information systems (IS) in aid management and to make sense of the complexity behind their sustainability failure. The investigation aims to address the primary research questions posed in this thesis:

- How can we understand the global diffusion of AIMS?
- Why do AIMS fail to achieve sustainability in recipient countries?

The study empirically shows that the use of information systems in aid management, commonly referred to as AIMS, has been globally diffused. The study identifies 80 cases in 71 recipient countries. Building on the historical analysis of AIMS diffusion in the last two decades, the study identifies that the norm of *aid effectiveness* - aligned with managerial economic rationalism – was a central force contributing to AIMS implementation around the globe. The *Paris Declaration* (PD) served as a *tipping point*, through which this norm emerged, diffused in the global field of aid, and was internalized in many recipient countries by implementing AIMS. This instrumental view on AIMS has been promoted by *norm entrepreneurs* such as powerful donors and MDAs.

While aid effectiveness norms were a central force in AIMS implementation, the complex combination of *isomorphic mechanisms* contributed to the proliferation of AIMS, including coercive isomorphic pressure created by the OECD Survey

on Monitoring the PD; mimetic isomorphism in the transitional economy in late 1990s as well as in the Tsunami-affected countries in mid-2000.

Alongside emerging global aid institutions both the inscribed visions of AIMS, as well as their technological functionalities, have evolved over the past two decades from PC-based AIMS for *good governance* in transitional economies, to web-based AIMS for *aid effectiveness*, to open data-based ones for *open development*. Despite the global popularity, the study identifies that many AIMS have not achieved the outcomes that the conventional technical-rational view anticipates; in fact some even failed to reach sustainability.

Building on this institutional understanding of the global diffusion of AIMS, the study investigates this very sustainability failure. The interpretive case study of Indonesia, where the AIMS was implemented in 2010, used, and then abandoned in 2013, demonstrates a complex process of sustainability failure of information systems, that involved multiple stakeholders at local and macro level, and their relationships within the broad global field of aid.

By tracing the history of global aid institutions and the power dynamics of AIMS, this thesis identifies that unlike other recipient countries, Indonesia, as a state actor, while being influenced by global aid governance, has actively shaped its strategic position in the field of aid. The structure-agency relationship between the global aid institutions and Indonesia, as well as the strategic actions of the state (i.e., reluctance, compliance, and subsidiarity to status-quo norms) effectively justifies the implementation and abandonment of the AIMS. Therefore, understanding the sustainability failure of information systems in developing countries requires a shift in focus from the project's local context to the macro-level dynamic in the global field of aid. In this dynamic, sufficient attention needs to be paid to the role of state, as oftentimes emerging economic powers play not only the role of norm-taker, but also act as institutional entrepreneurs in restructuring the global field.

The role of technology in this power dynamics of global aid relations is identified as multifaceted comprising a mixture of functional, managerial as well as political and symbolic dimensions. Thus, the thesis contributes to the understanding of technology as offering socially constructed meanings and reality. This extends the classical definition of *sustainability failure* in information systems. Although information systems are not being used and may not be serving their original managerial and functional roles, they maintain agency and play a symbolic role through their online presence. In addition, the study at hand argues that sustainability failure cannot simply be considered as a negative connotation, as conventional donor-driven/pre-defined evaluation mechanisms suggest. Rather, it may be the result of local agents (often states) finding alternative legitimacy in the global field. At the same time, this failure could cause left-over innovations domestically.

9.2. Transferability from Study Findings

The study first demonstrates empirically that the use of AIMS, or the information systems used in the management of aid, has been globally diffused. In addition, the study highlights the importance of global aid effectiveness norms in the promotion of AIMS adoption and implementation in recipient countries, and traces the emergence, diffusion, and internalisation of these norms. This thesis aims to understand why a donor-funded information system, AIMS, which was designed to institute the aid principles endorsed by a particular international norm of aid effectiveness, was implemented, used, and then abandoned. This is theoretically significant as it illustrates a specific case of ‘sustainability failure’ of information systems, which is closely related to the constant changes in relations, institutions, and understandings, in the complex global context of the field of aid. Furthermore, the multifaceted role of technology is examined with a discussion on the possible extension of the definition of ‘sustainability failure’ to also include the symbolic role of AIMS through an online presence, even though the original mandate might no longer be fulfilled.

Although an interpretive case study design seeks to understand a particular context, I hope to be able to provide empirical transferability (Miles & Huberman 1994) in order to reach applicable conclusions to broader domains. I also hope to contribute both theoretically and practically to the literature in the area of the use of IS in the context of aid.

9.2.1. Symbolic Roles of Technology and IS Failure

First, I seek to extend the definition of sustainability failure in information systems. Although information systems may not be in use, and may also not be serving in their original managerial and functional roles, they do maintain their agency and play a symbolic role through their online presence. In Chapter 6, I categorized 80 AIMS into the three categories: [A] relatively active and being used, [B] accessible but rarely being used, and [C] implemented once but then shut down. From Heeks' (2002, 2003) view, AIMS in Category [B] (not in active use) and [C] (shut down) cannot be clearly differentiated, however, [B] and [C] do have different symbolic roles.

Information systems may survive (i.e. keep their existence on-line) because they are useful as a management tool. However, even after the systems have proven to be neither functionally nor managerially useful for the achievement of the original outcomes (typically aid effectiveness and NPM principles), some of them maintain the existence without use (i.e., as information systems that are neither used nor updated, but are still on-line), still retaining much of their remaining symbolic meaning. When the systems reach this status, their symbolic role becomes more prominent. The symbolic roles of technological artefacts have been discussed (Winner 1999; Barley et al. 2011; Hirschheim & Newman 1991). Information systems scholars often argue that technology has an inherently political dimension, which makes it possible for different stakeholders to derive different symbolic meanings of technology. High-technology innovations in general, like ICT, can be symbolised as a national vision, development, and hope for the future. It particularly makes technology a symbol which may serve as a central rhetoric in policy agenda settings and political

speech (Amir 2007). To some extent, this has theatrical feature of technologies like nuclear technology, clean energy or smart cities can symbolize make them an ideal driver for the transmission of sensational themes through the media (Acuto 2010; Amir 2007).

In the Kenyan President's speech celebrating the launch of the Kenya Government Open Data Web Portal¹⁸⁶, an umbrella website of e-ProMIS, this notion of technology is well represented. President Mwai Kibaki emphasized the benefit of ICT several times and expressed his pride that Kenya led the 'ICT innovation' in public sector and aid management:

The information and telecommunications sector has continued to open new opportunities in our country. Kenyans are using ICT in innovative ways that are attracting global attention (...) I urge Kenyans to increasingly embrace the use of ICT in all possible sectors of our national endeavor, in order for us to reap the full range of benefits it offers.

(Kenyan President Mwai Kibaki's Speech on 8th July, 2011
at Kenyatta International Conference Centre, Nairobi)

One government official who was leading AIMS project argues that a previous experience of AIMS and its maintenance often symbolize the government's efforts on ICT innovations, as well as help them attract more funding from donors:

We are always interested in new ICT. AIMS is a great achievement for us, as many people think (...) I heard more than 90% of the World Bank projects have ICT components to some extent. It's a matter of funding as well. If you are project leader, you might want to have fancy ICT components to attract more funding.

(A former leader of AIMS Task Force in a Sub-Saharan African country)

The meanings arising from the symbolic roles of technology may have a positive and a negative connotation. If there are more positive symbolic meanings such as 'hope', 'progress', 'high-tech', 'vision', 'efforts', it would be harder to 'kill' the AIMS which is not managerially used, as once it is eliminated also its

¹⁸⁶ Speech on 8th July, 2011 at Kenyatta International Conference Centre, Nairobi

meaning disappears. Similarly, if the meanings – typically monumental symbols of the implementer’s efforts in complying with the dominant global norms – are sufficiently important, the systems may acquire the stability of ‘zombie’ status. In this way, the systems are kept alive as AIMS in Category [B], otherwise they would shut down – or faded away by being abandoned passive-aggressively – by not receiving funding, technical assistance from funders nor putting efforts, staff. Thus, the possibility of ‘sustainability failure’ of information systems emerges – which I define in Chapter 3 as:

A permanent shutdown of IS, which were once implemented, used, but abandoned after a relatively short period (such as three years after the launch), without any transformation, considerable left-over innovation or thoughtful reflection, (e.g. evaluation study, report for future innovation)

It may not be justifiable if one argues that all AIMS in Category [C] follow this logic. However, this conceptual distinction between [B] and [C] is helpful to understanding the multi-faceted role of technology depending on different stakeholders and the context in which the technology is embedded.

