

Natural Resources, State Formation and the Institutions of Settler Capitalism: the Case of Western Canada, 1850-1914

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Economics and Political Science for the degree of Doctor of Philosophy

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Declaration

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Abstract

A renewed discussion about inequality and economic divergence between countries has re-introduced the debate about the role played by natural resources, geography and the institutions of settler capitalism as promoters of growth and development in the long-term. Countries like Canada, Argentina, Australia and New Zealand, among others, expanded their frontiers of settlement, created important infrastructural transformations, received millions of immigrants and capital and became the most important producers of natural resources for exports during the first era of globalization (c. 1850-1914). Comparative studies that study these countries' development have particularly praised the democratic distribution of land in small lots, like in the United States and Canada, which created a class of successful farmers. With the help of Geographic Information system (GIS), this dissertation revisits the political economy of Western Canada settlement by using a historical economic geography approach.

Previous investigations on Western Canada settlement used decennial census records to estimate where settlers established themselves. This method is problematic as the expansion of the frontier of settlement happened on a very dynamic period where settlers moved frequently from one region to another. The use of annual postal records, instead, provides a more complete understanding of the region. As postal facilities opened where immigrants had already established themselves, the location of post offices gives a more nuanced understanding of the evolution of the frontier of settlement.

This study reconstructed the historical postal and railroad networks that revealed an uneven pattern of settlement with more details. Similarly, by analyzing updated homesteads entries and cancellations data during the period, this dissertation found that farmers' failures were more frequent than the classical literature assumed, particularly after the 1890s, a period scholars regarded as one of more stable settlement.

The production of space and the formation of the institutions in Western Canada from the 1850s to 1914 shows the dynamic of capitalist expansion and natural resources exploitation in a new territory. The location of post offices helps to understand in a granular form the uneven development of regions and the emergence of small communities that later became nodes of an important railroad network.

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Dedication

I dedicate this dissertation to Sandra, Fabian and Manuel.

Chapter 1

Introduction

This dissertation revisits the process of land appropriation and distribution in Western Canada during the first era of globalization (c.1850-1914).¹ The importance of studying the alienation of land in the New World resides in that the organization of a newly acquired space shaped the political economy of new countries and moulded the formation of the institutions of settler capitalism. In this form, this dissertation will explore two of the main institutions that illustrated the pace of settlement and state formation in Western Canada: the Dominion Lands Office and the postal network. Based on government published records, official statistics, maps, contemporary publications and a variety of other sources from newspapers and city directories to diaries and gazetteers, this study incorporates underutilized material and new data to recreate the dynamic period of frontier expansion and state formation in Canada. The incorporation of

¹ There is an agreement that globalization ended about 1914, however, the beginning of this period is somehow blurred. This dissertation focuses on the period 1850-1914 which coincides with the age of mass migration, as some scholars described it. See Michael D. Bordo, Alan M. Taylor, and Jeffrey G. Williamson, *Globalization in Historical Perspective* (Chicago: University of Chicago Press, 2005), 4.

Geographic Information System (GIS) analysis to study the period adds a rather new approach to evaluate the historical geography of the region. In the process, this dissertation will discuss general assumptions posited by theorists of institutions. Secondly, it will refine the comparative approach to study areas of recent settlement, as Ragnar Nurkse² described them. Third, it will contribute to the historiography of nineteenth century Canada and lastly, it will offer another approach to study Western Canada regional development by incorporating sources and data that have not been used previously.

1.1 Motivation

Since the 1850s, the expansion of capitalism in temperate areas of recent settlement followed similar patterns. Canada, the United States, Australia, New Zealand and Argentina, among other countries, benefited by their geographical location, became the principal producers of primary products for exports by the turn of the century. The conquest and domination of large extensions of territory, the arrival of millions of immigrants in these newly acquired lands and the creation and consolidation of nation-states marked the main characteristics of this period. As these countries became recipients of international capital and immigrants, they experienced important spatial and infrastructural developments. Villages, towns and cities became interconnected through an always-expanding postal, telegraph and railroad networks and the flow of immigrants, capital and goods between regions created the conditions for capitalist growth in the long run. These historical transformations occurred in a similar period that started in the 1850s and continued until the First World War, the culmination of what historians dubbed “the long nineteenth century.”³ The coincidences were not fortuitous indeed and their interconnection and differences help to elucidate the experience of natural resources exploitation, immigration, dependence, growth and development in the new world.

These coincidences frequently encouraged comparative analyses on areas of recent settlement that emphasized the importance of natural resources, staple production

² Ragnar Nurkse, “International Investment To-Day in the Light of Nineteenth-Century Experience,” *The Economic Journal* 64, no. 256 (December 1, 1954): 745, doi:10.2307/2228042.

³ The term “long nineteenth century” has been coined by Hobsbawm and widely used by other scholars, to illustrate the period between the French Revolution and the beginning of the First World War. See E. J. Hobsbawm, *The Age of Empire, 1875-1914*, 1st Vintage Books ed. (New York: Vintage, 1989), 6.

and dependence in these countries' evolution.⁴ Other studies, based on New Institutional Economics (NIE) theories, focused on the organization and evolution of economic institutions as the main factors behind these countries' long run growth and development.⁵ The New World is an important case study because it allows researchers to test different hypotheses about capitalist growth and development in comparison. These regions shared similar factor endowments, land, and their development started somehow in the same period, the second half of the nineteenth-century. In the 1850s, the American Plains, the Canadian Prairies, the Australian wheat belt and the Argentinian Pampas, among others, were large extensions of sparsely populated lands blessed by a temperate climate and fertile soil. Their importance, however, was in their ulterior economic development. As the nation-state expanded the frontiers of settlement, new areas were incorporated into agricultural production. The extension of the railroad lines, the improvement of farming techniques and the arrival of international capital and immigrants transformed these Neo-Europes, as Alfred Crosby called them, into the principal staple producers for the international market; yet, their economic organization experienced different patterns of capitalist development in the long run.⁶

⁴ See D. C. M Platt and Guido Di Tella, *Argentina, Australia, and Canada: Studies in Comparative Development, 1870-1965* (London: Macmillan in association with St. Antony's College, Oxford, 1985); Germán González and Valentina Viego, "Argentina-Canada from 1870: Explaining the Dynamics of Divergence," June 2009, <http://mpira.ub.uni-muenchen.de/18394/>; John Fogarty and Tim Duncan, *Australia and Argentina: On Parallel Paths* (Melbourne: Melbourne University Press, 1984); Jeremy Adelman, *Frontier Development: Land, Labour, and Capital on the Wheatlands of Argentina and Canada, 1890-1914* (Oxford: Oxford University Press, 1994); Donald Denoon, *Settler Capitalism: The Dynamics of Dependent Development in the Southern Hemisphere* (Oxford [Oxfordshire]: Clarendon Press, 1983); Carl E. Solberg, *The Prairies and the Pampas: Agrarian Policy in Canada and Argentina, 1880-1930* (California: Stanford University Press, 1987). Héctor L Diéguez, *Argentina y Australia: algunos aspectos de su desarrollo económico comparado*, Documento de trabajo (Centro de Investigaciones Económicas (Instituto Torcuato Di Tella)) ; 38. (Buenos Aires: Instituto Torcuato di Tella, Centro de Investigaciones Económicas, 1968); Barrie Dyster, "Argentine and Australian Development Compared," *Past & Present*, no. 84 (August 1979): 91–110.

⁵ Among a large body of scholarly works, the most recent studies that reflect an ongoing discussion on institutions and development are perhaps Daron Acemoglu and James Robinson, *Why Nations Fail: The Origins of Power, Prosperity, and Poverty* (New York: Crown Publishers, 2012); Stanley L. Engerman and Kenneth L. Sokoloff, eds., *Economic Development in the Americas since 1500: Endowments and Institutions* (New York: Cambridge University Press, 2012); Jared Diamond and James Robinson, *Natural Experiments of History* (Cambridge, Mass., USA: Harvard University Press, 2012).

⁶ Alfred W. Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900-1900*, 2nd ed., new ed, Studies in Environment and History (Cambridge ; New York: Cambridge University Press, 2004), xv. For British investments and capital flows to the new world see Angus Maddison, *The World Economy: A Millennial Perspective*, vol. 1–2 (Paris: Development Centre of the Organisation for Economic Co-operation and Development, 2001), 101–102; W.N. Goetzmann and A. Ukhov, "British Investment Overseas 1870-1913: A Modern Portfolio Theory Approach" (National Bureau of Economic Research, 2005), 33; Michael Edelstein, *Overseas Investment in the Age of High Imperialism: The United Kingdom, 1850-1914* (Taylor & Francis, 1982), 270.

Land, labour and capital played similar roles in the early development of areas of recent settlement but the historical evolution of these countries often differed. Moreover, after the Second World War, countries of the so-called Anglo world like Australia, Canada and New Zealand continued a path toward growth and development while countries of the so-called Spanish world separated from the core and never converged with them again.⁷ Some theorists claim that colonial institutions, democracy, property rights, geography or land distribution might have influenced this divergent path among countries. The idea of looking at the past to understand the present has always tempted some social sciences scholars and researchers. The risks of those assessments are that the answers very often come in the form of binary, static explanations. Their intentions are remarkable but their results lightly elaborate on the particularities of historical geographical transformations over time.⁸ Other studies based on a more nuanced understanding of the past, focus more on factual analysis rather than on conjectural predictions and mathematical models such as the ones performed by practitioners of the New Economic History (NEH).⁹

One of the startling characteristics found in NIE and NEH's studies is the rather deterministic evaluation found in the study of historical facts. The use of particular sources to analyze the past makes some NIE's studies of countries of recent settlement unconvincing. When those studies are critically confronted with other historical interpretations, the differences are important, as this dissertation will demonstrate in next

⁷ Argentina is a particular case. During the last decades of the nineteenth century, it converged with countries of the Anglo world. By the first decades of the twentieth, it outperformed some of those economies but later on, it started a slow process of divergence to leave the "convergence club" after the 1950s. See Steve Dowrick and J. Bradford DeLong, "Globalization and Convergence," in *Globalization in Historical Perspective* (Chicago: University of Chicago Press, 2003), 200–203.

⁸ While analyzing Spain's colonial institutions, Alejandra Irigoin and Regina Grafe have challenged Douglass North's often-simplistic binary interpretation of the formation and evolution of the institutions of the Anglo and Spanish worlds. See Alejandra Irigoin and Regina Grafe, "Bargaining for Absolutism: A Spanish Path to Nation-State and Empire Building," *Hispanic American Historical Review* 88, no. 2 (May 1, 2008): 174–175, doi:10.1215/00182168-2007-117. Similarly, Gareth Austin challenges Acemoglu, Johnson and Robinson's methodology to study the historiography of Africa. See Gareth Austin, "The 'Reversal of Fortune' Thesis and the Compression of History: Perspectives from African and Comparative Economic History," *Journal of International Development* 20, no. 8 (November 1, 2008): 996–1027, doi:10.1002/jid.1510.

⁹ For a brief account of the origins of NEH and NIE see, R. W. Fogel, "The New Economic History. I. Its Findings and Methods," *The Economic History Review* 19, no. 3 (1966): 642–56, doi:10.2307/2593168; Peter Temin, "Economic History and Economic Development: New Economic History in Retrospect and Prospect," Working Paper 20107 (Cambridge: National Bureau of Economic Research, 2014), http://link.springer.com/content/pdf/10.1007/978-3-642-40458-0_28-1.pdf.

chapter. It appears that for NIE-NEH theorists the period from the 1850s until the present time in new areas of settlement was a long linear event. Institutions that formed during the colonial period, or after independence in the case of the United States and Latin American countries, did not experience substantial transformations, changes or evolutions and this initial institutional organization influenced these countries' performance for the entire period; they were path dependent, as Douglass North claimed.¹⁰ If institutions that originated differently during the initial years of state formation like the British and Spanish institutions, as NIE students state, were responsible for the colonies' divergent path of development in the long run, how one can explain the convergence period at the turn of the nineteenth century like the one experienced between Canada and Argentina? Was it, as some followers of NIE's theories claim, that the initial distribution of land created the conditions for inequality that provoked divergent development in the long term? If the late twentieth century explains anything, it is that undoubtedly Latin America fell behind after the 1950s. If the cause of that divergence was the origin of their nineteenth-century institutions or more precisely the unequal distribution of land, it is certainly a debatable topic, as this study will discuss it in the following chapters.

This dissertation engages in a critical evaluation of NIE's studies and revisits the experience of land appropriation, natural resources exploitation, settlement and immigration in the Canadian Prairies from the 1850s to 1914. The main motivation is to revise the literature on frontier development in the Prairies by re-evaluating historical assumptions about land tenure and property rights to the land. In NIE's analyses, the transformation of the Canadian Prairies (and the American West for that matter) is used very often to compare how the early distribution of land in small plots promoted democracy and hence economic growth in contrast to those countries that divided land into large estates that benefited the elite, like in Latin America. In this sense, the evaluation of the appropriation of communal land shared by different indigenous communities, the ulterior enforcement of property rights to the land and the expansion and consolidation of the settler state are important topics in this dissertation. The main questions this dissertation asks is whether the initial appropriation and distribution of land

¹⁰ Douglass C. North, *Institutions, Institutional Change and Economic Performance* (Cambridge; New York: Cambridge University Press, 1990), 92–100, 113–117.

in the New World was responsible for divergent development in the long run. The second question asks whether the settlement of Western Canada followed the trends posited by NIE scholars or represented a particular case of development.

1.2 Methodology and Scope

In this regard, the focus will be on the evaluation of Western Canada in context with other areas or regions of recent settlement, mainly Argentina, Australia and New Zealand. The historical comparative approach to study Western Canada in context with other areas of recent settlement does not follow a pre-determined path. In some instances, there will be comparisons between countries; in others, between regions or areas according to the necessity of the argument. While this dissertation incorporates statistical information from different sources, it is not an econometric evaluation. This study embraces a multidisciplinary approach that brings the fields of Economic History, Economic Geography and Historical Economic Geography together; however, it leaves behind the trends established by practitioners of neo-classical economics to analyze the period.