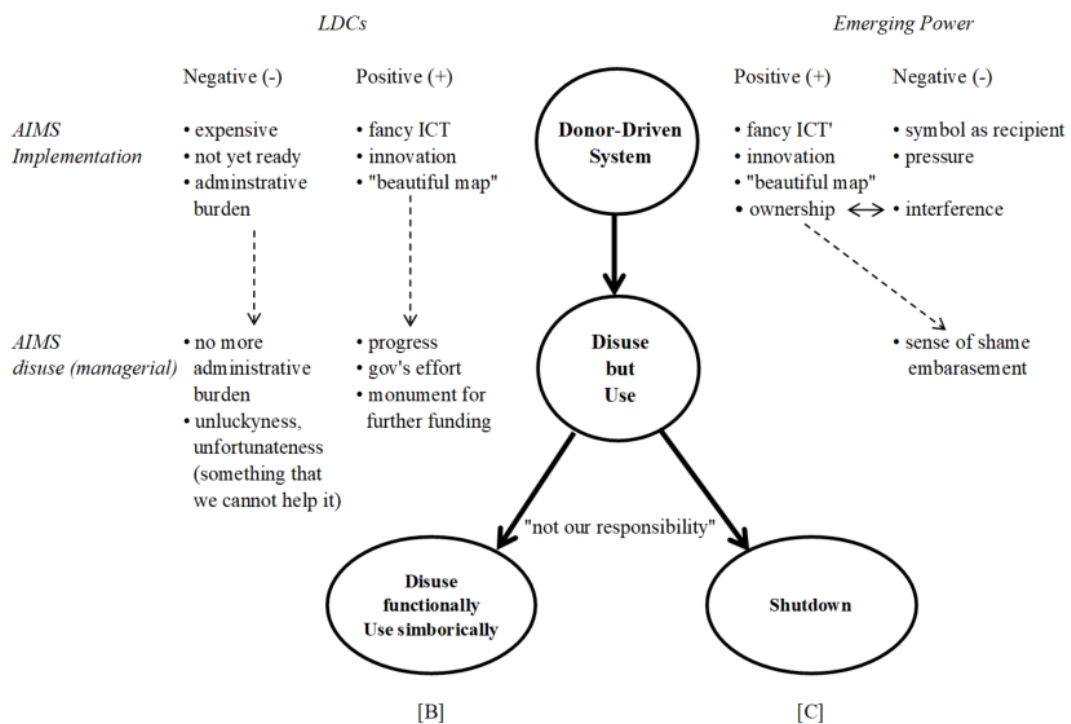


Figure 9-1. Different Meanings of AIMS

As discussed, it emerges in this study that the symbolic and political meaning of technology is one of the main reasons that influences sustainability failure, and helps maintain the on-line presence of AIMS without using it functionally as a management tool.

These findings have implications for our general understanding of information systems failure in developing countries, as well as making sense of the power dynamics surround these systems. The symbolic nature of technology has received relatively little attention in ICTD and IS failure research. Technology itself can symbolize different things for different people (Eoyang 1983). By stating and showcasing AIMS, the government's efforts on aid effectiveness norms such as transparency, coordination, efficiency may be demonstrated and communicated towards people as well as other stakeholders in the field of aid. As Hirschheim and Newman (1991:31) argue "*the value of a symbolic approach lies in its ability to interpret seemingly irrational events as symbols which serve one or more actors' rational functions.*" That is to say, although technology may not be currently in active use, it is seen as a 'great effort' and 'monument of the past', as well as 'hope' or 'vision' for next step. More importantly, although the technology may no longer contribute to 'transparency' in the field of aid, it still serves as a powerful *symbol* of 'transparency'.

Yes, it is unfortunate. But, we learned a lot. We cannot survive without understanding ICT. We are not yet getting the full potential of it, but this is the way we have to go. Next time we will do better (...) because it is a very good system. Nobody wants to kill the system we have worked on. I still remember, when I looked [at the system on] my screen, I was so happy to have this kind of advance systems in my government. It's not just technical tool. It's for transparency. Okay, now we have a lot of problems, but if we improve our technical capacity and the government works harder, we will be able to make a good system again. These days, we talk about open data and big data. These kinds of new technological innovation will help us. There are still many ways.

(A government official in charge of AIMS implementation
in a Sub-Saharan Africa)

9.2.2. Emerging Economies and AIMS Failure

As discussed in Chapter 6, cross-national studies on e-government performance based on multivariable regression analysis often suggest that e-government is more likely to be successful in states, that are wealthy, urbanized, transparent, with higher ICT infrastructure, literacy, government efficiency and low-level corruption (Kim 2007; Relly & Sabharwal 2009; Rorissa & Demissie 2010; Ferro et al. 2011; Gil-Garcia & Martinez-Moyano 2007). In spite of the various confounding factors and a-contextual approach in a cross-national analysis, technical rational approach became an orthodoxy and are often used to justify NPM principles in e-government practice in developing countries.

The findings from this thesis, however, suggest rather contradictory results. Empirical evidence indicates that the correlation between AIMS sustainability/success, and factors frequently used for e-government research, remains unclear in the case of IS in the aid sector. More importantly, most emerging economies fall into the case of ‘abandonment’ category as shown in [C]. The findings also show that it is more likely to find a great number of least developed countries (LDCs) in [A], the category in which AIMS in relatively active use by emerging economies. At the same time, it is more likely to find MICs in [C], rather than [B], groups in which AIMS are rarely used.

In this study, the role of powerful donors and MDAs who served as norm entrepreneurs in the process has been discussed, particularly in relation to international aid principles such as the Paris Declaration, which served as a tipping point in the process of internalisation. The Indonesian case study emphasizes the need for a shift in focus from the local context to the macro-level dynamics at the global level of aid, as well as the role of the state as norm taker, as well as institutional entrepreneur.

AIMS are more likely not sustainable in larger economies with higher government effectiveness. This includes emerging economies like Indonesia

(GDP: 9323 billion USD), India (GDP: 22,640 billion USD), South Africa, Thailand, Philippines, and Vietnam, based on the findings discussed in the previous chapters. This insight calls for particular attention to be paid to the role of the emerging states in the global field of aid, like the case of Indonesia, which has been actively and strategically engaged in the changing global field of aid, by localizing the dominant aid principles, and by promoting subsidiarity norms of South-South Co-operation. In this process in the context of an emerging economy, the implementation, use, and shutdown of AIMS may be justified as a strategic action of the state in a shifting consensus of global aid governance, which is characterized by the emerging power and by heterogeneous development partners.

Understanding the role of state actors in the global context is the key to explaining particular cases of sustainability failure where the major sources of changes and contingency are to be found on the recursive relationship within the global field of aid. Much of the disuse of information systems needs to be explained by tracing the change in relations, ideologies, and institutional arrangements among the donors and MDAs, which are normally beyond the influence of the recipient country as a state actor. Within this macro dynamic, the role of states in the field of international aid has rarely been accounted for and theorised in the ICTD literature explaining IS failure. In this scenario, particular attention must be paid to the context of the emerging states, where there arguably exists relative power balance between the state and the powerful actors in the aid field.

9.3. Research Contributions

This section presents contributions relating to the domains of ICTD research, policy, and methodology. Building on the discussion in the previous section, I discuss implications in the field of information systems, more specifically ICTD. Practical and policy-related implications, as well as methodological implications are reviewed.

9.3.1. Implications in ICTD Research

As positioned in the literature review, from an Information Systems perspective this study lies in the research domain of ICTD. In addition to the arguments presented so far, the thesis also makes contributions to the discussion within the academic field.

The study argues that ICTD research, in particular studies on information systems failure in developing countries, can draw important insights from the focus on the macro-level dynamics of global aid. Contrary to the existing focus on the micro-situated struggle in the literature, this thesis contributes to the shift of attention from the process of aid management within a developing country, to the global level. Institutional changes in the global field of aid are crucial in enabling, constraining, and shaping ICTD initiatives in a given country. Addressing Clegg's (2010) criticism of the relative absence of power in institutional theory, the importance of the state is emphasized through this thesis. The intellectual resonance between the sociological institutionalism and the IR constructivist approach was discussed in the early chapters of the thesis.

The thesis shows that ICTD research can benefit from theoretical perspectives from the IR field when it comes to understanding the global power dynamics in changing aid governance and the role of the states. Walsham's (2017:20) call for IS researchers to “*adopt a transdisciplinary perspective, seeing their contribution as potentially important but respecting and engaging with the perspectives from other disciplinary fields*” has been followed in this study. The transdisciplinary perspective helps us to avoid what Finnemore called ‘*disciplinary isolation*’ (Finnemore 1996).

9.3.2. Policy and Practical Implications

King et al. (1994) emphasize that a study should be based on a strong motivation of the researcher, and that it should pose a question that is ‘important in the real

world' (King et al. 1994:15). With the growing popularity of the use of information systems in recipient countries as well as aid agencies identified in Section 6.2.3, the practical implications of the study are vital, particularly in the applied social science discipline of Information Systems. Dunleavy (2003:23-25) asserts that the best way to achieve a great fit between the question asked and the answer delivered in research is *"to try and work out what you will be able to say, or hope to be able to say"*. At the beginning of my PhD journey, my objective was to learn from cases of AIMS failure and to draw lessons on how we could learn from those cases, so as not to continually repeat the same results in the development field. As explained in the introduction chapter, this policy-related thinking was the strong initial motivation for this study.

What we can learn from 'failure' is that *"it can reveal the process that would be hidden when systems are claimed to be successful"* (Mitev 2000). The progress to the internationally agreed target set by ODA, the 0.7% of a donor's growth national income (GNI), has been very slow, in particular since the 2007 financial crisis. Considering that there are still many sectors, towns, and marginalized people in desperate need of more help in the field of international development, the frequent failure of AIMS to achieve sustainability after heavy investment is a worrying outcome.

One way this has been dealt with in this study, is by conceptualizing a mechanism for sustainability failure that can be empirically transferred to other cases. Based on this, policy and practical implications for developing and implementing AIMS are drawn from the discussion as follows:

- There has been a lack of ownership by recipient governments during the shaping of technology in the stage of development, design and implementation of AIMS. Furthermore, there is very little evidence that technology is adaptively configured by diverse local users, particularly citizens as public users in the 'use' stage. The key elements and questions identified in the process of AIMS, summarized in Table 6-4, may be

helpful to engage more local, relevant social groups in the process, as well as to enable local government to enhance ownership.

- Careful consideration of the political nature of aid and global aid governance cannot be ignored in ICT initiatives in developing countries. AIMS implementations and ICT initiatives would be required to shed light on the socio-political context and institutional challenges that have often been overlooked.
- In order to enhance the sustainability of AIMS, a high level of ownership by local actors must be considered. Even in the donor-driven initiatives (in terms of norms, financial support, international aid standards that the system has to follow), the balance of power between the government and donors in a given recipient country is important to sustain the system, minimize conflict between stakeholders, and even to reduce transaction costs – as is also emphasized by rational choice theories.
- In this process and going beyond the influence of the state actor, other relevant social groups such as CSOs, media, academia, and citizens are encouraged to engage in the development process and the broad governance structure of aid activities.