The study of space as a product of capitalist intervention redefines the metanarrative of factor endowments, land and natural resources exploitation, as they are commonly described in the literature. In this sense, this dissertation considers that the organization of a capitalist space in the new world was a fundamental characteristic on the formation of a settler state. The study of human activity across time, as historians do, also incorporates the study of the environment where this activity took place. Not only historical events happened in a determined place, cultural, social and economic transformations were also influenced by the geographic location, as Harold Innis observed for Canada.¹¹ Hence, the reconstruction of the past, or the “geography of the past”¹² led historians and social scientists to incorporate the study of space, broadly defined as land or factor endowments, not as a part of a natural landscape but as a place manufactured through human intervention for the purpose of capitalist exploitation.

¹¹ Harold A. Innis, *The Fur Trade in Canada: An Introduction to Canadian Economic History*, Reprinted Edition (Toronto: University of Toronto Press, 2001), 393.

¹² Ian N. Gregory and Richard G. Healey, “Historical Gis: Structuring, Mapping and Analysing Geographies of the Past,” *Progress in Human Geography* 31, no. 5 (October 1, 2007): 638–53, doi:10.1177/0309132507081495.

The principal study will be on the evolution of the Prairie Provinces, what today are the provinces of Manitoba, Saskatchewan and Alberta. This dissertation uses the term “Prairie” interchangeable with the term “Western Canada”. In different studies, Western Canada includes the Province of British Columbia. Although it similarly benefited from the arrival of immigrants and capital, British Columbia’s production pattern possessed a different character, mainly forest and mining production instead of agricultural commodities, principally wheat but also cash crops and livestock. In addition, geographical patterns divide the territory through the Rocky Mountains, which act as a natural barrier to separate British Columbia from the rest of the Prairie Provinces. For these reasons, the focus will be on the three Prairie Provinces already mentioned. Certainly, the province of Manitoba, incorporated into the Canadian Confederation in 1870, demands more attention in this study than the other territories because it was the first Western development to form its own provincial political institutions and its main town and future capital, Winnipeg, became incorporated as a city in 1873. A second area of attention will be Saskatchewan and Alberta, which were part of the North-West Territories and became provinces at the turn of the century. Another focus will be on how Western Canadian cities evolved over time during the period of capitalist expansion and nation-state building.

The location of post offices across Western Canada helps to understand a pattern of settlement and urbanization during the period under evaluation. The expansion of the railroad network, furthermore, marks the dynamic of settlement and the establishment of new towns and cities after 1878. Several studies made empirical exercises that take into account the distance of settlements to the sea. This dissertation, on the other hand, does not consider that evaluation because Western Canada differs from other regions of recent settlement as the distance to the sea and consequently to ports is greater than in Argentina, Australia and New Zealand, which developed their urban frontiers alongside the seacoast. In this sense, in Western Canada, the location of towns, villages and cities close to the railroad network determines the influence of means of communications and transportation in the evolution of the urban space.

1.2.1 Sources and Data

This investigation has unearthed Canadian postal data that were not used before. Complete and systematically published postal records have existed since Confederation; however, very little has been written to analyze Canada and Western Canada’s

development with the help of that invaluable information. The Annual Reports of the Postmaster General of Canada and the Department of Interior published within the Sessional Papers provide an extraordinary occasion to discuss regional and local historical transformations. Studies of Western Canada settlement and immigration have commonly used censuses records to estimate the region's settlement, modest growth and uneven development. The inconvenience of this approach is that censuses were taken every ten years or every five years for the Prairie provinces, starting in 1886. Moreover, Western Canada data was partially incorporated in the second national census of 1881. Except for Winnipeg figures, data for the rest of the region in this census were dubious. In addition, census districts and sub-districts were not clearly delineated as counties and rural municipalities in Manitoba were incorporated after 1882. For the period between censuses, data are incomplete and scattered. This dissertation argues that in moments of great frontier expansion, census data cannot capture the dynamic of the period. Other studies that focused on more regional or local aspects relied on homesteads and land patents records mainly extracted from the *Historical Statistics of Canada* 1965 edition¹³ to establish with more accuracy the evolution of settlement in particular areas.¹⁴ This volume compiled an important number of government reports and national aggregated data that help to obtain some important quantitative evidence of the region's development. While those early studies represent the "classical view" in the analysis of Western Canada settlement, their approaches need a revision. Particularly, those studies that relied on incomplete datasets of homestead entries and cancellations, as this dissertation will evaluate in Chapter 4.

¹³ M. C. (Malcolm Charles) Urquhart and Kenneth Buckley, eds., *Historical Statistics of Canada* (Toronto: Cambridge University Press, The MacMillan Company of Canada Ltd., 1965).

¹⁴ Among the most important works, see: K. Gary Grant, "The Rate of Settlement of the Canadian Prairies, 1870-1911: A Comment," *The Journal of Economic History* 38, no. 2 (June 1, 1978): 471-73; Frank D. Lewis, "Farm Settlement on the Canadian Prairies, 1898 to 1911," *The Journal of Economic History* 41, no. 3 (1981): 517-35; William Marr and Michael Percy, "The Government and the Rate of Canadian Prairie Settlement," *The Canadian Journal of Economics / Revue Canadienne d'Economique* 11, no. 4 (November 1, 1978): 757-67; K. H. Norrie, "The Rate of Settlement of the Canadian Prairies, 1870-1911," *The Journal of Economic History* 35, no. 2 (June 1975): 410-27; John Tyman, "Patterns of Western Land Settlement," *MHS Transactions Series*, 3, no. 28 (1971), www.mhs.mb.ca/docs/transactions/3/landsettlement.shtml; Thomas R. Weir, "Settlement in Southwest Manitoba, 1870 - 1891," *MHS Transactions*, 3, 1960, <http://www.mhs.mb.ca/docs/transactions/3/swsettlement.shtml>. And perhaps the most influential historical geographical account of Western Canada settlement, William A. Mackintosh, *Prairie Settlement: The Geographical Setting*, vol. 1, Canadian Frontiers of Settlement (Toronto: The Macmillan Company of Canada limited, 1934). Another meticulous work in the field, although more regional in scope is John L. Tyman, *By Section, Township and Range: Studies in Prairie Settlement* (Brandon, MB: Brandon University, 1972).

This study will incorporate other sources to contribute to the study of the region. The increasing availability of new data, digitized maps and digital libraries put in the hands of researchers new evidence that in some way facilitate the task and circumvent the tiresome endeavour of on-site archival investigation. This dissertation takes advantage of the availability of new sources in digital format and incorporates them into new approaches and methodologies. The use of Geographical Information System (GIS) incorporates a rather new approach in historical economic studies, which expands the use of quantitative data in a spatial environment. The incorporation of GIS to evaluate areas of recent settlement is valid because the analysis of space needs a tool that can present new findings in a new stylized form. For instance, the study of railroad networks and the distance of settlements to the railway, the impact of geographical constraints in the election of settlements, the importance of regional particularities in economic development can be also mapped with certain precision. The analysis of post office locations in nineteenth century Western Canada provides, as this dissertation will show, new elements to evaluate when and where settlers established themselves in a region. As geographical transformation cannot be explained without a historical framework, likewise, historical development cannot be understood without a further explanation of geographical settings.¹⁵

1.3 Research Contribution

This dissertation's main contribution is the incorporation of the postal and railroad annual data into GIS. Its aim is to fill the gaps in spatial transformation that exist between censuses and to estimate certain economic activity such as postal revenues and money orders figures. The second main contribution is the gathering and geo-referencing of almost 1,000 post offices location across the Prairies and the reconstruction of the historical railroad lines that started their expansion into the west after 1878. For reason of space, those datasets are available online.¹⁶ The third contribution was the revision of homestead entries and cancellations data from 1870 to 1914. These data were generally extracted from the *Historical Statistics of Canada's* 1965 edition but

¹⁵ Jordi Martí-Henneberg, "Geographical Information Systems and the Study of History," *Journal of Interdisciplinary History* 42, no. 1 (2011): 11.

¹⁶ Datasets are available at <http://gusvelasco.sytes.net/data>

records were incomplete. Information gathered for this dissertation incorporated a more complete dataset extracted from individual land offices across the Prairies.

1.4 Chapters summary

The rest of this introduction is a summary of the chapters. Natural resources exploitation and dependence generated important studies during a great part of the twentieth century. Chapter 2 echoes those investigations and engages in a historiographical evaluation of the trends that marked Canada's economic history. In this regard, Harold Innis' contribution to the debate is paramount to understand the influence of staple production to Canada's development. A secondary discussion analyzes sources and methodology in the comparative evaluation of Canada and Argentina. This literature review is centered on two important studies that gave historical context to the study of factor endowments and institutions. Although a number of papers have analyzed Argentina and Canada together, Jeremy Adelman and Carl Solberg's full-length monographs were the principal comparative contributions to the field. This part critically analyzes both works, principally, Solberg's general assumptions and methodology derived from a particular use of primary sources. The role of land, as natural resources or as factor endowments, in the formation, expansion and development of nineteenth-century institutions in Canada is the chapter's principal contribution that connects with a critical evaluation of NIE's theories.

Chapter 3 analyzes Canada in context with other countries of recent settlement. It compares Canada's economic growth and immigration and population trends with countries that started their spatial transformation in a similar period such as Australia, New Zealand and Argentina. Comparing these countries' evolution helps to understand Canada's spatial transformation during the period 1850-1914. This chapter also raises questions about the quality of data, principally nineteenth century data, to provide a reliable estimate of the period under evaluation. Figures on net immigration and population growth were difficult to estimate, as countries did not follow precise border control during the period. Moreover, the dynamic of frontier expansion could not capture with precision migrants' mobility across the regions. This is particularly evident in the discussion about Canada's immigration and migration patterns, especially to the United States. For this reason, nineteenth century GDP figures must be taken as a broad guessimate. Nevertheless, these figures help to obtain a glimpse of the transformation experienced during the period and to act as an initial step for further investigations.

One of the New World's important transformations during the nineteenth century has been the incorporation of distant territories into capitalist production for the international market. Space was no longer a narrative account that illustrated the magnificent descriptions of landscapes in travellers' diaries but a capitalist tool aimed at the organization of the state. Chapter 4 describes the enforcement of private property in the land in those territories. Recent studies have put special interest on the early allocation of land as the main cause behind countries' economic development in the long run. These studies focus their attention on the mechanisms enforced by the United States and Canada through the American Homesteads Act of 1862 and the Canadian Dominion Lands Act a decade later. Social scientists praised these government policies as they provided a democratic allocation of land to small holders during the period. Surprisingly, these analyses leave behind other forms of land appropriation and distribution, principally to bigger players, such as railroad and land companies and other corporations. This chapter contributes to the comparative history of countries of recent settlement and examines different forms of land appropriation in the New World in different historical period. It also contributes to the historiography of Canada and the settlement of the Prairies and provides a more detailed assessment of Canada's land distribution in the newly acquired western territory.

The second part of the chapter incorporates updated homestead entries and cancellations data extracted from individual land offices across the Prairies and compiled by this author. In several works, the analysis of Prairie settlement have commonly used the *Historical Statistics of Canada* data.¹⁷ The problem with data related to "free grants" in this monumental compilation of Canadian statistics is that there are incomplete. This author has collected data from individual Land Offices across the Prairies extracted from the Department of Interior Annual Reports published within the Sessional Papers of the Dominion of Canada that provide a more complete understanding of the region's territorial development. With these updated data, this section used a Historical GIS approach to estimate settlers' mobility according to entries and cancellations derived from different land offices over time. The use of GIS allows one to link updated data from homesteads entries and cancellations over time and space to obtain a better understanding of settlers' performance during the period. A GIS time series map illustrates settlers'

¹⁷ M. C. (Malcolm Charles) Urquhart and Kenneth Buckley, eds., *Historical Statistics of Canada* (Toronto: Cambridge University Press, The MacMillan Company of Canada Ltd., 1965).

mobility according to the location of land offices and data compare entries and cancellations during the period. In this form, failures can be tracked in time and space by the number of homesteads cancellations. Consequently, we find that the allocation of land in small plots was not a guarantee of farmers' success as it was commonly assumed.

The division of Western Canada land formed an almost perfect grid of about 50,000 townships of 36 square miles divided into quarter sections of 160 acres, the homestead. Certainly, the occupation of those homesteads created an uneven pattern as homesteads were settled in different periods. W. A. Mackintosh, in his original work on the Prairie settlement of the 1930s, used census records to register the dynamic of frontier expansion.¹⁸ Chapter 5 follows similar methodology but it incorporates postal records. The importance of using postal records is the information provided in the Postmaster Annual Reports. This detailed information becomes of great importance not only for its revenues' annual estimates but also because it was possible to link those economic figures with the geographic location of almost 1,000 post offices that opened in the Prairies during the period.

This chapter provides sources and methodologies that have not been used before to understand the spatial transformation of Western Canada during the second half of the nineteenth century. Mackintosh's early study of the 1930s used map series drawn upon census records; in this chapter, maps and other spatial analysis performed with the help of GIS tools used the annual data extracted from the Postmaster Annual Reports and the post offices database hosted in Library and Archives Canada (LAC). This author has compiled digital records publicly available along data extracted from textual records from government documents, mainly from the Sessional Papers of the Dominion of Canada, complemented with information provided by maps, newspapers, gazetteers, city directories and other contemporary sources, like settlers diaries and information for potential immigrants published by railroad and land companies.

Of similar importance was the GIS reconstruction of the historical railroad system in Western Canada. Based on the actual railroad network, this chapter used historical printed maps from different archives, principally from the University of Manitoba Library and Archives of Manitoba, and textual records to produce digital format maps and revive the expansion of the railroad into the west. This project demanded consider-

¹⁸ Mackintosh, *Prairie Settlement*.

able time, as there were inconsistencies between maps and textual records. The reconstruction, nevertheless, estimates the movement of the main railroad line and several branches year by year to 1900. It then allowed one to connect different databases: the postal database with the railroad database. In this form, it was possible to estimate the distance of post offices to the railroad lines and to the rivers. This analysis shows the dynamic of Prairie settlement and the influence of different means of transportation in different periods. It also follows the trajectory of settled areas through the opening of post offices and in this way, it recreates a dynamic period that captures settlers' mobility over time. The reconstruction of the historical railroad is of great importance as no other source has yet rebuilt the expansion of Western Canada railroad from 1878 to 1900 in digital format as this dissertation does.¹⁹ In this sense, the post offices and historical railroad datasets available online in GIS format are two important contributions for future research.

Chapter 6 presents different evaluations of the postal aggregated data for the whole country to derive estimations of Western Canada's performance. The postal network was the principal state institution in terms of spatial presence, dynamic and number of employees. It combines the role of modern management bureaucracy aimed at providing a public service with a quasi-political entity as state agency in places where there were not yet any political organizations such as municipal or county government. In this sense, a brief introduction of the composition of all federal expenditures helps to locate the post office system within the broad components of a modern state in its making. This chapter also incorporates data from the Dead Letters Office (DLO) that help to obtain information about the movement of unsecured financial instruments through the postal system. Drawn upon the DLO and the Money Orders (MO) records, the chapter estimates money flow within and outside the country that suggest immigrants' remittances. The timing of the outflow of MO illustrates when immigrants of certain nationalities became money senders to their families in Europe and the United States.

In sum, the organization of space in Western Canada from the 1850s to 1914 shows the dynamic of capitalist expansion and natural resources exploitation in a new territory. Data available to study the region's performance are scarce and limited. Other

¹⁹ The digital datasets are available at <http://gusvelasco.sytes.net/data>

than censuses records, very few works provided estimates of the development of Western Canada before 1914. In times of great frontier expansion and settlers' mobility, these data is not sufficient to capture the dynamic transformation experienced in the period. The location of post offices year by year helps to understand in a granular form the uneven development of regions and the emergence of small communities that later became nodes of an important railroad network. The production of space and the evolution of a newly expanded nation-state were twin projects aimed at the organization of capitalism in new areas of settlement.

Chapter 2

Staples, Natural Resources and Institutions: Historiographical Discussion

2.1 Introduction

The staple theory or approach of economic growth posited early in the 1930s by Canadian economic historian Harold Innis serves as an introduction to the study of natural resources, geography, institutions and economic growth in Canada. A renewed debate about inequality and economic divergence between countries or regions has reintroduced the debate about the role played by natural resources, geography and institutions as promoters of growth and development in the long-term.¹ These studies provide a comparative approach to evaluate regional or geographical disparities and trace an imaginary line between the North and the South, if for the former we consider North America—principally the United States and Canada—Europe and Australasia as a privileged guest and for the latter Latin America, Africa and parts of Asia. Interests in historical comparative evaluations between countries or regions that exploited similar natural resources in similar periods have produced an important body of scholarly works in the form of books, articles, seminars and conferences.² A new category of historical

¹ Daron Acemoglu and James Robinson, *Why Nations Fail: The Origins of Power, Prosperity, and Poverty* (New York: Crown Publishers, 2012); Stanley L. Engerman and Kenneth L. Sokoloff, eds., *Economic Development in the Americas since 1500: Endowments and Institutions* (New York: Cambridge University Press, 2012).

² Among others, D. C. M Platt and Guido Di Tella, *Argentina, Australia, and Canada: Studies in Comparative Development, 1870-1965* (London: Macmillan in association with St. Antony's College, Oxford, 1985); Germán González and Valentina Viego, "Argentina-Canada from 1870: Explaining the Dynamics of Divergence," June 2009, <http://mpa.ub.uni-muenchen.de/18394/>; John Fogarty and Tim Duncan, *Australia and Argentina: On Paralell Paths* (Melbourne: Melbourne University Press, 1984); Jeremy Adelman, *Frontier Development: Land, Labour, and Capital on the Wheatland of Argentina*

economic analysis emerged following the impulse given by the New Economic History (NEH) and New Institutional Economic (NIE) ideas that incorporated neo-classical economic theory to study patterns of growth and development in historical perspective. Following these theories that attempt to provide an empiricist approach, some scholars reshaped the comparative method of historical evaluation delineated early by Marc Bloch³ and replaced the term for what they consider a more scientific approach to study the past: “natural experiments in history.”⁴ Those “experiments,” for instance, examine why countries that had similar factor endowments and produced similar staples for export in the nineteenth-century diverged substantially in the long term.

Even though this dissertation acknowledges in general the empirical studies posited by NEH and NIE practitioners, it distances itself from their answers. Principally, this dissertation challenges the simplistic binary explanation of “good” and “bad” institutions as the cause(s) of countries’ divergence in the long term. Rather, it searches for a meticulous historical and regional investigation instead of dubious universal laws that govern human activity.

This chapter is organized as follows: Section 2.2 explores the definition and scope of the so-called regions or areas or recent settlement. Section 2.3 examines the contribution of the staple theory or approach to the study of regions of recent settlement. This section presents critiques and contributions to Innis’ approach based on different theoretical interpretations and continues in section 2.4 by discussing “new” interpretations of Western Canada development based on neo-classical modeling and econometrics. Section 2.5 analyzes how a staple, wheat, shaped the development of two countries. Carl Solberg and Jeremy Adelman’s contributions to the study of land policies, immigration and wheat production in Canada and Argentina are very important as they

and Canada, 1890-1914 (Oxford: Oxford University Press, 1994); Donald Denoon, *Settler Capitalism: The Dynamics of Dependent Development in the Southern Hemisphere* (Oxford [Oxfordshire]: Clarendon Press, 1983); Carl E. Solberg, *The Prairies and the Pampas: Agrarian Policy in Canada and Argentina, 1880-1930* (California: Stanford University Press, 1987).

³ Marc Bloch, “Towards a Comparative History of European Societies,” in *Enterprise and Secular Change*, trans. Jelle C. Riemersma, The American Economic Association Series (London: George Allen and Unwin, 1953), 494–521; William H. Sewell, “Marc Bloch and the Logic of Comparative History,” *History and Theory* 6, no. 2 (January 1, 1967): 208–18, doi:10.2307/2504361; Alette Olin Hill and Boyd H. Hill, “Marc Bloch and Comparative History,” *The American Historical Review* 85, no. 4 (October 1, 1980): 828–46, doi:10.2307/1868874.

⁴ Jared Diamond and James Robinson, *Natural Experiments of History* (Cambridge, Mass., USA: Harvard University Press, 2012).

provide an influential framework to the study of factor endowments, geography and institutions highlighted in section 2.6 . Section 2.7 concludes.

2.2 Toward a Definition of Region

What things define a region? What do scholars define when they argue about regions of recent settlement? This section provides an overview and definitions that serve to understand the following arguments about space, factor endowments and geography. During the second half of the nineteenth century, a group of countries that had obtained formal and informal independence from their mother countries experienced a similar pattern of territorial expansion, national governments, foreign direct investment—principally from Great Britain—and settlement of European immigrants. Although, they have distinctive, individual features, scholars defined those countries according to what they considered their shared characteristics. Ragnar Nurkse defined them as “regions of recent settlement: the spacious, fertile and virtually empty plains of Canada, the United States, Argentina, Australia and other ‘new’ countries in the world’s temperate latitudes.”⁵ James Belich differentiates the shared characteristics of the Anglo-World, especially Australia, New Zealand and Canada from those countries of the Spanish-World. There were not the geographical characteristics that describe this group of countries, as Nurske stated but, rather, the origins of the political and institutional experience.⁶

In the quest to explain settlement and capitalist development from the mid-nineteenth century on, other authors expanded the scope and included South Africa, Chile and Uruguay among the members of that group of countries that received an important influx of European immigrants.⁷ Angus Maddison describes as “Western Offshoots” only those developed countries of the Anglo-world: Australia, Canada, New Zealand and the United States. He differentiates them from those countries of the Spanish Offshoots that experienced less growth and development than the Western Offshoots.⁸ For

⁵ Ragnar Nurkse, “International Investment To-Day in the Light of Nineteenth-Century Experience,” *The Economic Journal* 64, no. 256 (December 1, 1954): 745, doi:10.2307/2228042.

⁶ James Belich, *Replenishing the Earth: The Settler Revolution and the Rise of the Angloworld* (Oxford: Oxford University Press, 2009).

⁷ Denoon, *Settler Capitalism*.

⁸ Angus Maddison, *The World Economy: A Millennial Perspective*, vol. 1–2 (Paris: Development Centre of the Organisation for Economic Co-operation and Development, 2001), 449.

Alfred Crosby, European immigrants arrived and settled in the New World in areas with climate and vegetation similar to Europe. He describes these countries as “Neo-Europes” because settlers introduced in the New World the same economic, biological and institutional arrangement as those they had in Europe.⁹

Although regional investigation was the starting point to evaluate countries of recent settlement, as they became staple(s) producers for the international markets, the term “region” became interchangeable with the term “area” or “country”. While some scholars expanded the periods under scrutiny, others described the country in question as a whole without explaining regional particularities; for instance, the Canadian Prairies became Canada or the Argentinian pampas became just Argentina. It is important to note these latter descriptions as they overlook the definition of the region and the timing and thus, history becomes a blurred horizon. The scope of study—time and space—must represent similar units, as John Fogarty, argues.¹⁰ Those are not minor details as the area those countries had in 1850 changed significantly by the turn of the century and their economic development followed in several instances different paths.

The second half of the nineteenth century experienced a great dynamic in the form of territorial expansion, influx of immigrants, new political boundaries and hence, new political institutions. The scope of the investigation and the historiography that give context to the analysis must reflect those changes in time and space in order to compare similar or different areas in question. The region under scrutiny highlights its importance once its economic activity shifts from one mode of production to other(s). The transformation of Western Canada from a fur trade region to a region of agricultural production for the world market delineated a great structural change. The new staples, wheat and livestock, transformed the geography of the region and as such influenced the evolution of new towns and cities. If the fur trade sketched the territory with trails and portages connecting rivers and lakes with the centres of distribution and shipping, the wheat economy crossed the space onto a rather perfect grid of townships and homesteads. The addition of the railroad network to this new organized territory acted as hub

⁹ Alfred W. Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900-1900*, 2nd ed., new ed, Studies in Environment and History (Cambridge ; New York: Cambridge University Press, 2004).

¹⁰ John P. Fogarty, “The Comparative Method and the Nineteenth Century Regions of Recent Settlement,” *Historical Studies* 19, no. 76 (1981): 412–413, doi:10.1080/10314618108595647.

of economic activity and urbanization. Staple production consequently shaped the geography of the region, its infrastructure, communication networks and ultimately, institutions. In this sense, this dissertation follows Innis in style and approach.

2.3 The Staple Discussion

2.3.1 Dependence and Staple Theory

The production of staples for the world market in the second half of the nineteenth century reshaped the economic geography of Canada. Although he did not formulate a “theory” or “thesis,”¹¹ Harold Innis’ study of the role of natural resources in Canada’s development became a foundational idea that influenced the evolution of Canadian economic history debates, or as William Marr and Donald Paterson state, “it provides an essential taxonomy — a system of classification for like economic phenomena.”¹² Even though his “thesis,” “approach” or “theory” has been contested since at least the 1950s, it deserves a brief introduction as he positioned the field of Canadian history, historical geography, regional development and economic history into the international debate about staple production, transportation, economic growth and dependence.

Canadian scholars pioneered the field of historical economic geography and regional development early in the twentieth century. W. A. Mackintosh’s studies of the settlement of the Canadian Prairies and the role played by geography and natural resources exploitation in Canada’s growth is contemporary to Harold Innis’ study.¹³ Mackintosh recognized earlier that the production of staples for the European market did in fact produce growth and development. He added with optimism that, “[n]othing is more typical of colonial development than the restless, unceasing search for staples

¹¹ In fact, Melville Watkins gave a theoretical framework to Innis’ ideas. See Melville H. Watkins, “A Staple Theory of Economic Growth,” *The Canadian Journal of Economics and Political Science / Revue Canadienne d’Economie et de Science Politique* 29, no. 2 (May 1963): 141–58, doi:10.2307/139461.

¹² William L. Marr and Donald G. Paterson, *Canada: An Economic History*, 2nd ed. (Toronto: Gage Publishing, 1980), 11.

¹³ Mackintosh edited a collection of studies under the title *Canadian Frontiers of Settlement* that discussed similar ideas to those of Innis.

which would permit the pioneer community to come into close contact with the commercial world and leave behind the disabilities of a pioneer existence.”¹⁴ For Innis, on the contrary, staple production created dependency toward the industrialized centres of consumption. Consequently, an export-led economy based on the production of raw materials energized and multiplied the areas under exploitation to serve mainly the production of primary goods. Analyzing the fur trade in Canada, Innis observes, “[a]griculture, industry, transportation, trade, finance, and governmental activities tend to become subordinate to the production of the staple for a more highly specialized manufacturing community.”¹⁵ Dependence on more industrialized countries became the model of growth but also its restraint. “The economic history of Canada,” remarks Innis, “has been dominated by the discrepancy between the centre and the margin of western civilization.”¹⁶ Canada became in this way the principal supplier of raw materials to the industrialized world and to the United States “even more than of Great Britain.”¹⁷ A country that relies on the exploitation of natural resources alone delays therefore the process of industrialization and thus of modern economic growth.

2.3.2 Staples and Periphery: A Comment on Argentina

The debate on nineteenth-century patterns of growth and development based on staples production in countries of recent settlement has added plenty of insightful studies to the economics and history fields. The debate influenced a cross-country evaluation over the years and several studies remarked on the similarities (or differences) between Argentina, an informal British domain, in words of Henry S. Ferns,¹⁸ and the rest of the British offshoots.¹⁹ Argentina, for instance, experienced an important structural

¹⁴ W. A. Makintosh, “Economic Factors in Canadian History,” in Melville H. Watkins and H. M. Grant, eds., *Canadian Economic History: Classic and Contemporary Approaches* (Ottawa: Carleton University Press, 2000), 5.

¹⁵ Harold A. Innis, *Staples, Markets, and Cultural Change*, ed. Daniel Drache (Montreal: McGill-Queen’s University Press, 1995), 5. See also Harold A. Innis, *The Fur Trade in Canada: An Introduction to Canadian Economic History*, Reprinted Edition (Toronto: University of Toronto Press, 2001), 385.

¹⁶ Innis, *The Fur Trade*, 385.

¹⁷ *Ibid.*, 386.

¹⁸ H. S. Ferns, “Britain’s Informal Empire in Argentina, 1806-1914,” *Past & Present*, no. 4 (November 1953): 60–75.