In the past years, a number of AIMS have been implemented, particularly along with emerging open data initiatives, without careful consideration of the feasibility in the country, and mixed context of domestic and global aid governance. This study may help to provide guidelines for policymakers and practitioners by adding new dimensions to enhance the understanding of *hidden* problems and challenges of AIMS, contrasting the existing best practice type research published by MDAs, which focuses on data transparency and technical-functional solutions.

9.3.3. Methodological Implications

One concrete contribution can be formulated pertaining to the research approach on IS studies. The dominance of quantitative studies in IS research, which was identified in the early 1990s by Orlikowski and Baroudi (1991) who point out that 150 of 155 research papers are based on the positivist approach with quantitative analysis only, is still valid. Chen and Hirschheim (2004) empirically show that 81% of 1131 studies in IS research are conducted under a positivist epistemology. Likewise, a similar trend was found in e-government research, as discussed in the literature review (Heeks & Bailur 2007; Yildiz 2007). Given the dominance of instrumental views and technical deterministic approaches in research on ICT implementation in the public sector (Heeks & Bailur 2007; Snead & Wright 2014), the combination of an explanatory account of information systems diffusion together with an interpretative single case study, provides in-depth empirical findings in this research arena. More importantly, the study's findings, which reveal that among the 80 AIMS examined, 36 cases of AIMS have shut down, and 29 cases have experienced significant challenges, this insight may be revelatory in the field where 'good practice' studies are prevalent.

In addition, researchers call for methodological rigour and diversity in research, particularly when it comes to ICT intervention in the public sector (Yildiz 2007; Heeks & Bailur 2007). Snead and Wright (2014) reveal that very few studies are conducted using multiple methodologies (9%), and only 47% are based on first data from in-depth studies within e-government research. My research seeks to provide a unique stance in this field and a methodological rigour based on an in-depth interpretive case study with mixed methods. To the best of my knowledge, this thesis may be one of the first comprehensive studies of information systems in the aid sector. While much empirical research has been conducted on ICT adoption in the public sector in a single state, it seems that the adoption of IS in the context of aid still has not yet been addressed. The review study of AIMS by complete enumeration on all countries in the list of OECD recipients does not

exist. Future research can also be suggested and based on the empirical findings in this study.

9.4. Limitations

In this section, I draw attention to the limitations of my research relating to three concrete aspects: methodology, generalization, and scope of research.

Methodological Limitations: As discussed in Section 4.3.4 and 4.4.5, the data collection and research methodology had some limitations. For the study of AIMS review (Chapter 5 and 6), the detailed data collection was limited to the period of post-new millennium. The analysis of the first generation – PC-based AIMS – was supported by limited data. Also, I mainly relied on data collection using search engines, and I recognize that the use of search engines often encounter limitations as discussed in Section 4.3.4 (Lucas D. Introna, Helen Nissenbaum 2000). More nuanced data on each case, including semi-structured interviews, will help to develop an agenda for further research.

In addition to the common methodological limitations of interpretive case studies, including issues of generalization and double hermeneutics, my single case study on Indonesia's AIMS had a couple of notable methodological limitations. First, the case study was started in 2015, only after the shutdown of the AIMS. There would have been much room for development if a longitudinal approach had been possible. Although it may be inevitable to involve double hermeneutics in case of an interpretive study conducted over a longer period of time, an in-depth longitudinal study covering the whole process of information systems including planning, implementation, use, and shutdown would provide for a richer description. Another challenge was the nature of a 'failure study'. While I note that research findings on the process of failure may well have reached saturation, interviewing some key former officials who were involved in AIMS but were reluctant to be interviewed was not easy, and this limited the data collection process.

Scope of Research: One of the limitations concerns the unit of analysis used. Although the nation-state has been a central unit of analysis in international relations and international political sociology, this state-centrism has been rigorously challenged by scholarly efforts theorizing the diverse dimensions of globalization. Particularly in the digital era, the role of non-state entities such as private firms, global IT companies, CSOs is becoming much more prominent (Sassen 2004).

I recognize that the conception of the state as an unproblematic totality would be subject to criticism, and my analysis places great emphasis on the state of Indonesia. I thereby take a relatively lesser close look at complex dynamics between diverse stakeholders at different levels, like government, municipalities, CSOs, media and so on in the domestic arena.

Generalization: A comparative study that can go beyond a single case design, specifically a qualitative comparative study (QCA) on a number of AIMS cases, which can benefit from the empirical findings of AIMS implementation in Chapter 5 and 6, may help against further generalization. This will be further discussed together with potential key research questions in the following Section.

9.5. Suggestions for Further Research

On approaching the submission of a PhD thesis, I indeed realize that the completion of my doctoral research is only the starting point of my exploration of the research arena, nurtured by many intellectual lessons as well as the trials and errors that I have gone through as a doctoral student. The 18th-century English chemist, Joseph Priestley made a wonderful metaphor:

Every discovery brings to our view many things of which we had no intimation before (...). The greater is the circle of light, the greater is the boundary of the darkness by which it is confined

(Priestley 1790).

Indeed, as knowledge grows, so does ignorance. However, I believe that this journey will be an indispensable foundation for a long-term research agenda for which I plan to collaborate with scholars in relevant fields and learn from them. Thus, I present below major areas of future research opportunities closely linked to the findings and limitations that I discussed in Section 9.2.3.

Open databased AIMS: As discussed in Chapter 6, recipient governments have also promoted open data initiatives by implementing AIMS to better process comprehensive data in timely manner. Although open data has become increasingly popular, there is still confusion around the impact of open data in aid management and development process. The following questions remain unanswered: To what extent does open data contribute to solving not only technological challenges but also institutional challenges given the political nature of aid? How can the logic of open aid data be theoretically linked to the research stream of ICTD? These questions require a better understanding of the missing theoretical links between open data, information sharing and how they improve coordination in the aid sector.

Demand side of AIMS: AIMS should be seen as a socio-technical system of which the varying political and economic interests of diverse relevant social groups exist within the supply-demand chain. The current implementation of AIMS heavily focuses on aid data transparency; however, it is not clear how the data produced can enhance development outcomes beyond increased transparency. Further research would be required to shed light on the demand side of AIMS. ICTD researchers often point out that ICT initiatives cannot work properly if end users are not able to use the services. However, several issues are not yet clear: how do stakeholders use aid data? and are AIMS developed and implemented with the goal of supplying data that meet the demands of users? We need to have a better understanding on the demand side of AIMS.

Inclusive aid process: Increased transparency does not necessarily lead to better accountability in aid service. There has been a lack of evidence of citizens' experience in AIMS. Future studies may question which group can be empowered in the diffusion and use of AIMS, and whose voice can be reflected to make the aid process more inclusive, and in particular, how to engage citizens in the development process. Additional research needs to address the linkage between transparency, participation and accountability; whether such ICT intervention only works for certain demographics, and if so, what changes should be made to the intervention. Walsham (2017) describes a major challenge for ICTD researchers as trying "to create a better world where people from less advantaged backgrounds can be enabled to enhance their capabilities and increase their participation in matters which affect their lives." Further research needs to investigate how AIMS empower citizens to engage more in aid activities, and close the accountability gaps in aid mechanisms.

Sector/region-specific study: This study was conducted at the national level information sharing and aid management. Given that there is growing attention to the decentralization of governance and the role of local authorities in aid management, it would also be useful to deepen the study to include what opportunities and challenges exist at regional or municipal levels in using information systems in sub-national level aid management; and what conflicting mandates and policy exist between levels. Likewise, it would be feasible to explore a particular sector, such as, aid management in education, public health, or ICT and investigate whether there are different practices or outcomes in the use and sustainability of AIMS.

Based on the analysis of 80 AIMS cases in Chapter 5 and 6, diverse research methodologies on various topics may be suggested.

Comparative Studies in different contexts may be suggested. As discussed in Section 5.1, seven countries implemented AIMS on two occasions: Bolivia, Burundi, Georgia, Indonesia, Kyrgyz Republic, Philippines, and Tajikistan. In

some cases, this may have occurred because the political, cultural, technological context is no longer relevant. In other cases, possible dissatisfaction may be reflected in the switch of providers (Bolivia, Burundi, Kyrgyz, Georgia, and Indonesia). Of course, none explicitly blame service providers, but some disappointments are reflected in the switch of provider (Burundi, Kyrgyz, Georgia, and Indonesia). In addition, it would also be interesting to compare the use and sustainability of AIMS between the case of humanitarian aid, fragile states, and the managing of regular ODA.

Qualitative Comparative Analysis (QCA): QCA (Berg-schlosser et al. 2008) might be feasible for extending the findings of this thesis. It may be possible to select cases in countries with similar socio-economic status, in the same geographical category such as Sub-Saharan Africa; in a regional collaboration such ASEAN; or with the same economic status. Studies may investigate to what extent institutional differences between countries contribute to the sustainability of AIMS. Also, it may be feasible to study how global norms and AIMS are diffused, and how they conflict with regional, local norms in this process, and what role technology plays therein.

A cross-national analysis: Findings on the 80 cases of AIMS may also be a useful source for a cross-national analysis with limited opportunities. With an extension of empirical puzzles discussed in Section 6.3.2, one interesting hypothesis to test might be the claim that AIMS in countries with higher GDP, IT infrastructure, internet access, and e-government index are less likely to be successful in AIMS; while least developed countries (LDCs) with lower socio-economic indicators, and IT infrastructures are more likely to be successful in donor-driven AIMS, due to a potential power imbalance between donors and the government. This contradicts the conventional wisdom of success factors from e-government research based on multivariate analysis.

In addition, further research may investigate which isomorphic mechanism occurs prominently in what circumstances by testing the following hypotheses:

i) in terms of coercive pressure, countries with high level of foreign direct investment (FDI) or aid dependency would be more likely to adopt donor-driven AIMS, ii) when adoption of new IS practice is based on coercive mechanism, decoupling is more likely; When adoption of new IS practice is based on normative mechanism, decoupling is less likely.