¹⁹ Solberg, *The Prairies and the Pampas*; Adelman, *Frontier Development*; Héctor L. Diéguez, *Argentina y Australia: algunos aspectos de su desarrollo económico comparado*, Documento de trabajo (Centro de Investigaciones Económicas (Instituto Torcuato Di Tella)); 38. (Buenos Aires: Instituto

transformation and economic growth from the 1880s until the First War similar to other European off-shoots. It is important to note that by the time Innis illustrated his staple model, Argentinian economists were making similar conclusions regarding Argentina's growth. During the second half of the nineteenth century Argentina's agrarian production expanded rapidly and so did its growth rate. The benefits of that growth, however, did not produce an important industrial transformation. Economists and intellectuals close to the ideas posited in *Revista de economía argentina*, like Alejandro Bunge, noted in 1918 that Argentina faced dependence problems in developing its economy. Bunge argued that for fifty years Argentina's economy depended on the interests of external buyers and suppliers and in order to obtain economic independence the country should change its economic policies according to its own needs. In this way, the country could create better possibilities to promote industrialization and public works expansion and initiate a path towards modern development.²⁰

Later contributions by the "developmentist" or structuralist school led by Raúl Prebisch and the CEPAL (ECLA) put industrial development at the centre of the scene again. Prebisch's definition of "centre" and "periphery" became a cornerstone in future studies of development. He argues that the economic advantages of the international division of labour are unquestionable but countries in the periphery that suffered the lack of industrialization became less advantaged because their productivity levels does not allow them to save and enjoy the benefits of the developed countries.²¹ The linkages that later Melville Watkins described for Canada were not present in the evolution of Argentina's growth.²² It is not clear if Innis' theory was informed by Bunge's approach on external dependence or if Prebisch knew about Innis when he theorized about unequal exchange, Latin America's terms of trade and core and periphery relationships. The fact was that Innis explained Canadian early development in similar terms. It is

Torcuato di Tella, Centro de Investigaciones Económicas, 1968); Fogarty and Duncan, *Australia and Argentina: On Parallel Paths*; Platt and Di Tella, *Argentina, Australia, and Canada*.

²⁰ Alejandro Ernesto Bunge, "La economía positiva y la política económica argentina," *Revista de economía argentina*, September 1918, 250, 253.

²¹ Raúl Prebisch, "El desarrollo económico de la América Latina y algunos de sus principales problemas," *Desarrollo Económico* 26, no. 103 (October 1986): 479, doi:10.2307/3466824. An earlier version of this article was published in 1949 by CEPAL (ECLA).

²² Watkins, "A Staple Theory of Economic Growth," 145.

noteworthy then to incorporate areas of recent settlement to the analysis of staple production and development.

2.3.3 Staple Theory, Growth and Industrialization

For Innis, the fur trade determined the geographic limits of Canada's development. "The present Dominion," says Innis, "emerged not in spite of geography but because of it. The significance of the fur trade consisted in its determination of the geographic framework."²³ In this form, geographic determinism implied that staples perpetuates the same economic cycle based on primary products for exports. Watkins disputes Innis' pessimist argument and states that, if the staple economy expands and overcomes the so called "staple trap," it is possible that a secondary or tertiary economy would evolve and then the term "staple economy" would lose its negative connotation as Innis remarked.²⁴ Watkins finds that three sort of linkages—backward, forward and demand linkages—interconnect the cycles of staple production and accelerate capital accumulation and thus, potential industrialization. The backward linkages provoke the increasing of investments in capital goods and production for the staple industry. Forward linkages cause the re-investment of the product of natural resources exports into industry, for instance, further processing of primary commodities: wheat to flour to baked goods or logs to lumber to shipbuilding. Demand linkage, through the diversification of production, directs investment toward those industries that produce for the domestic market.²⁵ Watkins considers that entrepreneurship and state involvement through solid institutions—institutions moulded anew without any constrain toward an export-led economy—would take advantage of the exports and promote a good business climate for domestic and international investors.²⁶ In this way, the staple economy generates the conditions for economic diversification and the domestic market benefits twofold, first as producer and then as consumer of local industrialized goods.²⁷

Innis, however, had similarly addressed Watkins' contribution in an early study, although his sense of "industrialization" must be analyzed with caution. While Watkins

²³ Innis, *The Fur Trade in Canada*, 393.

²⁴ See Watkins, "A Staple Theory of Economic Growth," 151–152.

²⁵ *Ibid.*, 145.

²⁶ *Ibid.*, 146-148.

²⁷ *Ibid.*, 144.

explains a modern economic growth based on staple production like the transformation experienced after the 1890s, Innis was describing the passage from the fur trade to a more industrialized activity like lumber production. Analyzing the development of Quebec in the 1820s, Innis recognized the region's economic dependence on fur trade and lumber as the principal staples. Nonetheless, he also made a distinction about the different outcomes that this dependence created according to specific staples. While the first stage of growth based on fur trade did not create development and perpetuated dependency on this staple, the lumber industry that developed thereafter created the conditions for industrial innovations and significant levels of settlers' mobility.²⁸ This latter explanation deserves more attention as small-scale transportation involved in the fur trade, like canoes and small boats, were not able to provide an important return cargo. The lumber industry, instead, utilized larger vessels that on the return trip became passenger boats that transported large number of immigrants.²⁹ The expansion of canals and waterways and the improvement of maritime transportation, said Innis, were "responsible for rather violent fluctuations in economic development through the dependence on staple raw materials."³⁰ In this case, a positive dependence stage gave impulse to another economic cycle based on a more industrialized staple, lumber. Innis' early thought was close to the optimistic Mackintosh's approach than to the pessimistic view outlined in his later arguments; nevertheless, dependence on staple production marked the development of Canada well after the turn of the century, as 3.3.4 will show.

2.3.4 Metropolis, Frontier and Dependence

If Innis' approach provided a new interpretation of economic growth based on external dependence and the production of staples, J. M. S. Careless argues that the country's territorial expansion created another kind of dependence, an internal dependence, that mediated between the financial and commercial centres, the metropolis, and the new, distant territories, the frontiers.³¹ For Careless, the political and economic will of the metropolis influenced the development of the frontier. This dependent connection

²⁸ Harold A. Innis and Mary Quayle Innis, *Essays in Canadian Economic History* (Toronto: University of Toronto Press, 1962), 67–69.

²⁹ *Ibid.*, 67.

³⁰ *Ibid.*, 74-75.

³¹ J. M. S. Careless, *Frontier and Metropolis: Regions, Cities, and Identities in Canada before 1914*, The Donald G. Creighton Lectures 1987 (Toronto: University of Toronto Press, 1989), 10.

determined an internal core-periphery relationship in which the new towns formed during the period of frontier expansion were economic, politically and socially subordinated to the necessities of the metropolis. In this form, the establishment of financial institutions, wholesale trade centres and the extension of the transportation networks in the newly incorporated towns and cities was a clear determination of metropolitan capitalism, not to the export-led agricultural production, as Innis stated.

Careless' contribution to the organization of cities and regions is very important as he incorporates the study of space, urban space, as a capitalist battlefield for the location of financial institutions, communication networks and wholesale centres. The hinterland as staple producer strengthened the role of the frontier cities as dual centres of power. On the one hand, frontier-expanding cities could not detach themselves from the metropolis' influence and consequently acted as their distant agents. At the same time, some new urban centres that evolved within the hinterland also became metropolises on their own and soon raised themselves as centres of regional influence by exercising control over other forming towns and cities. The location of post offices, as this dissertation will show, demonstrates that trend. A network of well-located post offices provided services to smaller ones. The intersection of central post offices, railroad stations and hubs of postal routes will demonstrate the spatial setting of central towns and cities.³² In this way, regional urban centres marked the dynamic of frontier development. Echoing Innis' geographical determinism, Canada, says Careless, "reflected the profound influence of physical environments."³³ Space, that is geographical location, played an important role as a determinant factor in the dual relationship between the metropolis and the hinterland.

2.3.5 New Dependence and Underdevelopment: the Canadian Way

The early assessment of Canada's development and early dependence on the American market made some social scientists to wed Innis's staple approach with that

³² For an elaboration on central places and gateway cities see, Bonnie Barton, "The Creation of Central-ity," *Annals of the Association of American Geographers* 68, no. 1 (March 1, 1978): 34–44; Charles S. ReVelle and Ralph W. Swain, "Central Facilities Location," *Geographical Analysis* 2, no. 1 (January 1, 1970): 30–42, doi:10.1111/j.1538-4632.1970.tb00142.x; A. F. Burghardt, "A Hypothesis About Gateway Cities," *Annals of the Association of American Geographers* 61, no. 2 (June 1, 1971): 269–85, doi:10.1111/j.1467-8306.1971.tb00782.x.

³³ Careless, *Frontier and Metropolis*, 20..

of the Latin American dependency school.³⁴ By connecting these ideas, the studies assumed that Canada and Latin America's development appear to follow similar patterns of underdevelopment and external dependency because they produced staples for the international market. However, as Leo Panitch points out, Canada followed a "rich dependency" path because since the beginning of its institutional organization after Confederation in 1867, production under free or relatively free-labour conditions followed the patterns of a "normal" modern capitalist development.³⁵ The social relations of production in Canada followed a more mature stage similar to those of the developed countries.³⁶ On the contrary, in the "poor" periphery where pre-capitalist relations of production persisted, he argues, the dependence on the metropolis was stronger. While in Canada an entrepreneur class promoted industrialization, in the periphery, argues Panitch, mercantilism reproduced a pre-capitalist mode of production.³⁷ Panitch's arguments contested R. T. Naylor's thesis that Canada's late industrialization or "take-off" was a result of the necessities of the "mercantile-financial entrepreneurs."³⁸ The formative capitalist class, argues Naylor, invested in endeavours of rapid turnover instead of putting their capital into the much longer process of industrialization.³⁹ Panitch, however, does not make strong distinctions between the different sectors of the capitalist class as Naylor does. For Panitch, industrialists and mercantilists were the members of the same class regardless if profits were obtained from production or from distribution. There is, of course, a shortcoming in Panitch's arguments. He focuses mainly on Ontario or Upper Canada as the paramount of "normal" relations of productions. The historical period shows, however, an uneven development between regions. He acknowl-

³⁴ David McNally, "Staple Theory as Commodity Fetishism: Marx, Innis and Canadian Political Economy," *Studies in Political Economy* 6, no. Autumn (1981): 37; Leo Panitch, "Dependency and Class in Canadian Political Economy," *Studies in Political Economy* 6, no. Autumn (1981): 10.

³⁵ Panitch, "Dependency and Class in Canadian Political Economy," 24.

³⁶ *Ibid.*, 9.

³⁷ *Ibid.*, 15–16.

³⁸ R. T. Naylor, "The Rise and Fall of the Third Commercial Empire of the St. Lawrence," in Gary Teeple, ed., *Capitalism and the National Question in Canada* (Toronto: University of Toronto Press, 1972), 3.

³⁹ *Ibid.*, 21; R. T. Naylor, *The History of Canadian Business, 1867-1914*, Carleton Library Series 207 (Montreal: McGill-Queen's University Press, 2006), 4.

edges that Quebec followed different a path of development; however, he does not mention Western Canada where pre-capitalist relations of productions persisted even after Confederation. Confederation did not change significantly the fur trade. In fact, it remained one of the most important staples exported from Manitoba until the 1890s.⁴⁰

The staple approach influenced all Canadian schools of economic and political thought. Classical and neo-classical approaches lauded the staple economy for its connection to the international markets and thus for the linkages the economy obtained by exploiting natural resources. For “dependentistas,” heterodox economists and neo-Marxists, the explanation is rather divided. There are those who consider that staple production retarded industrialization because capital was mainly invested in infrastructures that benefited the production of staples like canals, railroads, and western expansion and those like Panitch who claims that mercantilism in Canada did not reproduce pre-capitalist relations of production as it did in Latin America, but, on the contrary, it promoted industrialization.⁴¹

2.4 Canadian Economic Historians became Empirical

The staple thesis or approach produced an important number of scholarly works that endorsed or challenged its general ideas. One the most common criticisms to Innis’ thesis or approach was the difficult to probe it with empirical results. Critics of the role that the wheat economy played in Canadian economic development started in the late 1950s. Kenneth Buckley argued that it is difficult to precisely measure the contribution of the wheat boom to Canada’s economic growth. He considers that Innis’ approach must be studied in terms of regional development as the staple was defined by geography and time. Once the frontier of settlement expanded, new areas entered into produc-

⁴⁰ Gerald Friesen, “Imports and Exports in the Manitoba Economy 1870-1890,” *Manitoba History*, no. 16 (Autumn 1988): 31–41. Arthur Ray’s book, principally Chapter 3, thoroughly studied the importance of the fur trade in Canada during the first era of globalization. See, Arthur J. Ray, *The Canadian Fur Trade in the Industrial Age* (Toronto: University of Toronto Press, 1990).

⁴¹ Surprisingly a revival of Canadian “dependence” and the re-evaluation of the so-called left-nationalism gained ground in recent debates. See, “The Staple Theory @ 50. Reflections on the Lasting Significance of Mel Watkins’ ‘a Staple Theory of Economic Growth’” (Canadian Centre of Policy Alternatives, March 2014); Paul Kellogg, *Escape from the Staple Trap: Canadian Political Economy after Left Nationalism* (Toronto ; Buffalo: University of Toronto Press, 2015).

tion and new staples appeared because of market demands and technological improvements.⁴² This is certainly true in the sense that other cash crops experienced an important increase during the period. Although Buckley asserts that capital formation for the period 1896-1930 demonstrated an important change compared to previous periods, he considers that with data available at the time it is impossible to disaggregate the contribution of the wheat economy to Canada's growth in general.⁴³

As data from Western Canada were diverse and unclear, other scholars relied on new approaches to fill these data gaps and attempted to provide a better understanding of the Prairies' contribution to the Canadian economy. Following the trends initiated by practitioners of the "New Economic History," the 1960s and 70s witnessed attempts to provide a new theoretical approach and empirical contribution to Innis' ideas by incorporating the use of statistics and econometrics to the study of Canadian economic history. The results vary and for a moment had its importance. Edward J. Chambers and Donald F. Gordon used neo-classical equilibrium model and counterfactual model to probe the role of the "staple" in Canada's GNP.⁴⁴ They argued that the "staple thesis" needed a quantitative evaluation in order to determine how much the wheat boom contributed to the increase of Canada's per capita income.