In this concluding chapter, I summarize key findings and arguments, and suggest the further research agenda. Despite the fact that there has been substantial investment and coordinative efforts on AIMS, many AIMS have not been sustainable. Through the case of Indonesia, I argue that the eventual disuse and abandonment of AIMS cannot be simply understood as the failure of the recipient government. It is also difficult to accuse and hold stakeholders in Indonesia justifiably accountable for the sustainability failure of AIMS caused by institutional changes in the global field of aid. Rather, the implementation, use, and shutdown of AIMS may be justified as a strategic action of the state in a shifting consensus of global aid governance, which is characterized by the emerging power and by heterogeneous development partners. In this process, the symbolic and political role of technology becomes more prominent.

It is, however, still not desirable to witness the prevalent disuse and sustainability failure of AIMS after heavy investments, considering that there are a billions of people who desperately need further development assistance. Looking back on my personal motivation for pursuing the Ph.D., particularly on the topic of information systems failure in the aid sector, I indeed hope we find a way to not repeat the *déjà vu* – of *donor-driven agendas, excitement over new technologies, explosive initial attention, huge investments, quick diffusion with universal ideas, fade away, and failure with no reflection.*

This also highlights the importance of in-depth research on the context. Through this thesis, I argue for the importance of understanding of technology beyond its technical and functional aspect, namely as providing socially constructed meanings in a particular domestic context and global setting, in which the

political nature of aid cannot be ignored. As discussed in Chapter 2, development is value-laden. Walsham (2017) emphasized that ICTD researchers “*should not see ourselves as the ‘experts’ bringing top-down solutions to ‘beneficiaries.’ Rather, we should see ourselves as co-contributors with everyone else, since all people all over the world have views about ‘development’ in their particular context.*” Further research and policy needs to highlight the role of local actors and their ownership, as well as the context in which the ICTD initiatives are embedded, including not only the local but also the global-level.

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Appendix 1: Jargon of the Aid Sector

This appendix section defines and explains the most common terms used throughout this upgrade proposal.

In OECD's Glossary of Aid-flow Terms (2001), *donor* is defined as, "any entity including sovereign governments, intergovernmental institutions, non-profit entities, and private for-profit organizations that contributes funds" to a developing or low-income country. The term *aid recipient* refers to any entity that receives resources, including governmental, quasi-governmental, non-governmental, or private institutions (OECD, 2001). It is commonly used to refer to a country that receives financial resources and technical assistance for relief or development purposes.

Development Assistance Committee (DAC) is "the specialized committee of the OECD that serves as a forum for discussions on aid and development among the main Western aid donors" (OECD, 2001:3). As of 2014, it comprises 28 countries including Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Italy, Japan, Korea, Luxemburg, The Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, United Kingdom, and United States, and European Union. DAC was established in 1961, and has led aid effectiveness agenda. DAC members agree to submit to a regular Peer Review of their development co-operation, undertaken by the DAC, and to serve as an examiner in reviewing other donor's aid activities. DAC doesn't include donors from rising economy such as BRICs and MINTs.

Creditor Reporting System (CRS) was established in 1967 to collect detailed information about individual aid loans and later grants to complement the recording of aggregate flows. Since 1973, it has covered the project level of activities of most of the OECD's Development Assistance Committee (DAC) members well as those of multilateral development banks and some UN agencies, and is expanding to include non-DAC emerging donors. The objective of the CRS database is to provide a set of readily available basic data that enables analysis on where aid goes, what purposes it serves and what policies it aims to implement, on a comparable basis for all DAC members.

International Aid Transparency Initiative (IATI) was launched in 2008 at the third High Level Forum on Aid Effectiveness (HLF) in Accra. It was designed, in part, to support donors to meet their political commitments on transparency, as laid out in the Accra Agenda for Action. At the fourth HLF in Busan, 2011, development actors committed to "implement a common open standard for electronic publication of timely, comprehensive and forward-looking information on resources provided through development cooperation," that takes into account the statistical reporting of the OECD-DAC and work of IATI (Source: IATI website). The IATI standard is a framework suggested by the IATI for publishing information on development cooperation activities in a timely, comprehensive and forward-looking manner with more indicators and qualitative information (<http://iatistandard.org>). It is still in the shaping process.

The *Paris Principle on the Aid Effectiveness* (2005) has been the most authoritative practical framework for stakeholders since its endorsement by hundreds of ministers, heads of donor agencies and aid-recipient countries.

Ownership is emphasized as primarily referring to recipient country governments' abilities to "exercise leadership over their development policies and strategies and coordinate development actions" (OECD, 2008). Ownership also emphasizes the use of the government-administered aid management system by donors. The AIMS is fully endorsed under this principle, and development partners are asked to commit to use the aid-recipient country's aid information management system to ensure effective communication and information sharing with the government.

Alignment refers to the provision of aid by donors in ways that respond to partner countries' development priorities, supporting and using partner countries' own systems and institutions (OECD, 2010). According to OECD's Aid Effectiveness Monitoring Report (2008), for aid to be most effective, it needs to respond to the recipient countries' priorities and be provided in a way that uses and strengthens the partner countries' own institutions and systems. Within this principle, there is a specific emphasis on the use of the countries' systems, such as AIMS in order to understand the government priorities and avoid duplication of projects in the country.

Aid harmonization is about bringing donors together to streamline the way they provide aid. The Paris Declaration on Aid Effectiveness (2005) recognized that the multitude of donor approaches to preparing, providing, and managing development co-operation, could result in unnecessary duplication of efforts and a greater burden on aid managers who deal with a multitude of policies and procedures. This principle encourages donors and aid-recipient countries to implement common arrangements and procedures, simplifying the way in which aid is provided. It also encourages them to work together to enhance complementarity in development cooperation by implementing a more effective division of labour at the country level. Harmonization is closely related to ownership and alignment as well. When partner countries implement their commitments to strengthen their systems, the easiest way for donors to harmonize is often to use the country's own systems.

Mutual accountability between donor and recipient countries is emphasized in the Principle. Further, the Accra Agenda for Action (2008) reiterates the importance of the *mutual accountability* principle, emphasizing greater transparency and accountability in the use of all development resources. This principle urges the development partners and the aid-recipient country to remain transparent to each other and the citizens. It requires each donor to report to each other on their aid spending and continuously communicate about the aid-funded projects (OECD, 2008).

Managing for results is a general principle of management that involves using information about results to systematically improve decision making and strengthen performance. Developing countries are expected to develop cost-effective, results-oriented reporting and smart aid information management systems, while donors commit to using any such arrangements and refraining from requiring separate reporting (OECD, 2010). *Managing for results* is an objective in its own right—citizens are fully entitled to know how aid resources are being used. It is also a way of establishing powerful motivations that help improve the effectiveness of all aid resources in achieving results.

Appendix 2. Invitation Letter for Research Visa

Letter of Invitation

Indonesian Embassy
38 Grosvenor Square
London W1K 2HW
Tel. (020) 7499 7661
Fax. (020) 7491 4993

5 October 2015

VISA APPLICATION FOR MR. KYUNG RYUL PARK – Passport No. SC2048624

Dengan Hormat

Yang bertanda tangan dibawah ini saya

Nama : Lisman Manurung, Ph.D
Umur : 62 tahun, lahir di Porsea, 21 Juli 1953
Alamat : Dosen Fakultas Ilmu Sosial dan Ilmu Politik Universitas Indonesia. Depok Jakarta
Pekerjaan : Lektor Kepala pada FISIP UNIVERSITAS INDONESIA
Nomor KTP : 3174 0121 07530006
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Dengan ini menyatakan bahwa,

Nama : Kyung Ryul Park
Kebangsaan : Republic of Korea
Normor paspor : SC2048624
Tempat – Tgl lahir : March 7th, 1979
Pekerjaan : PhD Candidate, London School of Economics and Political Science (LSE), in the United Kingdom

Kenalan saya akan ke Indonesia untuk belajar tentang e-government di Indonesia dan memanfaatkan perpustakaan Universitas Indonesia. Mr Kyung Ryul Park adalah kandidat PhD di sekolah London School of Economics (LSE) di Inggris. Mr. Kyung Ryul Park, sejak lama saya kenal sebagai orang yang berkelakuan baik dan tidak pernah tersangkut urusan Kepolisian Republik Indonesia. Demikian pernyataan ini saya buat dengan sejujur-jujurnya, agar menjadi perhatian Bapak seperlunya.

Untuk itu saya mengucapkan banyak terima kasih.

Hormat saya



Lisman Manurung, Ph.D

Appendix 3. Data Sources (A Review of AIMS)

***Website Screenshot:** Screenshots acquired from Category [A] and [B]. In addition, some AIMS in [C] are accessed from web.archive.org, as evidence that the AIMS were once existed.

***Donor Agency Reports:** Refers to the ones published by donor (mostly UNDP, OECD, World Bank, and limited number of bilateral agencies).