Their model stated that in the peak of the Canadian wheat boom, the Prairie region might have contributed only 8.4 percent to the national economy and they argue that other factors might have promoted regional economic growth.⁴⁵ Their counterfactual model asks what would have happened if all the Prairie agricultural land were made of rock? Their conclusion was that neither factor endowments nor capital had a great influence in raising GNP per capita and cannot be considered as factors of economic growth per se. They do not provide a clear answer, but they suggest that technological

⁴² Kenneth Buckley, "The Role of Staple Industries in Canada's Economic Development," *The Journal of Economic History* 18, no. 4 (December 1958): 443-444.

⁴³ *Ibid.*, 444-445.

⁴⁴ Edward J. Chambers and Donald F. Gordon, "Primary Products and Economic Growth: An Empirical Measurement," *Journal of Political Economy* 74, no. 4 (August 1966): 315-332.

⁴⁵ *Ibid.*, 328.

innovation, human capital, institutions and policies might have been of greater importance.⁴⁶ Unfortunately, the measures of those contributions were unclear in Gordon and Chamber's creative study.

2.4.1 Counterfactual Model: A Critique

Certainly, counterfactual models provide a very stylized answer to the problems investigated. The question is whether counterfactual models help to understand societies of the past or if they provide answers that validate the models of their practitioners. The discussion then is the validity of incorporating stylized mathematical models to the study of history. Does economics, or the more widely use of econometric models, allow a more rigorous understanding of the past or does it contribute to simplify and force a research agenda detached of the nuances of historical transformations? This is particularly true when researchers use nineteenth-century data without any critical evaluation of the quality of said data and the forms in which they were collected. This dissertation will show in the following chapters that data quality for the studied period must be used with caution. Numbers found in historical statistics were not free of bias; they responded to the historical political interests of the moment. The incorporation of econometric studies in Canada did not take into account the quality of the data as Kenneth Buckley, mentioned in the previous paragraph, suggested. Chambers and Gordon's article, nevertheless, produced a dividing line in Canadian economic history theory. In a response to their critics,⁴⁷ they came again with the "what if" assumption to validate the counterfactual model.⁴⁸ The problem then comes with the conditional assumptions and generalizations of historical facts. For what reason might a historian be interested in facts that have never happened? Gordon and Chambers had their reasons and made it clear. They are not making a historical examination of the economic evolution of Canada or some of its variables but, instead, they were performing a hypothetical evaluation in which one of the historical facts, the wheat boom, did not happen.⁴⁹

⁴⁶ Ibid., 327.

⁴⁷ John H. Dales, John C. McManus, and Melville H. Watkins, "Primary Products and Economic Growth: A Comment," *Journal of Political Economy* 75, no. 6 (December 1, 1967): 876–80, doi:10.2307/1829578.

⁴⁸ Edward J. Chambers and Donald F. Gordon, "Primary Products and Economic Growth: Rejoinder," *Journal of Political Economy* 75, no. 6 (December 1, 1967): 881, doi:10.2307/1829579.

⁴⁹ Ibid., 883.

Aside from their ahistorical perspective, Chambers and Gordon did not take into consideration a number of other factors that might have probably changed their evaluation. In the first instance, they paid little attention to the previous period, which set the basis for the wheat boom, mainly the expansion of the state and the creation of new government institutions and second, to the development of new towns and cities alongside the railroad lines. Some of these latter observations may probably be difficult to measure or quantify because data are not readily available but not all the factors that became of historical relevance can be measured. Nevertheless, it is important to take into account the timing of Prairie settlement as an important measure to study the development of the region.⁵⁰

2.4.2 The Rate of Settlement

Other works that focus on the development of Western Canada also used econometrics to study the region and they incorporated the settlement of the Prairies and natural resources production as other variables of analysis. This was an important step forward, as Chambers and Gordon paid scant attention to the region's settlement. The production of natural resources for the international market was closely connected to the region's rate of settlement as it triggered a number of other developments, namely, railroad extension, roads, public works, the development of villages, towns, cities and so forth, as previous sections discussed. In general, neo-classical economic historians and economists attempt to study the period based on regression models. The results differed substantially and the answers very often determined that wheat prices, falling transportation costs, technological innovation, or the availability of farming land in the United States had a positive or negative correlation with the rate of settlement in Western Canada.

⁵⁰ Based on Chambers and Gordon's paper other studies contributed to the discussion and incorporated other variables that took into account the impact of tariff revenues, additional sectors of the economy, the creation of economies of scale from population and market growth as well as issues with the measure of land rent used. See for instance, Caves, R.E. "Export-led Growth and the New Economic History," in J.N. Bhagwati, R.W. Jones, R.A. Mundell and J. Vanek (eds.) *Trade, Balance of Payments and Growth*, Amsterdam, 1971, 403-42; Gordon W. Bertram, "The Relevance of the Wheat Boom in Canadian Economic Growth," *The Canadian Journal of Economics / Revue Canadienne d'Economie* 6, no. 4 (November 1973): 545-66, doi:10.2307/134090; Gordon W. Bertram, "Economic Growth in Canadian Industry, 1870-1915: The Staple Model and the Take-Off Hypothesis," *The Canadian Journal of Economics and Political Science / Revue Canadienne d'Economie et de Science Politique* 29, no. 2 (May 1963): 159-84, doi:10.2307/139462.

Alongside its territorial expansion and state formation, the periodization of Canada's development from the 1850s to 1914 distinguishes four important periods.⁵¹ From responsible government in 1848 until Confederation in 1867 the British North American provinces pursued integration through the extension of the first railroad lines. From Confederation until the 1880s, the incorporation of the Western Territories and the formation of new provinces created great expectations and an initial land "boom". The arrival of the railroad to the West coast opened the land for potential settlement; however, it was not until 1896 that an aggressive campaign to attract immigrants gave considerable impulse to Prairie settlement.

Kenneth Norrie, however, set aside the period before the arrival of the railroad in Manitoba and focused instead on the period 1879-1911, which he divided into two different moments, before and after 1896. The evolution of dry farming technique and the consequent expansion of the farming frontier into the semi-arid lands of Saskatchewan provoked an important structural break in 1896. He considered that the increase of the price of wheat after a long period of depressed values also acted as a boost to Prairie settlement. Before 1896, the rate of settlement lagged behind government expectations. Norrie used the number of homestead entries each year as a dependent variable and the price of wheat in Winnipeg as independent variable. The regression revealed to Norrie that an increase of one percent in the price of wheat resulted in an increase in the number of homestead entries of 1.5 percent.⁵²

Sandford Borins followed Norrie's similar line of inquiry but he disaggregated the dependent variable "homestead" into fourteen land offices records and instead of including all the entries, he considered the net number of homesteads; that is entries minus cancellation at the end of 1918.⁵³ The independent variables differ from those of Norrie's. Borins used government expenditure, economic conditions in countries of settlers' origin and the expected profitability settlers assumed they would obtain in farming. In a second equation, he estimated the average rainfall and railroad track density.

⁵¹ Chapter 3 analyzes the period with more details.

⁵² K. H. Norrie, "The Rate of Settlement of the Canadian Prairies, 1870-1911," *The Journal of Economic History* 35, no. 2 (June 1975): 415-417.

⁵³ Sandford F. Borins, "Western Canadian Homesteading in Time and Space," *The Canadian Journal of Economics / Revue Canadienne d'Economique* 15, no. 1 (February 1, 1982): 19-20, doi:10.2307/134667.

In the latter, Borins considered that track lines were built in advance of settlement. Similar to Norrie, he found that in 1896 there was a structural break. In addition, he showed that government expenditure influenced the rate of settlement after that year, but before 1896, the reaction to government expenditure was negative.⁵⁴ For Borins the results were not satisfactory because data are limited and thus any model in this way became incomplete.⁵⁵

Marr and Percy revised Norrie's findings in terms of timing or periodization of the structural breaks. For Norrie the period 1879 to 1896 was a unique, continuous period of wheat farming which shifted after 1896 with the introduction of dry-farming technique. Marr and Percy included in their regression model the net stock of homesteads entries as a dependent variable—similar to Borins—instead of the total number of homesteads entries. They also considered homestead entries as endogenous to the process of settlement, rather than exogenous as Norrie evaluated. They also evaluated the elasticity of the net stock of homesteads with respect to the expansion of railroad lines and the importance of government expenditure to attract immigrants. Another difference with Norrie's study was the consideration of the period 1879-1896 as two periods of structural breaks, 1879-1886 and 1887-1896.⁵⁶ Their results differed from those of Norrie in which the rate of railroad investment in the period 1879-1911 was important in the evolution of homesteads entries. Lastly, they found that government expenditure was determinant of the rate of settlement after 1896.⁵⁷

In Chapter 4, this dissertation evaluates with data from the Dominion Lands Office the shortcomings of using homestead entries; nevertheless, this section summarizes some observations needed in order to survey the traditional literature that deals with western settlement. In the first place, the literature continues to use in their regressions analysis homestead entries as dependent variable. The problem with this interpre-

⁵⁴ Ibid., 24.

⁵⁵ Ibid., 25. Section 4.4 discusses in details homestead entries and cancellations and the shortcomings of using these data.

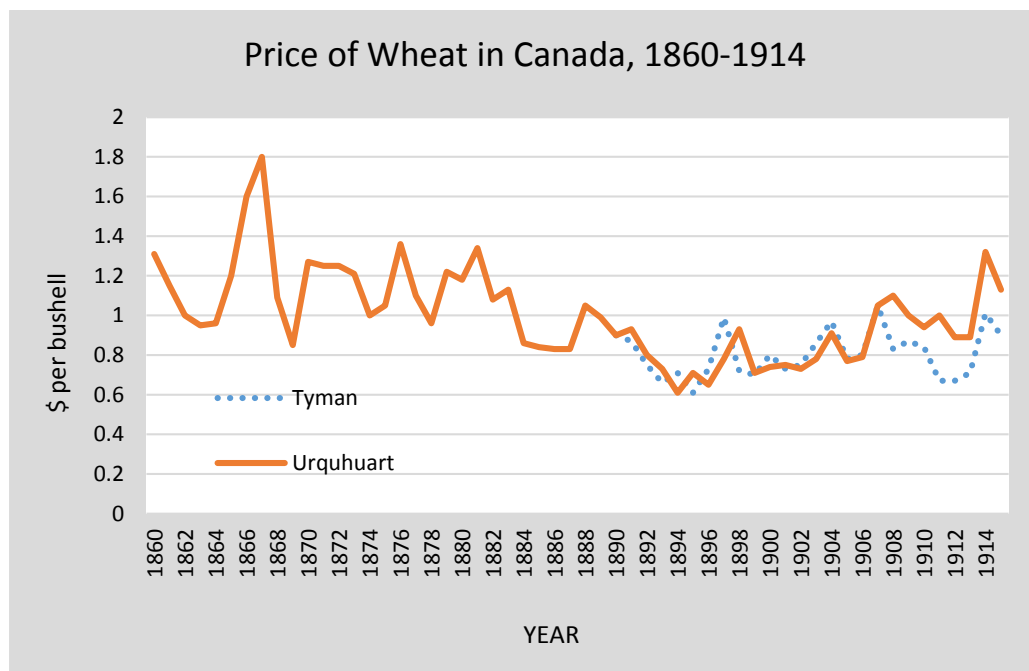
⁵⁶ William Marr and Michael Percy, "The Government and the Rate of Canadian Prairie Settlement," *The Canadian Journal of Economics / Revue Canadienne d'Economie* 11, no. 4 (November 1, 1978): 759–761.

⁵⁷ Ibid., 767.

tation is that homestead entries mainly extracted from Urquhart and Buckley's *Historical Statistics* were not reliable information.⁵⁸ The number of entries and cancellations abound in the period and as such, it makes it difficult to determine with reliability the estimated figures. In addition, by taking the figures of homesteads entries for the whole region, the evaluation loses the observation of regional particularities. Recent immigrants perceived different opportunities if they settled in southern Manitoba, where they frequently had already built a social network of family, religion and ethnic origins, than if they did in the isolated and extended grazing area of Alberta. The assessment in this way should be more meticulous as disparities in time and space prevailed.

If the price of wheat was a determinant of homesteading, as Norrie suggests, why in the same year, did some regions receive significant entries and other regions did not? The price of wheat shows a great volatility over the whole period with abrupt shifts from one year to the other (Figure 2-1). Settlers could hardly depend on the information regarding wheat prices to determine the possibilities to establish themselves in a region. Moreover, the period of higher prices from 1860 until the 1880s corresponded to the period of lower number of homestead entries as Section 4.4 will show. On the contrary,

Figure 2-1 Price of Wheat in Canada, 1860-1914.



Sources: Winnipeg Grain Exchange and Manitoba Department of Agriculture in John L. Tyman, *By Section, Township and Range: Studies in Prairie Settlement* (Brandon, MB: Brandon University, 1972), 225 and M. C. (Malcolm Charles) Urquhart and Kenneth Buckley, eds., *Historical Statistics of*

⁵⁸ Chapter 4 observes the shortcomings of those statistics.

the period of lower wheat prices corresponded with the higher number of entries. Norrie suggests that wheat prices increased after 1896, but that increase did not reach the levels of the previous period until the turn of the century as the graph shows.

Another observation is the authors' use of railroad construction as magnet to attract new settlers. They argue that settlers followed railroad expansion. The answer, as this dissertation will show, is yes and no. Sometimes settlers established themselves alongside new railroad lines and other times railroads extended their lines toward areas previously settled. For instance, in Manitoba railroads were mainly built where immigrants were already settled or where old settlers had lived for years. This trend followed almost all the period with very few exceptions. Norrie started his period of study after 1879 when the first railroad connected Winnipeg with Pembina in North Dakota; the settlement period before 1879 then was disregarded. This first railroad, particularly, ran alongside the Red River where early immigrants had already settled in the region and a dynamic trade route existed for years based on carts and steamships. In 1881, the CPR main line reached Winnipeg, which had been settled several decades before. The rail movement to the west followed similar characteristics. When it arrived in Brandon, 200 km west of Winnipeg, in 1882, the area near the railroad line, yet scattered, showed signs of increasing settlement. In some cases, especially in the North West Territories, settlers established themselves where the main line or a branch line was already built but very often railroad expansion followed settlers and not the contrary. For instance, the old stagecoach corridor that connected Calgary with Edmonton was populated with small towns and villages before the branch line was constructed. When the railroad network expanded into southern Manitoba until the year 1900, the farthest an open homestead was from a railroad line did not exceed 20 miles and as Knick Harley suggests railroad had little influence in the rate of settlement afterwards.⁵⁹ Chapter 5 will provide a time series assessment of the extension of railroads and settlements through the location of post offices.