No.	Country	Year	AIMS Name	Provider	Status				Funder	Data Sources					
					A	B	C	URL N/A		Web Screenshot	Analytics / User Manual	Gov Doc	AIMS Provider Doc	Donor Agency Reports	Media Articles
1	Afghanistan	2002	National Budget and Synergy Aid Management Systems			✓		MDTF (UNDP, Japan)	✓	✓	✓	✓	✓		✓
2	Armenia	1990s	DAD: Donor Synergy Assistance Database				✓	UNDP					✓		✓
3	Bangladesh	2014	AIMS: Aid Techno Vista Information Management System		✓			MDTF (Australian Aid, Denmark, DANIDA, DFID, Government of Bangladesh and UNDP)	✓	✓	✓	✓	✓		
4	Bolivia (1)	2007	PGA: Plataforma de DG Gestión de la Ayuda				✓	N/A				✓			
5	Bolivia (2)	2012	MIP: Mapa de la Local IT Inversión Pública en Bolivia			✓		N/A	✓		✓		✓	✓	
6	Botswana	2005	BODAMIS: Botswana Equinoccio Development Assistance Management Information System				✓	The European Commission	✓		✓	✓	✓	✓	✓
7	Burkina Faso	2008	PGA: Plateforme de DG Gestion de l'Aide			✓		UNDP	✓		✓	✓	✓		✓

No.	Country	Year	AIMS Name	Provider	Status				Funder	Data Sources						
					A	B	C	URL N/A		Web Screen- shot	Analytics / User Manual	Gov Doc	AIMS Provider Doc	Donor Agency Reports	Media Articles	Other Sources
8	Burundi (1)	2008	AMP: Management Platform	Aid DG			✓		MDTF: Swiss Agency for Development and Cooperation (SDC) / Development Gateway Foundation (DGF), Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ)				✓	✓		✓
9	Burundi (2)	2012	DAD: Development Assistance Database	Synergy			✓		N/A	✓		✓		✓		✓
10	Cambodia	2005	Cambodia Database	ODA Local IT	✓				N/A	✓	✓	✓		✓		✓
11	Cameroon	2010	DAD: Development Assistance Database	Synergy		✓			MDTF	✓	✓	✓	✓	✓		✓
12	Central African Rep.	2008	DAD: Development Assistance Database	Synergy			✓		UNDP	✓		✓	✓	✓		✓
13	Chad	2014	PGA: Plateforme de Gestion de l'Aide	DG		✓			MDTF (including UNDP)	✓		✓	✓	✓		
14	Comoros	2013	DAD: Development Assistance Database	Synergy		✓			UNDP, EU, and Islamic Development Bank	✓	✓		✓	✓		
15	Congo Democratic Rep.	2008	AIMP: Aid and Investment Management Platform	DG			✓		N/A				✓		✓	✓
16	Côte d'Ivoire	2014	PGA: Plateforme de Gestion de l'Aide	DG	✓				MDTF	✓		✓	✓	✓		
17	Ethiopia	2005	AMP: Management Platform	Aid DG		✓			MDTF	✓			✓	✓		✓
18	Gambia	2015	AMP: Management Platform	Aid DG		✓			MDTF	✓			✓			
19	Georgia (1)	1990s	DAD: Donor Assistance Database	Synergy			✓	✓	UNDP				✓	✓		✓

No.	Country	Year	AIMS Name	Provider	Status				Funder	Data Sources						
					A	B	C	URL N/A		Web Screen- shot	Analytics / User Manual	Gov Doc	AIMS Provider Doc	Donor Agency Reports	Media Articles	Other Sources
20	Georgia (2)	2015	e-Aid Information Management System (eAIMS)	FAS	✓			N/A		✓		✓				
21	Guatemala	2009	DAD: Development Assistance Database	Synergy			✓	UNDP		✓	✓		✓			
22	Guinea Bissau	2011	PGA: Plataforma de Gestão da Ajuda	de DG		✓		N/A					✓	✓		
23	Haiti	2012	MGAE: Module de Gestion de l'Aide Externe	de DG		✓		N/A		✓			✓	✓		✓
24	Honduras	2013	PGC: Plataforma de Gestión de la Cooperación	de DG	✓			UNDP, CIDA (Canadian International Development Agency), and the EU		✓			✓	✓		
25	India	2007	CDSS: Coordination & Decision Support System	Synergy			✓	UNDP		✓	✓	✓	✓	✓		✓
26	Indonesia (1)	2005	Recovery Aceh - Nias (RAN) Database	Synergy		✓		MDTF		✓		✓	✓	✓	✓	✓
27	Indonesia (2)	2009	AIMS: Aid Local IT Information Management System	IT			✓	GTZ (Gesellschaft für Technische Zusammenarbeit)		✓	✓	✓		✓		✓
28	Iraq	2011	IDMS: Iraq Development Management System	Synergy		✓		MDTF (UNDP, USAID, the European Commission, the U.N. Office for Project Services, and the government of Spain)		✓	✓		✓	✓	✓	✓
29	Jordan (1)	2010	JAIMS: Jordan Information Management System	Aid Local IT			✓	European Union & United Nations		✓		✓		✓	✓	✓

No.	Country	Year	AIMS Name	Provider	Status				Funder	Data Sources						
					A	B	C	URL N/A		Web Screen-shot	Analytics / User Manual	Gov Doc	AIMS Provider Doc	Donor Agency Reports	Media Articles	Other Sources
30	Jordan (2)	2015	JORISS: Response Information System for the Syria Crisis	Jordan Local IT	✓				EU, UN	✓		✓				✓
31	Kazakhstan	1990s	DAD: Assistance Database	Donor Synergy			✓	✓	UNDP				✓	✓		✓
32	Kenya	2010	Electronic Monitoring Information System (e-PromIS)	Project Synergy	✓				MDTF (UNDP/ Government)	✓	✓	✓	✓	✓		
33	Kosovo	2010	AMP: Management Platform	Aid DG		✓			MDTF(European Commission Liaison Office (ECLo)/the United States Agency for International Development) (USAID)	✓			✓	✓		
34	Kyrgyz Republic (1)	1990s	DAD: Assistance Database	Donor Synergy			✓	✓	UNDP				✓	✓		✓
35	Kyrgyz Republic (2)	2012	AMP: Management Platform	Aid DG		✓			Government of Switzerland	✓			✓		✓	
36	Laos	2011	AMP: Management Platform	Aid DG		✓			MDTF (UNDP, The World Bank, and OECD)	✓		✓	✓	✓		
37	Lebanon	2006	DAD: Development Assistance Database	Synergy			✓		UNDP	✓		✓	✓	✓		
38	Lesotho	2013	PSID: Investment Database	Public Sector Synergy		✓			UNDP	✓	✓	✓	✓	✓		✓
39	Liberia	2007	AMP: Management Platform	Aid DG		✓			N/A	✓		✓	✓	✓		✓
40	Macedonia	2010	CDAD: Assistance Database	Central Donor Synergy		✓			UNDP	✓				✓		
41	Madagascar	2009	AMP: Management Platform	Aid DG			✓		MDTF	✓		✓	✓			

No.	Country	Year	AIMS Name	Provider	Status				Funder	Data Sources							
					A	B	C	URL N/A		Web Screenshot	Analytics / User Manual	Gov Doc	AIMS Provider Doc	Donor Agency Reports	Media Articles	Other Sources	
42	Malawi	2008	AMP: Management Platform	Aid DG	✓				UNDP	✓			✓				✓
43	Maldives	2005	DAD: Development Assistance Database	Synergy			✓		UNDP	✓		✓	✓	✓			
44	Mauritania	2011	DAD: Development Assistance Database	Synergy		✓			UNDP	✓			✓		✓		
45	Moldova	2014	AMP: Management Platform	Aid DG	✓				MDTF	✓	✓			✓			✓
46	Montenegro	2007	AMP: Management Platform	Aid DG			✓	✓	N/A				✓	✓			✓
47	Mozambique	2006	ODA to Mozambique Database (ODAmoz)	DG		✓			MDTF	✓			✓	✓			✓
48	Myanmar	2015	Mohinga	Catalpa Int'l	✓				European Union	✓		✓	✓	✓			✓
49	Nepal	2010	AMP: Management Platform	Aid DG	✓				MDTF (UNDP, DFID, DFAT (Australia), and USAID)	✓	✓		✓	✓			
50	Nicaragua	2008	ODA to Nicaragua Database (ODAnic)	DG			✓		Department for International Development (DFID)	✓			✓				✓
51	Niger	2009	PGA: Plateforme de Gestion de l'Aide	DG	✓				African Development Bank Group, UNDP, USAID	✓			✓	✓			
52	Nigeria	2010	DAD: Development Assistance Database	Synergy		✓			MDTF	✓	✓	✓	✓				
53	Pakistan	2006	DAD: Development Assistance Database	Synergy			✓		MDTF	✓			✓	✓			✓
54	Palestine	2010	DARP: Assistance and Reform Platform	Development Local IT		✓			N/A	✓	✓			✓			
55	Papua New Guinea	2008	DAD: Development Assistance Database	Synergy			✓		MDTF				✓	✓			

No.	Country	Year	AIMS Name	Provider	Status				Funder	Data Sources						
					A	B	C	URL N/A		Web Screen- shot	Analytics / User Manual	Gov Doc	AIMS Provider Doc	Donor Agency Reports	Media Articles	Other Sources
56	Philippines (1)	2014	Electronic Monitoring Platform Accountability and Transparency Hub for Yolanda (eMPATHY)	Synergy			✓	UNDP		✓		✓			✓	
57	Philippines (2)	2013	Foreign Aid Local IT Transparency Hub (FaiTH)			✓	N/A			✓		✓			✓	
58	Russia	1996	DAD: Donor Synergy Assistance Database			✓	✓	UNDP				✓	✓			✓
59	Rwanda	2006	DAD: Development Synergy Assistance Database		✓			MDTF (Including UNDP)	✓	✓	✓	✓	✓			✓
60	Senegal	2009	PGFE: Plateforme de DG Gestion des Financements Extérieurs		✓			MDTF		✓		✓				
61	Sierra Leone	2008	DAD: Development Synergy Assistance Database		✓			UNDP		✓	✓		✓	✓		
62	Solomon Island	2011	DAD: Development Synergy Assistance Database		✓			UNDP		✓	✓	✓	✓	✓		
63	Somalia	2011	DAD: Development Synergy Assistance Database			✓	✓	UNDP				✓	✓	✓		
64	Somaliland	2010	DAD: Development Synergy Assistance Database			✓		UNDP				✓		✓		✓
65	South Africa	2004	DCIS: Development Local IT Co-operation Information System				✓	MDTF (European Union, United Nations Development Programme and the UN Office on Drugs and Crime (UNODC))	✓	✓	✓					✓
66	South Sudan	2010	AMP: Aid DG Management Platform		✓			UNDP				✓	✓			✓