⁵⁹ C. Knick Harley, "Western Settlement and the Price of Wheat, 1872-1913," *The Journal of Economic History* 38, no. 4 (December 1, 1978): 873.

If the extension of the railroad shows a correlation with the increase of settlement, then how does it explain the expansion of the frontier of settlement before the arrival of the railroad, as 5.4.2 will show in the time series maps based on postal records? If the computation includes projected lines to the evaluation, then it is difficult to estimate with precision a fact that had not taken place yet. Similarly, following Marr and Percy, if railroad investment produced an increase in homestead entries, then what they suggest was that that investment was directed to the construction of a branch or the extension of a line. If this was the case, they agree with the other evaluations that considered that settlers followed or moved alongside the expansion of the railroad network.

In sum, if quantitative evaluations and counterfactual models are constrained by economic assumptions independent of human activity, the answer then becomes limited, as economic factors are the outcomes of political intervention, disputes of power and institutional arrangements; in sum, human intervention. Econometric studies of the expansion of Western Canada isolated the economic from the social and political influence; moreover, they often put history aside. The use of “natural experiments” with methods borrowed from the natural sciences hardly reproduce similar empirical output in the social sciences.⁶⁰ This dissertation aims to incorporate data for Western Canada that will be important to reassess the contribution of the region to the country’s development. The incorporation of postal data and the reconstruction of the railroad network alongside a new evaluation of homestead entries and cancellations during the period aims at enhancing the historical evaluation that other scholars did in the past.

2.5 Land, Immigration and Government Policies: A Comparison

The use of neo-classical equilibrium models and econometrics to understand the past frequently put aside the different ways societies organized over time. For neo-classical theorists, economic activity takes place in an orderly, frictionless environment

⁶⁰ The scope of this literature review does not allow one to go further on the debate between the different interpretations. However, this dissertation distances itself from neo-classical theories, mathematical modelling and counterfactual studies in the evaluation of historical events and it critically makes use of quantitative and spatial analyses and statistics. More on this discussion, Robert Fogel and Geoffrey Elton, *Which Road to the Past?: Two Views of History* (London: Yale University Press, 1983); David Greasley and Les Oxley, eds., *Economics and History: Surveys in Cliometrics*, 1 edition (Wiley-Blackwell, 2011) and a critical study of Neo-Classical empiricism in Francesco Boldizzoni, *The Poverty of Clio: Resurrecting Economic History* (New Jersey: Princeton University Press, 2011). Another recent work that takes into account both methodological approaches to study the past is the previously cited Diamond and Robinson, *Natural Experiments of History*.

where external forces like struggle for power, institutional arrangements or government intervention were factors of less importance. New Institutional Economics (NIE) theories aim to solve the problems present in historical analysis based on the neo-classical models of development. NIE does not reject neo-classical models—in fact the study of individual behaviours is of great importance in their theory—but for them the market is imperfect as the flow of information between participants is incomplete and thus it increases the transaction costs associated with the economic exchange. For Douglass North, institutional organization is the fundamental factor that reduces transaction costs and “uncertainty by providing a structure to everyday life.”⁶¹ Even if institutions organize society by providing the “rules of the game”, they were not created to be efficient per se; institutions serve the interests of those with greater bargaining power.⁶² Central to NIE’s theory is the organization of property rights, especially in areas of recent settlement. The following section presents a comparative evaluation of two countries that developed a similar set of institutional arrangements in the second half of the nineteenth century: Argentina and Canada. Both countries expanded their territorial domains, organized the state, provided the policies to distribute public land, enforced private property of the land and delineated diverse immigration policies over time.

The problems of external dependence, late industrialization and growth in different areas of the New World were the starting points that marked the debates about natural resources exploitation in light of twentieth century uneven development and divergence. These different paths of growth and development between countries were more apparent after the Second World War. In the late nineteenth century, however, the export-led economy in new areas of settlement experienced similar patterns of development, although, they maintained their regional particularities. Carl Solberg and Jeremy Adelman’s comparative evaluation of Canada and Argentina’s performances of the late 1880s and early 1890s bring about an original study of both countries’ similar growth pattern by analyzing wheat production, land distribution and institutions in the pampas and the prairies.⁶³ The importance of both works is twofold. First, they introduce a meticulous study on the unequal distribution of land in Canada and Argentina

⁶¹ Douglass C. North, *Institutions, Institutional Change and Economic Performance* (Cambridge; New York: Cambridge University Press, 1990), 3.

⁶² *Ibid.*, 3, 16.

⁶³ Adelman, *Frontier Development*; Solberg, *The Prairies and the Pampas*.

and compare both countries' economic output based on same staples, wheat. Secondly, the importance of their works became apparent because New Economic History (NEH) and New Institutional Economics (NIE) theorists broadly cite and mention them in the investigation of growth, land tenure, property rights, immigration and institutions in the Americas, particularly when they compare Canada and Argentina's different economic performance in the long-run.⁶⁴

2.5.1 Land Distribution in Canada

Solberg's hypothesis is that Canada's more democratic land policies created a class of small farmers based on land ownership and family production who became successful producers in the long-term. His hypothesis states that as farmers became owners of their homestead land and acquired Canadian citizenship in a short time, they incorporated themselves into the Canadian society and as such, they were able to create agrarian cooperatives that formed links of solidarity among other producers and together were able to improve and increase their production. On the other hand, argues Solberg, Argentina failed to provide proper democratic land policies and the main outcome was that in the long-run, concentration of land did not promote agrarian production in the way Canada did. Hence, the concentration of land in few hands restrained the availability of small farming plots and thus settlers were not able to obtain land ownership as they did in Canada. In addition, the difficulties to obtain citizenship as easily as in Canada detached immigrants from the region they had already settled and transformed them into a rather nomadic population searching for better opportunities elsewhere. Because of their mobility, they could not knit proper links of solidarity with other producers and thus they ultimately failed to create cooperatives.⁶⁵

At a first glance, these assumptions explain in general why Argentina was apparently less successful while Canada achieved a most important path of development at the turn of the century. Solberg's analysis, however, needs to be revised. Solberg downplays the initial forms of land distribution in Canada before and after Confederation and with him, other scholars paid little attention to the distribution of land to big players.⁶⁶ For instance, following the agreement between the Hudson's Bay Company

⁶⁴ Particularly in Engerman and Sokoloff's important studies.

⁶⁵ Solberg, *The Prairies and the Pampas*, 20, 29, 52, 56, 59, 62, 67, 226–227.

⁶⁶ The concentration of the research only on wheat production leaves unattended other forms of land utilization. In Western Canada, principally in Alberta, large extensions of land were used for cattle

(HBC) and the Dominion government in 1869, the Company obtained twenty per cent of the farming land once the survey was completed. More importantly, the Company retained all the land adjacent to their posts in the small towns and villages where they had established business since early times.⁶⁷ Canadian historian W. L. Morton observes, “[O]ne of the greatest transfers of territory and sovereignty in history was conducted as a mere transaction in real estate.”⁶⁸ In places like Winnipeg, for instance, the HBC was an active participant in the wave of land speculation and was one of the supporters of the real estate boom of 1881-82 in the region.⁶⁹

Solberg also pays scant attention to the fact that the Canadian Pacific Railway (CPR) obtained land two miles north and south of the railroad lines as it advanced in the extension into the West.⁷⁰ Other parties became also great beneficiaries of public land distribution in the period, especially colonization companies with direct connections to Ottawa and different politicians.⁷¹ Before settlers established themselves in the new towns and cities that formed alongside the extension of the railroad, speculators and businesspersons took advantage of land conditions and in searching for business opportunities moved from one “land boom to another.”⁷² The railroad land grant also increased as the government needed more funding to extend the railroad network. In

farming and grazing and there were important disputes between ranchers and farmers for those lands. See, David Breen, *The Canadian Prairie West and the Ranching Frontier: 1874-1924* (Toronto: University of Toronto Press, 1983).

⁶⁷ Charles John Brydges, *The Letters of Charles John Brydges, 1879-1882, Hudson's Bay Company Land Commissioner*, ed. Hartwell Bowsfield, Publications of Hudson's Bay Record Society 31 (Winnipeg: Hudson's Bay Record Society, 1977), xiv.

⁶⁸ Quoted in Friesen, *The Canadian Prairies*, 117.

⁶⁹ John Selwood and Evelyn Baril, “Land Policies of the Hudson's Bay Company at Upper Fort Garry: 1869-1879,” *Prairie Forum* 2, no. 2 (November 1977): 101-119; Charles Napier Bell, “The Great Winnipeg Boom,” *Manitoba History*, no. 53 (October 2006): 32-37. For an early study of HBC's land policies, see Archer Martin, *The Hudson's Bay Company's Land Tenures and the Occupation of Assiniboia by Lord Selkirk Settlers, with a List of Grantees Under the Earl and the Company* (London: William Clowes and Sons Limited, 1898).

⁷⁰ Harold A. Innis, *A History of the Canadian Pacific Railway* (Toronto: McClelland and Stewart, 1923), 98-99.

⁷¹ Twenty-four senators and other politicians were among stockholders in several land companies. See for instance, A. M. Lalonde, “Colonization Companies in the 1880s,” *Saskatchewan History* XXIV (1971): 101-14.

⁷² See Robert A. McDonald, *Making Vancouver: Class, Status and Social Boundaries, 1863-1913* (Vancouver, BC, Canada: UBC Press, 1996), 37; Henry C. Klassen, *A Business History of Alberta* (Calgary [Alta.]: University of Calgary Press, 1999), xxv.

1874, twenty miles each side of the railroad line were reserved for that purpose. In July 1879, the reserve augmented to fifty-five miles each side of the line that contained about 100 million acres in the best agricultural area. By 1883, more than one thousand townships were surveyed in an area of the fertile belt that contained twenty-seven million acres; of those, about one thousand townships went to railroad subsidies⁷³ and only thirty-six percent went to Free Grants. The Dominion kept about eleven percent of those and the CPR and the HBC obtained together thirty percent of the land.⁷⁴

The history of land allocation to European settlers was also the history of dispossession for indigenous and *Métis* peoples.⁷⁵ No less important was the procedure to distribute farming plots to the *Métis* peoples displaced from the land they had long settled.⁷⁶ Under the *Manitoba Act* of 1870, the children of *Métis* settlers would receive 1,400,000 acres of land in compensation for their lost because of the new federal survey and the subsequent land division.⁷⁷ *Métis*, instead of land, received scrip and some relocated in places different from where they usually resided. While a few ones obtained land, the majority of scrip ended up in the hands of lawyers and speculators.⁷⁸

⁷³ Kirk N. Lambrecht, *The Administration of Dominion Land, 1870-1930* (Regina: Canadian Plains Research Center, 1991), 12.

⁷⁴ A detailed account of the Canadian railroad land policies in times of state expansion in James Blaine Hedges, *The Federal Railway Land Subsidy Policy of Canada* (Cambridge: Harvard University Press, 1934); John A. Eagle, *The Canadian Pacific Railway and the Development of Western Canada, 1896-1914* (Kingston: McGill-Queen's University Press, 1989). Chapter 4 will evaluate the allocation of land in Western Canada.

⁷⁵ The French term *Métis* or the British term Half-Breed refers to the children of white French or Anglo settlers and indigenous women.

⁷⁶ Jaqueline Peterson argues that the Manitoban half-breed population identify themselves, culturally and ethnically, with those from the Great Lakes region. See Jaqueline Peterson, "Many Roads to Red River: Métis Genesis in the Great Lakes Region; 1680-1815," in Jacqueline Peterson and Jennifer S. H. Brown, eds., *The New Peoples: Being and Becoming Métis in North America* (St. Paul, Minn: Minnesota Historical Society Press, 2001), 37–71. In a more recent work, J. Peterson doubts about the Great Lakes mixed-blood population as self-identifying themselves as *Métis*. See Jaqueline Peterson, "Red River Redux Métis Ethnogenesis and the Great Lakes Region" in Nichole St-Onge, Carolyn Porduchny, and Brenda Macdougall, eds., *Contours of a People: Metis Family, Mobility, and History*, Reprint edition, *New Directions in Native American Studies* (Norman: University of Oklahoma Press, 2014), 30–31.

⁷⁷ Canada. Statutes, *An Act to Amend and Continue the Act 32 and 33 Victoria, Chapter 3; and to Establish and Provide for the Government of the Province of Manitoba* (Ottawa: Brown Chamberlin, 1870).

⁷⁸ See this discussion in Paul L. A. H. Chartrand, *Manitoba's Métis Settlement Scheme of 1870* (Saskatoon: Native Law Centre, University of Saskatchewan, 1991); Thomas Flanagan, *Metis Land in Manitoba* (Calgary: University of Calgary Press, 1991); Douglas N. Sprague, *Canada and the Metis, 1869-1885* (Waterloo, ON, Canada: Wilfrid Laurier University Press, 1988). See also Friesen, *The Canadian Prairies: A History*, 198–199.

Aboriginal producers experienced other restraints as well. Sarah Carter, for instance, has described in detail how the government discouraged Plain Indians, who had engaged in successful agrarian production, from continuing farming for the market. The government argued that Aboriginal peoples' way of life was not suitable for agricultural production. The Canadian government denied them any technical aid and located producers who had succeeded in their agricultural endeavours on small, less fertile, subsistence plots further from the area that the government had already reserved for future European settlements.⁷⁹ As described above, the argument that Canada promoted a more democratic land allocation policy compared with that of Argentina is a matter of debate. *Métis* and indigenous peoples were both ill-treated in the allocation of land; put simply, they were pushed aside in order to allow the establishment of European settlers. It is fair to ask then: To what extent the distribution of land in Western Canada was more "democratic" than elsewhere? Certainly the answer is also a topic of debate and historical interpretation.⁸⁰

2.5.2 Immigration Policies in Canada

Canada and Argentina relied greatly on the arrival of European immigrants in the new frontier areas in order to expand agrarian production. Solberg, however, argues that Canada introduced better immigration policies than Argentina because it granted citizenship to newcomers in a short time. He states that as newcomers were able to obtain Canadian citizenship shortly after they settled, they successfully incorporated themselves earlier into the trends of Canadian society, culture and politics. This description is rather misleading, as it appears that immigrants could easily obtain citizenship or naturalization. The *Immigration Act* of 1906 and the extension of 1910, aimed at enforcing a more restrictive legislation, allowed the government to regulate the status of women and children born outside of Canada, prohibit the settlement of "undesirable" persons and deport them more easily. This latter legislation was in contrast with that

⁷⁹ See Sarah Carter, *Lost Harvests: Prairie Indian Reserve Farmers and Government Policy* (Montreal: McGill-Queen's University Press, 1990), ix.

⁸⁰ Livio Di Matteo has recently published an important study on wealth inequality in Canada. See Livio Di Matteo, "Wealth Distribution and the Canadian Middle Class: Historical Evidence and Policy Implications," *Canadian Public Policy* 42, no. 2 (June 1, 2016): 132–51, doi:10.3138/cpp.2015-041. See also, Livio Di Matteo, "Land and Inequality in Canada 1870–1930," *Scandinavian Economic History Review* 60, no. 3 (November 1, 2012): 309–34, doi:10.1080/03585522.2012.727765. For urban land inequality in Winnipeg see, David G. Burley, "The Keepers of the Gate: The Inequality of Property Ownership during the Winnipeg Real Estate Boom, 1881-82," *Urban History Review/Revue D'histoire Urbaine* 17, no. 2 (October 1988): 63–76.

applied by Clifford Sifton, the Minister of Interior under Prime Minister Laurier, in a previous period. Before the *Immigration Act* of 1906-1910 and the *Naturalization Act* of 1914, any alien male who had resided in Canada for one year could apply for naturalization. The *Naturalization Act* of 1914 enforced a more rigorous legislation and the period of residence in Canada before applying for naturalization was of three years.⁸¹ This is an important argument, indeed, because Solberg emphasizes that as immigrants obtained “citizenship,” it was more likely that they remained in the place they first settled. The conditions to obtain “citizenship” became more difficult over the years. It is important to note this because under a more benign immigration legislation, settlement into the West was rather modest; on the contrary, under a more rigorous and restrictive legislation, immigration increased significantly.⁸² It would be difficult then to relate the acquirement of Canadian “citizenship” with the successful settlement of immigrants into the West.

Following Solberg’s argument, immigrants participated in the communal life of their settled area and consequently, with other producers, created agrarian cooperatives earlier on. According to Solberg, cooperative organization allowed farmers to own grain elevators collectively in the Prairies and as such, they were in better position to negotiate the sale of their production in the market, as they owned the storage facilities.⁸³ As this might have been true after 1900, during the last decades of the nineteenth century farmers struggled to sell their products and to buy cheaper machines.⁸⁴ Gerald

⁸¹ A special status under the *Immigration Act* of 1906 created the figure of “Canadian Citizen”, but still persons born in Canada were considered British subjects until 1947 when Parliament passed the *Citizenship Act*. Solberg’s early article acknowledges the term “British subject” instead of Canadian citizen. See Carl Solberg, “Land Tenure and Land Settlement: Policy and Patterns in the Canadian Prairies and the Argentine Pampas, 1880-1930” in Platt and Di Tella, *Argentina, Australia, and Canada*, 55. See “Canadian Citizenship Act, 1947 | CMIP 21,” *Canadian Museum of Immigration at Pier 21*, 2015, <http://www.pier21.ca/research/immigration-history/canadian-citizenship-act-1947>; “Immigration Act, 1906 | CMIP 21,” *Canadian Museum of Immigration at Pier 21*, 2015, <http://www.pier21.ca/research/immigration-history/immigration-act-1906>; “Immigration Act, 1910 | CMIP 21,” *Canadian Museum of Immigration at Pier 21*, 2015, <http://www.pier21.ca/research/immigration-history/immigration-act-1910>; “Naturalization Act, 1914 | CMIP 21,” *Canadian Museum of Immigration at Pier 21*, 2015, <http://www.pier21.ca/research/immigration-history/naturalization-act-1914>. A collection of essays critically discusses the history of citizenship in Canada. See William Kaplan, ed., *Belonging: The Meaning and Future of Canadian Citizenship* (Montreal: McGill-Queen’s Press, 1993).

⁸² In fact, settlers were a very mobile population and except for those who established themselves in ethnic bloc settlements, the rest moved from places very often. See our argument in 4.4 .

⁸³ Solberg, *The Prairies and the Pampas*, 67.

⁸⁴ See Ian MacPherson, ““Better Tractors for Less Money’: The Establishment of Canadian Co-Operative Implements Limited,” *Manitoba History* 13, no. Spring 1987, accessed April 8, 2012, http://www.mhs.mb.ca/docs/mb_history/13/coopimplements.shtml.

Friesen observes that foreign companies that fixed the market's price mostly owned grain elevators. As pools' monopoly determined the market conditions, farmers could not hold their production much longer to obtain better prices. This situation persisted until 1900 when the passing of the *Manitoba Grain Act* organized the market in better terms for producers and gave them more tools to negotiate prices.⁸⁵

2.5.3 Land and Immigration Policies in Argentina

Solberg's arguments of the Canadian prairies seems to be rather contradictory when compared with other sources and historical facts. In the case of Argentina, Solberg uses ambiguous definitions. It can be argued that Argentina applied bad land policies that perpetuated inequalities or erratic policies in general that undermined its performance later on but not that Argentina "never devised ... [a] massive land-distribution program" or that "no national land policy existed in Argentina."⁸⁶ This argument is plainly untrue. The government followed with clear interest and, yet, unequal results several policies to allocate public land in different moments. Some of those examples, for instance, were President Rivadavia's *enfiteusis* in the 1820s, the New Plan of Frontiers in the Province of Buenos Aires of 1837, the Law of Immigration and Colonization of 1876 and different projects of colonization in the provinces of Santa Fe, Entre Rios, Buenos Aires and other federal territories.⁸⁷ Similarly, the federal government paid

⁸⁵ See Gerald Friesen, *The Canadian Prairies*, 332–333 and Canada. Statutes, *An Act Respecting the Grain Trade in the Inspection District of Manitoba*, 63–64 *Victoria-Chapter 39*, 1900; Vernon C. Fowke, *The National Policy and the Wheat Economy*, Social Credit in Alberta, Its Background and Development 7 (Toronto: University of Toronto Press, 1957), 116–118. In chapter 9, Fowke discusses the implementation of grains control in Western Canada based on Royal Commission's recommendations. Also, D. J. Hall, "The Manitoba Grain Act: An "Agrarian Magna Charta"?" in Gregory P. Marchildon, ed., *Agricultural History*, vol. 3, History of the Prairie West (Regina, SK: Canadian Plains Research Center, 2011), 289–308.

⁸⁶ Solberg, *The Prairies and the Pampas*, 51.

⁸⁷ Rivadavia was secretary of government in 1822 when he introduced the *enfiteusis*, but the most important aspects of the law appeared when he was president after 1826. See also Auguste Brougues, *Extinción del pauperismo agrícola por medio de la colonización en las provincias del Rio de la Plata con un bosquejo jeográfico é industrial* (Paraná, Argentina: Imprenta del Estado, 1855); Argentina, *Ley de Inmigración Y Colonización de La República Argentina Sancionada Por El Congreso Nacional de 1876* (Buenos Aires: Imprenta y litografía de M. Biedma, 1881); Argentina, *Ley sobre venta de tierras de propiedad de la nación: Sancionada el 24 de octubre de 1882* (Imp. del Departamento Nacional de Agricultura, 1882); Argentina, *Tierras, Colonias Y Agricultura: Recopilación de Leyes, Decretos Y Otras Disposiciones Nacionales* (Buenos Aires: Taller Tipográfico de la Penitenciaría Nacional, 1898); Argentina. Comisión Central de Inmigración, (last), *Las colonias: informe sobre el estado actual de las colonias agrícolas de la República Argentina* (Buenos Aires: La Sociedad Anónima, 1873); Argentina. Congreso de la Nación. Cámara de diputados de la Nación, Emilio Lahitte, and Antonio M. Correa, *Investigacion parlamentaria sobre agricultura, ganadería, industrias derivadas y colonización: Ordenada por la H. Cámara de diputados en resolución de 19 de junio de 1896* (Buenos Aires: Tip. de la

great interest to the evolution and expansion of agriculture. Solberg's argument has historical and methodological problems. It is misleading to say that the Argentinian government did not have any agrarian policy because the Ministry of Agriculture was not created until the end of the nineteenth century and "even after that the ministry did little scientific research."⁸⁸ Indeed, under Domingo F. Sarmiento's presidency in 1871, the government created the National Department of Agriculture. The Department's voluminous reports in 1872 demonstrate the clear interest the federal government had to promote agriculture, settlement and investigations on farming techniques.

Although the Department encountered difficulties in operating properly, it managed to distribute seeds and pamphlets promoting cultivation techniques and maintained an extensive correspondence with the interior provinces and with other departments and ministries of agriculture in Europe whom it exchanged information about agricultural development. The Department's intention was to create a body of officers and inspectors of agriculture and colonies to assess the country's needs, create agrarian schools, promote different forms of cultivation and cattle raising and to improve species

Penitenciaria Nacional, 1898); Argentina. Departamento Nacional de Agricultura, *Informe Del Departamento Nacional de Agricultura Año 1872* (Buenos Aires: Imprenta de "La Nación," 1873); Argentina. Departamento Nacional de Agricultura, *Informe Del Departamento Nacional de Agricultura Año de 1875* (Buenos Aires: Imprenta y Litografía del Courier de La Plata, 1875); Argentina. Departamento Nacional de Agricultura, *Informe del Departamento Nacional de Agricultura Año de 1876* (Buenos Aires: Imprenta y Litografía del Courier de La Plata, 1877); Argentina. Departamento Nacional de Agricultura, *Colonia "Florescia": informe que acerca del estado de esta colonia en marzo de 1885, presenta el inspector de Agricultura, Manuel Vázquez de la Morena* (Buenos Aires: Imprenta del Departamento Nacional de Agricultura, 1885); Argentina. Dirección de Inmigración, *Informe Anual Del Comisario General de Inmigración de La República Argentina* (Buenos Aires: Imprenta y Litografía del Courier de La Plata, 1877); Nicolás Avellaneda, *Estudios sobre las leyes de tierras públicas* (Buenos Aires: Imprenta del Siglo, 1865); Buenos Aires, *Instrucciones a los agrimensores y colección de leyes y decretos y demas disposiciones sobre tierras públicas desde 1811 hasta febrero de 1865* (Buenos Aires: Imprenta del Comercio del Plata, 1865); Buenos Aires, *Código rural de la provincia de Buenos Aires: seguido de la ley general de tierras públicas sancionada en 1878, del decreto reglamentario de la misma, y de la ley sobre cercos y caminos generales de mayo de 1880* (Buenos Aires: Imprenta de Pablo E. Coni, 1880).

⁸⁸ Solberg, *The Prairies and the Pampas*, 20. In fact, Canada did not have a Ministry of Agriculture, as Solberg claims, but a Department of Agriculture created in 1867, four years before than that of Argentina. As in Argentina, the Canadian Department of Agriculture was under the orbit of the Department of Interior. See Canada, *Statutes of Canada. Passed in the Session Held in the Thirty-First Year of the Reign of Her Majesty Queen Victoria...on the Sixth Day of November, and Adjonrned on the Twenty-First December, 1867, to the Twelfth March Following* (Ottawa: M. Cameron, Law Printer to the Queen's Most Excellent Majesty, 1868), 147..

all over the country.⁸⁹ Moreover, the Department was an active organizer of the Argentinian delegation that participated in the Paris Exhibitions the following years.⁹⁰ Although the Department obtained disparate success and caught less political attention in the following years, it is not clear why Solberg did not mention these important sources in his analysis. It was clear that Argentina, as Canada did, promoted immigration, settlements and agricultural production in similar ways. If one centers the debate in terms of more efficient policies, Canada, contrary to what Solberg suggests, encountered great difficulties in encouraging immigration to the West, principally before 1895.⁹¹ In fact, during the initial offer of free homesteads in the 1870s, the Canadian government suffered an important setback as the land allocated could not be settled and the government had to take it back. In 1874, the government cancelled sixty-three percent of homestead entries and ninety-three percent of pre-empty entries due to different reasons.⁹² The hypothesis that the Canadian state had better policies than that of Argentina is a simplified and unconvincing argument based on a particular use of primary sources. Scrutinizing Solberg's arguments has the purpose of highlighting the methodological problems in doing comparative analysis. Certainly, the above discussion shows the shortcomings of using a partial set of primary sources. This argument is important because practitioners of the so-called New Economic History and New Institutionalism Economics replicate Solberg's methodological problems in their comparative evaluations of countries of recent settlement.⁹³

⁸⁹ See, Argentina. Departamento Nacional de Agricultura, *Informe del Departamento Nacional de Agricultura Año 1872* (Buenos Aires: Imprenta de "La Nación," 1873); Argentina. Departamento Nacional de Agricultura, *Informe del Departamento Nacional de Agricultura Año de 1875* (Buenos Aires: Imprenta y Litografía del Courier de La Plata, 1875); Argentina. Departamento Nacional de Agricultura, *Informe del Departamento Nacional de Agricultura Año de 1876* (Buenos Aires: Imprenta y Litografía del Courier de La Plata, 1877).

⁹⁰ In 1882, a delegation commissioned by the government travelled to Australia, Great Britain and the United States to learn about agricultural methods and the stage of agricultural development and improvement in those countries. Nine volumes describe with details the results the delegation obtained in these trips. See Ricardo Newton and Juan Llerena, *Viajes Y Estudios de La Comisión Argentina Sobre La Agricultura, Ganadería, Organización Y Economía Rural En Inglaterra, Estados-Unidos Y Australia*, vol. VI (Buenos Aires: Imprenta y fundición de tipos "La República," 1884).vol. 1-9.