No.	Country	Year	AIMS Name	Provider	Status				Funder	Data Sources						
					A	B	C	URL N/A		Web Screenshot	Analytics / User Manual	Gov Doc	AIMS Provider Doc	Donor Agency Reports	Media Articles	Other Sources
67	Sri Lanka	2005	INDIS: Integrated National Development Information System	Synergy		✓		UNDP	✓	✓		✓	✓		✓	
68	Tajikistan (1)	1990s	DAD: Donor Assistance Database	Synergy			✓	UNDP				✓	✓		✓	
69	Tajikistan (2)	2012	AIMS: Aid Information Management System	Synergy			✓	Technical support from UNDP; funded by Department for International Development (DFID)	✓	✓	✓	✓			✓	
70	Tanzania	2008	AMP: Aid Management Platform	DG		✓		MDTF	✓		✓	✓	✓		✓	
71	Thailand	2005	DAD: Development Assistance Database	Synergy			✓	UNDP	✓			✓			✓	
72	Timor-Leste	2012	Aid Transparency Portal	DG	✓			MDTF (The Government of Japan, Australia and the Asian Development Bank)	✓	✓	✓	✓				
73	Togo	2011	PGA: Plateforme de Gestion de l'Aide	DG			✓	European Union & UNDP	✓			✓		✓	✓	
74	Turkmenistan	1990s	DAD: Donor Assistance Database	Synergy			✓	UNDP				✓	✓		✓	
75	Uganda	2013	AMP: Aid Management Platform	DG		✓		MDTF	✓		✓	✓			✓	
76	Ukraine (1)	1990s	DAD: Donor Assistance Database	Synergy			✓	UNDP				✓	✓		✓	
77	Ukraine (2)	2012	Open Aid Ukraine	Synergy	✓			N/A	✓		✓		✓			
78	Vietnam	2005	DAD: Development Assistance Database	Synergy			✓	UNDP	✓	✓	✓	✓	✓		✓	
79	Yemen	2012	DAD: Development Assistance Database	Synergy			✓	MDTF (UNDP, USAID, DFID, Italy)				✓	✓			
80	Zambia	2008	DAD: Development Assistance Database	Synergy			✓	UNDP				✓	✓		✓	

Appendix 4. List of Selected Documents for Analysis

Laws & Regulations (Indonesia)

Pancasila [the official, foundational philosophical theory of the Indonesian state]

Preamble of the Undang-Undang Dasar Republik Indonesia Tahun 1945

[Constitution of the Republic of Indonesia]

Perubahan Keempat Undang-Undang Dasar Republik Indonesia Tahun 1945

[Fourth Amendment to the Constitution of the Republic of Indonesia], based on Sidang Paripurna MPR-RI, on Direct Presidential Election.

Undang-Undang [Law] No. 1/2004 on State Treasury.

Undang-Undang [Law] No. 25/2004 on the National Development Planning System.

Undang-Undang [Law] No. 17/2007 on RPJPN 2005-2025.

Ketetapan MPRS No. XXIII/MPRS/1966 [Parliamentary Decree] on the Renewal of the Policy on Economic, Finance and Development Platforms.

Peraturan Pemerintah [Government Regulation] No. 54/2005 on Regional Government Loans.

Peraturan Pemerintah [Government Regulation] No. 2/2006 on the Procedures for Receiving and Forwarding Foreign Loans / Grant.

Peraturan Pemerintah [Government Regulation] No. 39/2006 on Procedures to Control and Evaluate Implementation of Development Activities.

Peraturan Pemerintah [Government Regulation] No. 10/2011 on the Procedures for Receiving and Forwarding Foreign Loans / Grant.

Peraturan Presiden [Presidential Regulation] No. 7/2005 on RPJMN 2004-2009.

Peraturan Menteri Perencanaan Pembangunan Nasional [State Ministry of National Development Planning (Bappenas) Regulation]

No. Per. 005/M.PPN/06/2006 on Foreign Grant and Loan Funded Program Planning, Drafting, Assessment, Monitoring, and Evaluation Mechanism.

Peraturan Menteri Perencanaan Pembangunan Nasional [State Ministry of National Development Planning (Bappenas) Regulation]

No. 33/M.PPN/HK/04/2009 on the Establishment of A4DES.

Peraturan Menteri Perencanaan Pembangunan Nasional [State Ministry of National Development Planning (Bappenas) Regulation] No. 4/2011 on Foreign Grant and Loan Funded Program Planning, Drafting, Assessment, Monitoring, and Evaluation Mechanism.

Keputusan Menteri Keuangan [Minister of Finance Decree] No. 447/KMK.06/2005 on Government Debt Management Strategy.

Speech (Presidential and Ministerial)

Arita Hachiro, 'The International Situation and Japan's Position', *Japan's Foreign Minister Radio Speech*, 29 June 1940.

Armida Salsiah Alisjahbana, *Ministerial Address on International South-South Cooperation High Level Meeting on Country-led Knowledge Hubs*, in Bali, 10 July 2012.

Mohammad Hatta, 'Mendayung di Antara Dua Karang [Rowing between Two Rocks]' *Speech Made before the Central Indonesian Committee (KNIP)*, 2 September 1948

Sukarno, 'Tahun Vivere Pericoloso [Year of Living Dangerously]', *President Speech Commemorating the 19 Years of Independence*, in Jakarta, 17 August 1964.

Sukarno, *President Speech on Withdrawal from UN Membership*. 7 January 1965.

Sukarno, 'Raihlah Bintang-Bintang di Langit: Tahun Berdikari [Reach for the Stars in the Sky: Year of Berdikari]', *President Speech Commemorating the 20 Years of Independence*, in Jakarta, 17 August 1965.

Susilo Bambang Yudhoyono, *Inaugural Speech for Presidency*, in Jakarta, 10 October 2004.

Susilo Bambang Yudhoyono, *Remarks at the Meeting on Financing for Development Forum*, in New York, 14 September 2005.

Susilo Bambang Yudhoyono, *President Speech Commemorating the 64 Years of Independence*, in Jakarta, 14 August 2009.

Susilo Bambang Yudhoyono, *Inaugural Speech for the Second Term of Presidency*, in Jakarta, 20 October 2009.

Declarations & International Agreements (by year)

- Kalijati Agreement (between Dutch and Japan), signed on 8 March 1942
- Dutch – Indonesian Round Table Agreement, signed on 2 November 1949
- Final Communiqué of the Asian-African Conference, in Bandung, 24 April 1955.
- Buenos Aires Plan of Action (BAPA) for Promoting and Implementing Technical Cooperation among Developing Countries, 12 September 1978.
- Rome Declaration on Harmonization, at the First High Level Forum on Aid Effectiveness, February 2003.
- Paris Declaration on Aid Effectiveness, at the Second High Level Forum on Aid Effectiveness, February 2005.
- Accra Agenda for Action, at the Third High Level Forum on Aid Effectiveness 2008.
- Jakarta Commitment, 12 January 2009.
- Busan Partnership Documents, at the Fourth High Level Forum on Aid Effectiveness December 2011.
- The Busan Partnership for Effective Development Cooperation, July 2012.

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- Badan Pusat Statistik (Statistics Indonesia), *Berita Resmi Statistik*, No. 05/01/Th. XIX, 4 January 2016.
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- Bappenas, 2011, *AIMS 2011 Online Survey on Monitoring the Paris Declaration User Guide Book*.
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Dedi Masykur Riyadi, Bappenas, Indonesian Delegation at High Level Symposium on Accountable and Transparent Development Cooperation, in Vienna, 12-13 November 2009.

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Task Team on South-South Cooperation, 2011, *Unlocking the Potential of South-South Cooperation: Policy Recommendations from the Task Team on South-South Cooperation*.

UN, 2015. *World Population Prospects: The 2015 Revision*.

UN Doc S/7498, 19 September 1966 (Telegram dated 19 September 1966 from the Ambassador of Indonesia to the USA addressed to the Secretary General).

US Geological Survey, 'Indian Ocean Tsunami Remembered — Scientists reflect on the 2004 Indian Ocean that killed thousands'.

OECD, 2007, *OECD Survey on Monitoring the Paris Declaration 2006*.

OECD, 2008, *OECD Survey on Monitoring the Paris Declaration 2008*.

OECD, 2011, *Better Aid, Aid Effectiveness 2011*.

GTZ, 2011, *Schlussbericht zu einer TZ-Maßnahmen: Kapazitätssteuerung zur Verbesserung der Wirksamkeit der Entwicklungszusammenarbeit* [Final Report on a TC-Measures: Capacity Control to Improve the Effectiveness of Development Cooperation].

News Articles (by year)

Chicago Tribune, Edition 26 March 1964, page 12.

TEMPO, Edition 37/03, Published on 17 November 1973, Cover Story: Jan Pronk, Dutch Minister of Development Cooperation – IGGI Sebagai Cukong (IGGI as Broker).

TEMPO, Edition 30/04, Published on 28 September 1974, Cover Story: Adam Malik – Indonesia's Foreign Minister - Selamat Sore IGGI! (Good Afternoon IGGI!).

TEMPO, Edition 05/22, Published on 4 April 1992, Cover Story: IGGI Bubar: Wawancara Khusus dengan J.P. Pronk (IGGI Disbanded: Special Interview with J.P. Pronk).

TEMPO 'Pendonor Asing Tak Bisa Mendikte [Foreign Donors Can No Longer Dictate]' in Tempo.co, 13 January 2009

Sindonews, 'Tak Cuma Menerima, Indonesia Kini Jadi Negara Donor [Not Just Accepting, Indonesia is Now a Donor Country]', June 2014

Metrotvnews, 'Sebagai Negara Donor, Indonesia dapat Keuntungan Politik dan Ekonomi [As a Donor Country, Indonesia Earns Politics and Economic Gains]', 5 June 2014.

Kompas, 'Selamat Tinggal IGGI, Selamat Datang CGI [Goodbye IGGI, Welcome CGI]', 26 June 2015, p. 66.

Rappler, 'Megawati sindir kepemimpinan: Ganti orang, ganti visi misi [Megawati quips on leadership: New leader, new vision and mission]', 11 January 2016.

Appendix 5. Consent Form for Interviews

Consent Form for LSE PhD Research

- **Research Topic: The role of aid information management systems (AIMS) - Case Study in Indonesia**
- **Researcher: Kyung-Ryul Park**

Please tick the appropriate boxes

Yes No

Participation in the research

- I have read and understood the project information sheet attached. Yes No
- I have been given the opportunity to ask questions about the research via email communication. Yes No
- I agree to take part in the research. Taking part in the study will include being interviewed and recorded (only audio). Yes No
- I understand that my taking part is voluntary. I can withdraw from the study at any time and I do not have to give any reasons for why I no longer want to take part. Yes No

Use of the information I provide for this research only

- I understand all of my personal details such as Skype ID and email address will not be revealed to public. Yes No
- I understand that my words may be quoted in publications, reports, web pages, and other research outputs. Yes No
- Please choose **one** of the following two options:*
- I would like my real name used in the above Yes No
- I would **not** like my real name to be used in the above. Yes No

Use of the information I provide beyond this project

- I understand that other seminar leader or class examiner will have access to this data only for the purpose of assessing the research practice. Yes No
- I understand that other genuine researchers may use my words in publications, reports, web pages, and other research outputs, only if they agree to preserve the confidentiality of the information as requested in this form. Yes No

So we can use the information you provide legally

- I agree to assign the copyright I hold in any materials related to this study to Kyung-Ryul Park. Yes No

Name of participant

Signature

Date



Kyung Ryul Park
Researcher

Signature

Date

Department of Management: Information Systems and Innovations Group
London School of Economics and Political Sciences

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Appendix 6. Example Topic Guide for Semi-structured Interviews

The topic guide below is one of guides that I used for interviews conducted during my field visits. It was used particularly in my second visit to Indonesia from December 2015 to February 2016.

Stage	Topic Points
0. Prior to Setting Interview	<ul style="list-style-type: none"> • Provide an overview of the research and consent form via email • Clearly explain interviewees' rights and requirements as a research participant • Email participants a reminder of the time and date of the interview • Informal conversation at café or other comfortable venue, if available
1. Introduction (5mins)	<ul style="list-style-type: none"> • Greet and Introductions • Notify that interview will be recorded, and receive interviewees' agreement ➢ <u>Official interview begins</u> • Express gratitude for interviewee's participation • Remind the participant of the purpose and nature of the study, explaining details where necessary • Confirm interviewee's rights, anonymity and requirements • Explain the confidentiality arrangements. • Introduce interview procedure and expected duration (1 hour or more) • Ask whether there are any questions, or areas needing clarification, prior to the interview?
2. Warm-up (5mins)	<ul style="list-style-type: none"> • Ask initial questions on participants' affiliation, position and areas of responsibility <ol style="list-style-type: none"> 1) Before the main questions, could you tell me your title and role, and how you came to join the organization? 2) How long have you worked in the position? 3) What are thy typical activities that come with your role, your common everyday tasks?
3. Main Part of Interview (45mins)	<ul style="list-style-type: none"> - <u>Points during interview</u> - Be aware of reflexivity - Keep check/manage time (moving to next question quickly, skipping some questions, or asking more questions, as required) ➢ <u>Start with the first broader question:</u> <ul style="list-style-type: none"> - I would like to know your thoughts on the impact of the aid information management system (AIMS) or ICT intervention on aid effectiveness If interviewee asks for clarification, respond (Roles in AIMS) <ul style="list-style-type: none"> - Could you describe your role in using/managing/developing/policy-making in AIMS? - Could you describe the involvement of your team with ICT interventions for governance? - How useful is AIMS to you in ICT-enabled aid management related work? Explain further.

	<p>- What you have learned from it so far?</p> <p>➤ <u>Main Questions</u></p> <p>1) Overview of ICT use in aid management - From the time when there were no computers to today (documents would be helpful).</p> <p>a) Institutional changes over time e.g. creation of BAPPENAS, AIMS, E-Government Directorate etc.</p> <p>b) The idea of ICT in aid management</p> <ul style="list-style-type: none"> • What do you understand by AIMS? How does the Government appear to understand it? • Whose idea matters? The Indonesian Government? Donors? Citizens? Private sector? International pressure? • What do you think about the donor-driven agendas, norms (transparency, aid effectiveness, the Paris Declaration)? <p>c) Policy</p> <ul style="list-style-type: none"> • Describe the policy development process – guiding principles, values, and participants etc. • How was the policy translated into action plans/programmes? <p>d) Processes</p> <ul style="list-style-type: none"> • What action programmes for aid management exist? • What do you think of how they are funded? Co-ordination among donors? • How important is foreign/donor funding? • How are they operationalized as projects? <p>e) Players</p> <ul style="list-style-type: none"> • Important individuals, groups and their goals and how pursued • Who are/have been some key players at national level? • Who were influential in driving the AIMS/Open Aid agenda – the public sector, donors, private sector, NGOs, individuals (Champions)? How good is/was the cooperation. • What did they do that is of significance? • What of opposition? Was it open or covert? • How much do conflicts between private and public interests affect your e- government projects? <p>f) Evaluation (points of success/failure)</p> <ul style="list-style-type: none"> • How do you feel about the implementation? Did it work well? • What do you think, could be improved in practice? • What points were successful and unsuccessful? • Finally, the shutdown. What are the reasons? • How do you compare the RAND (legacy technology) vs AIMS, and the current IS? • Overall, what do you think are the main challenges in developing an effective AIMS in Indonesia? • With specific reference to the government agency/donor agency level, what difficulties do you encounter (or perceive) in the collection and use of aid information? • Was there a feedback mechanism to help aid workers understand how their aid data was being used? • Is there a functional system for the monitoring and evaluation of aid
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	<p>? What role can the AIMS play in this, you think?</p> <ul style="list-style-type: none"> • In your opinion, what is the approximate rate of failure/success for ICT-enabled projects in general? (Success being the ability to achieve stated goals) • Why do you think projects succeed or fail in the Ministry? Give examples of successful (and failed) ICT projects. <p>2) AIMS in your agency (Ministry, local government, donor agency)</p> <ol style="list-style-type: none"> a) Tell me about the use of AIMS, e-government in a broader context b) Technology issues <ol style="list-style-type: none"> i) What systems exist, and at what stages of completion, usage? ii) What computer types and systems have been used in government over the years? iii) How well do public servants adapt to new technologies? Explain. c) People <ol style="list-style-type: none"> i) Culture, beliefs and attitudes, and their effect on ICT use and AIMS take off. ii) How compatible are the actual work culture and practices with rational assumptions about decision processes in computer based systems? E.g. Indonesian time. iii) Indonesians are from diverse cultural and ethnic backgrounds. How easy is it to pull them together for the common interest? d) Personal experiences in working in ICT/E-Government/AIMS related work: Significant moments, events, personal motivation, difficult decisions and changes encountered.
4. Cool-off (5mins)	<ul style="list-style-type: none"> • Ask any remaining questions • Clarify if there is any vagueness or tension. • Let participant know that interview is finished, 'I switched off the recorder.' • Be aware of 'hand on the door' phenomenon, and try to deal with it. <ol style="list-style-type: none"> 1) I think I have asked all main questions that I would like to ask. Is there anything more you would like to share?
5. Closure (2mins)	<ul style="list-style-type: none"> • Express thanks
6. Follow Up	<ul style="list-style-type: none"> • Transcribe all interviews into electronic form (MS word) from recordings. • Save interview transcript in a safe manner. • Reflect field notes (notes taken while I conducted interviews). • Send follow up email to participants.

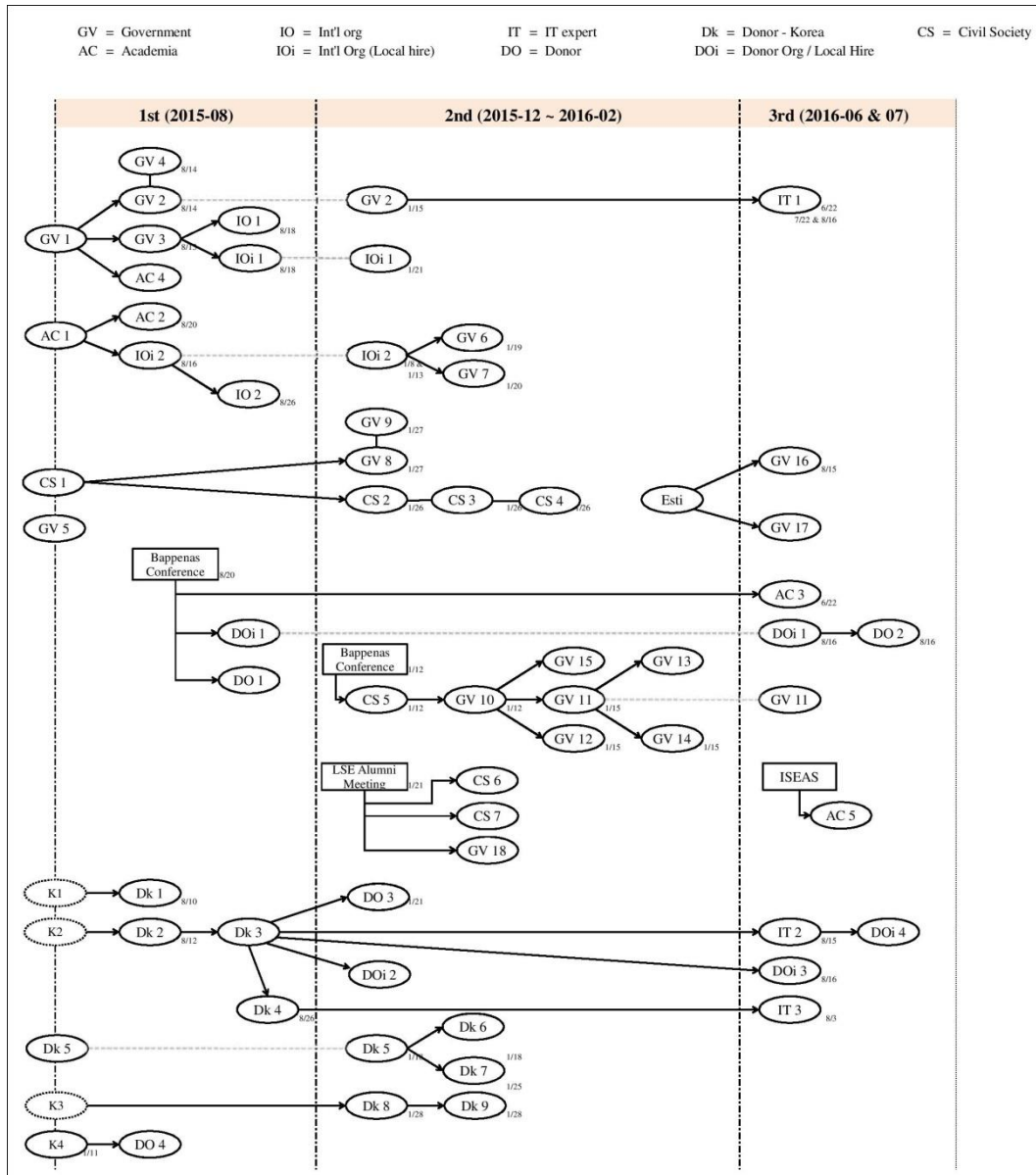
Appendix 7. List of Interviews

No	Date	Organization (current/former)	Position	Type of data collection	Code
Pilot Interview					
	01/03/2015	World Bank	Operation Officer		IOi0
	12/04/2015	SETNEG	Former AIMS manager from SETNEG side	Interview (Skype)	GV1
August 2015					
	10/08/2015	Donor agency	First Secretary	Interview (in person)	Dk1
	12/08/2015	Donor agency	Resident Representative	Interview (in person)	Dk2
	13/08/2015	SETNEG	Head of Sub Division	Interview (in person)	GV3
	13/08/2015	SETNEG	Deputy Director	Interview (in person)	GV1
	14/08/2015	BAPPENAS	Deputy Director of SSTC	Interview (in person)	GV2
	14/08/2015	BAPPENAS	Staff	Interview (in person)	GV4
	14/08/2015	UNESCO	Head of the Education Unit	Interview (in person)	DO4
	16/08/2015	World Bank	Senior Counsel	Interview (in person)	IOi2
	18/08/2015	UNDP	Technical Specialist - REDD+ Environment Unit	Interview (in person)	IO1
	18/08/2015	UNDP	Communication Specialist	Interview (in person)	IOi1
	20/08/2015	University of Indonesia	Professor	Interview (in person)	AC2
	26/08/2015	World Bank	Senior Governance Specialist	Interview (in person)	IO2
	26/08/2015	Donor agency	ODA Specialist in Governance	Interview (in person)	DO5
	26/08/2015	Donor agency	Senior Advisor	Interview (in person)	Dk4
December 2015 – February 2016					
	07/01/2016	SETNEG	Head of Sub Division	Interview (in person)	GV3
	08/01/2016	UNDP	Senior Counsel	Interview (in person)	IOi2
	09/01/2016	Donor agency	Staff in charge of AIMS	Interview (in person)	DA1
	11/01/2016	Embassy in East Timor	Country Representative, First Secretary	Interview (in person)	DF1
	12/01/2016	CSOs	Researcher	Interview (in person)	CS5
	12/01/2016	BAPPENAS	Intern	Interview (in person)	GV10

No	Date	Organization (current/former)	Position	Type of data collection	Code
	12/01/2016	Ministry of Foreign Affairs	Analyst, Bilateral Foreign Funding	Interview (in person)	GV5
	12/01/2016	IS Provider	Developer	Interview (in person)	IT2
	13/01/2016	UNDP	Senior Counsel	Interview (in person)	IOi2
	15/01/2016	BAPPENAS	Directorate of Bilateral Foreign Funding	Interview (in person)	GV11
	15/01/2016	BAPPENAS	Director of International Development Cooperation	Interview (in person)	GV14
	15/01/2016	BAPPENAS	Deputy-Director	Interview (in person)	GV12
	15/01/2016	BAPPENAS	Deputy Director of SSTC	Interview (in person)	GV2
	18/01/2016	Donor agency	Vice Representative	Interview (in person)	Dk5
	19/01/2016	University of Indonesia	Professor	Interview (in person)	AC4
	19/01/2016	Ministry of Finance	Deputy Director of Development Management	Interview (in person)	GV6
	21/01/2016	USAID	Communication Officer	Interview (in person)	DO3
	21/01/2016	UNDP	Program Assistant	Interview (in person)	IOi1
	21/01/2016	CSOs	Analyst	Interview (in person)	CS6
	22/01/2016	Donor agency	E-Gov specialist	Interview (in person)	Dk9
	22/01/2016	Donor agency	Lawyer	Interview (in person)	N/A
	25/01/2016	Donor agency	Country Director/Chief Representative	Interview (in person)	Dk7
	26/01/2016	Open Data Labs	Research Manager	Interview (in person)	CS2
	26/01/2016	Open Data Labs	Data Scientist	Interview (in person)	CS4
	27/01/2016	Kantor Staf Presiden	Open Data Lea	Interview (in person)	GV8
	27/01/2016	Kantor Staf Presiden	Open Data Developer	Interview (in person)	GV9
	27/01/2016	SETNEG	Head of Sub Division	Interview (in person)	GV1
	28/01/2016	Bilateral Economic Cooperation Bureau	Representative	Interview (in person)	Dk8
	28/01/2016	Research institute	Senior Researcher	Interview (in person)	Dk9
	07/02/2016	A4DES	Former A4DES Staff	Interview (Skype)	DOi2
June – August 2016					
	22/06/2016	IS Provider	AIMS developer	Interview (in person)	IT1
	22/06/2016	Bandung Institute of Technology	Professor	Interview (in person)	AC3
	22/07/2016	Freelancer	AIMS developer	Interview (in person)	IT1

No	Date	Organization (current/former)	Position	Type of data collection	Code
	28/07/2016	Bilateral Economic Cooperation Bureau	Representative	Interview (in person)	Dk8
	28/07/2016	Donor research institute	Senior Researcher	Interview (in person)	Dk9
	02/08/2016	Donor agency	ODA Specialist	Interview (in person)	Dk4
	03/08/2016	Aid for Development Effectiveness Secretariat (A4DES)	AIMS Task force	Interview (in person)	IT3
	05/08/2016	IS Providers, Donor agency	AIMS developer, Donor data specialist, AIMS Task force	Focus group	FO1
	12/08/2016	BAPPENAS	Communication Officer	Interview (in person)	GV15
	12/08/2016	BAPPENAS, SETNEG	AIMS Task force	Focus group	FO2
	15/08/2016	A4DES	Former A4DES IT Manager	Interview (in person)	IT2
	15/08/2016	Unit Kerja Presiden bidang Pengawasan dan Pengendalian Pembangunan (UKP4)	Former Minister, Head of BRR, Head of UKP4	Interview (in person)	GV16
	15/08/2016	UKP4	Researcher	Interview (in person)	GV19
	16/08/2016	Knowledge Sector Initiative (KSI)		Interview (in person)	DOi9
	17/08/2016	IS Provider	Manager, Global Practice	Interview (Skype)	IT4
	18/08/2016	A4DES	Former A4DES Program Manager	Interview (in person)	DOi2
	30/08/2016	AIMS Provider	Manager	Interview (Skype)	IT5

Appendix 8. Selected Snow-Balling



Appendix 9. Publications Related to Thesis

Some of the preliminary findings and analysis from my doctoral study were presented as conference proceedings earlier. All empirical data were collected and analysed by myself; papers were developed and written during my doctoral study in Information Systems and Innovation Group, Department of Management, London School of Economics and Political Science from 2013 to 2017.

Conference Proceedings

- Park, KR. (2017). An Analysis of Aid Information Management Systems in Developing Countries: Explaining the last two decades. In: Proceedings of the 50th Hawaii International Conference on System Sciences, Hawaii, pp.2580-2589. <https://scholarspace.manoa.hawaii.edu/handle/10125/41468>
An earlier version was presented in the Doctoral Colloquium of the Annual Conference on Digital Government Research, Shanghai in 2016.
- Park, KR. and Li, B. (2017). Systems Failure for Good Reasons? – Understanding aid information management systems failure with Indonesia as the state actor in the changing global field of aid. In: Proceedings of the Information and Communication Technology for Development (ICT4D) 2017, Yogyakarta, pp 321-332. https://link.springer.com/chapter/10.1007/978-3-319-59111-7_27

Related Works

- Park, KR. (2016). Institutional Isomorphism and Organized Hypocrisy in Aid Information Management Systems: the Case of Indonesia. Extended abstract accepted and presented at the Annual Conference of Development Studies Association, Oxford.
- Park, KR. (2016) Social Shaping of Aid Information Management Systems in Indonesia, Note accepted at ICTD 2016, Michigan.
- Park, KR. (2015). Does Open Data Enhance Aid Coordination among Stakeholders? Paper accepted and presented at the 1st Open Data Research Symposium, Ottawa.
- Wittemyer, R., Bailur, S., Anand, N., Park, KR., and Gigler, S. (2014). New Routes to Governance: A Review of Cases in Participation, Transparency, and Accountability. In: Closing the Feedback Loop: Can Technology Bridge the Accountability Gap? World Bank, Washington, DC.