⁹¹ Friesen, *The Canadian Prairies: A History*, 185–187.

⁹² Canada. Department of Agriculture, *Statistical year-book of Canada for 1890* (Ottawa: Brown Chamberlin, 1891), 497. See also Adelman, *Frontier Development*, 26.

⁹³ Particularly Engerman and Sokoloff in their various papers.

Although his sample is small, Jeremy Adelman's study of Argentina and Canada used primary sources and original archival investigation on a group of counties in the Canadian Prairies and the Province of Buenos Aires to shed new light on both countries' settlement characteristics. Adelman compares private records, probate records and official statistics of a small number of counties in Argentina and Canada to analyze land tenure and ownership. While Solberg centred his debate on how government policies (or lack thereof) influenced the process of land allocation and, thus, wealth inequality, Adelman argues that the transformation of an open access regime into another based on private property of the land produced more secure institutions. Although it produced different levels of inequalities based on the distribution of land, nevertheless, it promoted development.⁹⁴ This argument is certainly true in the case of Argentina's development. Argentina's growth paralleled that of Canada regardless of inequalities of land distribution and the size of farming plots. If inequalities did not become apparent in the short run, asserts Adelman, in the long run they determined the divergent path of development, mainly the failure to setup a strong program to promote industrialization.⁹⁵

The concentration of large estates in the hands of the *estancieros*, compared to family farming in small plots provoked a significant debate in the historiography of frontier settlement. Adelman proves that both systems were the outcome of historical conditions, yet effective in their own geographical setting and timing. External factors such as labour and capital played an important role in the definition of different paths of capitalist development according to the necessities of the moment. For Adelman "failure" is a relative term; both countries enforced a property system that allowed them to grow to the limits of their institutional development.

2.6 Factor Endowments, Institutions and Economic Growth: A NIE Approach

The discussions on staples and dependence and staples and economic growth led to enquiry into the role of institutions as promoters of economic growth. Recent

⁹⁴ Adelman, *Frontier Development*, 9.

⁹⁵ *Ibid.*, 264.

literature on institutions remarks that factor endowments and land distribution determined the quality of institutions and marked different paths toward growth and development in the Americas. New contributions by NEH and NIE students revamped the idea of the “grand narratives” by asking: Why do countries grow? Why do countries fail? Do institutions matter?⁹⁶ Stylized arguments that used neo-classical theory attempt to answer these questions, although some definitions need to be revised, especially the interpretation of historical facts. In light of similar initial paths of development in the nineteenth century, the cases of Canada and Argentina emerge very often to illustrate how different institutional arrangements influenced divergent performance in the long term. Solberg and Adelman’s analyses were very important as anticipated those latter observations and studied how the development of institutions played an important role in both countries’ growth. If institutions in Argentina failed, as Solberg argues, then inequalities arose. If the Argentinian government failed or did not intervene in the distribution of land (*laissez-faire*), then a class of large landowners imposed a less democratic program, obtained more political power and ultimately undermined growth.⁹⁷

For Adelman, property rights marked a substantial difference in the modes of land tenure in Argentina and Canada. However, the fact that in Canada land ownership prevailed over tenancy does not mean a more efficient mode of production. Argentina was as successful producer as Canada by using a mixed system of tenancy, sharecropping and leasehold in combination with production under a regime of land ownership. The *Agricultural Census of 1888*, for instance, enumerated almost as many tenants as owners in the Province of Buenos Aires, 15,326 owners and 12,743 tenants.⁹⁸ For Adelman the choice of using one or another property rights regime was based on market opportunities and historical settings. The difficulty or impossibility of obtaining credits in the Pampas made farmers rely on a more effective mode of tenure, tenancy, which ultimately demanded less investment. In Canada, where the chartered banks were not allowed to lend on the security of land or property, mortgage and land companies spread

⁹⁶ Acemoglu and Robinson, *Why Nations Fail: The Origins of Power, Prosperity, and Poverty*; Engerman and Sokoloff, *Economic Development in the Americas Since 1500*.

⁹⁷ Solberg, *The Prairies and the Pampas*, 229.

⁹⁸ Buenos Aires. Comisión auxiliar provincial, Exposición de Paris, *Censo agrícola-pecuario de la Provincia de Buenos Aires: levantado en el mes de octubre de 1888 para contribuir a la representación de la República Argentina en la Exposición universal de Paris* (Buenos Aires: Estab. tip. el Censor, 1889), 29.

across the Prairies.⁹⁹ The *Census of Manitoba* of 1885-86, for instance, is illustrative of this pattern of early land ownership; it included 16,351 farm owners and only 1,170 tenants.¹⁰⁰ Early availability of mortgages, however, marked the dynamic of land ownership on the Prairies and determined a different pattern of settlement between early speculative investments and “bonafide” settlers. In this sense, this dissertation agrees with Adelman’s arguments. While speculators, as Chapter 4 will show, bet on land almost in every place, external forces like weather, crop prices and farming techniques, especially the late adoption of dry farming, ruined a bonafide settler who had mortgaged his land based on overly optimistic prospects of a future return.

Still, regardless of the original investigation on institutions and private property, Solberg and Adelman provide a partial understanding of Argentina’s decline and Canada’s success. Solberg starts his study in 1880 and Adelman in 1890 and both centre their investigation on wheat production, principally at the turn of the century. Certainly the first decades of the twentieth century provide more reliable information and both authors spent more space studying the latter period than the last decades of the nineteenth century where data availability were more scattered. However, their analyses do not illustrate that there was a significant difference between both countries. At least until the first decades of the twentieth century, as the next chapter will show, Argentina’s and Canada’s performance ran parallel with other regions that based their early economy on the production of staples, like Australia and New Zealand. From 1850 to 1900 both countries developed and experienced sustained growth thanks to the exploitation of other natural resources as well, namely, wool and later beef and frozen beef in Argentina, minerals in Australasia and mining and timber in Canada.

The comment on the Australasia region is relevant to the analysis of natural resources as those economies developed in similar terms during the period. Comparing Argentina, Australia and Canada, John Fogarty states that these new areas of settlement enjoyed an important economic growth thanks to the exploitation of a “super staple.” Wheat in Canada, wool in Australia, lamb in New Zealand and beef in Argentina were the main super staples that helped the expansion of their economies.¹⁰¹ As an exercise

⁹⁹ Adelman, *Frontier Development*, 38.

¹⁰⁰ Canada. Dept. of Agriculture, *Census of Manitoba, 1885-6* (Ottawa: Maclean, Roger & Co., 1887), 129.

¹⁰¹ John Fogarty, “Staples, Super-Staples and the Limits of Staple Theory: the Experiences of Argentina, Australia and Canada Compared” in Platt and Di Tella, *Argentina, Australia, and Canada*, 22–23.

of testing a hypothesis of development through one kind of staples, Solberg and Adelman's studies provide interesting responses and introduce an original explanation of the formation of institutions and the creation of a property rights regime. Solberg acknowledges that Argentina's most important staple production was beef, whose producers belonged to the most powerful political fraction.¹⁰²

2.6.1 Do Institutions Matter?

For Neo-classical economics, institutions and more specifically, "institutions of private property" as Acemoglu, Johnson and Robinson (AJR) describe them, are essential to create a favourable climate for investment and obtain "successful economic performance."¹⁰³ These institutions are in sharp contrast to those that they define as extractive institutions. Organized and managed by a small elite, extractive institutions discouraged investments and restrained economic development. Elites organized institutions to benefit themselves, controlled democracy by limiting enfranchisement of the whole population and perpetuated political power among members of the same group or class. Were those characteristics what defined different areas of recent settlement in the second half of the nineteenth century? Acemoglu, Johnson and Robinson argue that countries that were rich at the time of European encounters in the 1500s became poor later on and countries that were poor and unpopulated early became rich afterwards.¹⁰⁴ They call that transformation the "reversal of fortune." Canada, Australia, New Zealand and Argentina, for instance, were poor at the beginning of the nineteenth century and performed fairly well by 1900. Some caveats, however, apply. By the 1930s, Argentina started a divergent path and, ultimately, separated from the developed countries afterwards.

Some studies argue that this trend has its root in their colonial past because Canada and other offshoots incorporated the cultural heritage of the Anglo world. Argentina, instead, adopted the authoritarian, centralized organization inherited from the

¹⁰² Solberg, *The Prairies and the Pampas*, 41–45.

¹⁰³ Daron Acemoglu, Simon Johnson, and James A. Robinson, "Reversal of Fortune: Geography and Institutions in the Making of the Modern World Income Distribution," *The Quarterly Journal of Economics* 117, no. 4 (November 2002): 1239.

¹⁰⁴ *Ibid.*, 1278.

Spanish empire. For Douglass North, this differentiation marked the future path of development of the Third World and explained why some countries failed.¹⁰⁵ If an imperfect property rights regime prevailed and coercive institutions inherited from the Spanish Crown ruled the country, as North explains, why did Argentina not fail in the same way than other Latin American countries? On the contrary, Argentina was one of the most important destinations of Great Britain's overseas investments since the 1870s, its GDP per capita until 1914 was close or surpassed some European countries and its economy experienced a sustained growth comparable with other countries of the Anglo world during the period. Surprisingly, its political regime and institutions resembled those described by Acemoglu et al. as the outcome of "extractive institutions."

2.6.2 Does Culture Matter?

The cultural-ideological explanation of the formation of institutions and path dependence in the development of countries has been largely studied by North in different works and it does have followers who attempt to explain Argentina's decline in similar terms. Torcuato Di Tella, for instance, argues that the development of Canada, Australia and New Zealand in reality was a consequence of the extension of the British frontier overseas and that included its forms of social, political, and economic organization. In this sense, migrants did not move into a foreign destination; on the contrary, they moved within Britain's external frontiers. The change of geography did not bring about any important modification. Immigrants maintained in the new settled areas the same cultural heritage of the mother country until a gradual change towards a more independent organization prevailed. In this sense, unique countries, tied together by the same colonial origins, enhanced the institutions of the Anglo world in a new geography.¹⁰⁶ In the case of Quebec in Canada or Louisiana in the United States for that matter, it is not clear how the French setting fits into Di Tella's argument. Moreover, Canada's immigration patterns during the last quarter of the nineteenth century reflect the seeds of a multicultural setting as the country received an important number of immigrants

¹⁰⁵ North, *Institutions, Institutional Change and Economic Performance*, 8–9, 116–117.

¹⁰⁶ See Torcuato S. Di Tella, "Argentina: ¿Una Australia Italiana?," *Crítica & Utopía*, no. 10–11 (November 1983): 1–13.

from Germany, Ukraine and Russia during the period. For example, the Mennonite colony that settled in Southern Manitoba in the 1870s maintained its own language, religion, settlement layout and farming technique that they practiced in Russia.¹⁰⁷

Argentina—and Uruguay and Chile—on the contrary, maintains Di Tella, had a rather uneven combination of Italians and immigrants of other nationalities that struggled to fit into a society in motion and that attempted to build institutions based on different cultural heritages. This combination of diverse cultural and ideological heritages provoked the formation of a foreign-born bourgeoisie with little political participation during the years of nation building and state formation.¹⁰⁸ This particular combination, claims Di Tella, created institutional instability because the foreign-born commercial bourgeoisie started to dispute political power late. The argument is provocative, indeed, but it does not explain why other British colonies that implemented the institutions of the Anglo world like Jamaica, the West Indies and parts of Africa or India did not follow the path of growth of the developed countries of the Anglo world.¹⁰⁹

2.6.3 Natural Resources, Factor Endowments and Geography

For Engerman and Sokoloff, cultural heritage or the controversial thesis that Protestantism was the engine that fueled economic growth in the British settlements appears inconsistent.¹¹⁰ For them, factor endowments determined ultimately the quality of institutions and the way countries developed. Wealth inequality, human capital and the administration of political power embedded in the cultural history of the colonies,

¹⁰⁷ Lawrence Klippenstein, “Manitoba Settlement and the Mennonite West Reserve (1875-1876),” *Manitoba Pageant* 21, no. 1 (Autumn 1975); John Warkentin, “Mennonite Agricultural Settlements of Southern Manitoba,” *Geographical Review* 49, no. 3 (July 1, 1959): 342–68, doi:10.2307/211911. For an analysis of market integration of the Mennonite community, see Royden Loewen, *Family, Church, and Market: A Mennonite Community in the Old and New Worlds, 1850-1930* (Urbana and Chicago: University of Illinois Press, 1993); Royden Loewen, *The Making of Ethnic Farm Culture in Western Canada* (Ottawa: Canadian Historical Association, 2002).

¹⁰⁸ Di Tella, “Argentina: ¿Una Australia Italiana?,” 11.

¹⁰⁹ Kenneth L. Sokoloff and Stanley L. Engerman, “History Lessons: Institutions, Factors Endowments, and Paths of Development in the New World,” *The Journal of Economic Perspectives* 14, no. 3 (July 2000): 219. Similar explanation is provided by Daron Acemoglu, Simon Johnson, and James Robinson, “Institutions as the Fundamental Cause of Long-Run Growth,” Working Paper Series No. 10481 (National Bureau of Economic Research, 2004), 28, <http://www.nber.org/papers/w10481>.

¹¹⁰ Stanley L. Engerman and Kenneth Lee Sokoloff, “Factor Endowments, Inequality, and Paths of Development among New World Economies,” *Economía* 3, no. 1 (2002): 44, doi:10.1353/eco.2002.0013. See also Stanley L. Engerman and Kenneth L. Sokoloff, “Colonialism, Inequality, and Long-Run Paths of Development,” *SSRN eLibrary*, January 2005, 3, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=649742.

they argue, determine the path to development and future economic success.¹¹¹ The geographic location of European settlements in the New World had a strong influence in their later development. In areas of new settlements where native population was scarce, the influx of European immigrants that engaged in the cultivation of grains determined a path toward more equal distribution of wealth, better human capital and more homogenous immigration pattern.¹¹² In the case of Latin America, early land distribution to members of the military and the elite created the conditions for land inequalities that influenced later in the quality of their institutions.¹¹³

Engerman and Sokoloff make a clear point regarding the unequal distribution of land in Argentina; however, they miss the opportunity to assess in similar manner early allocation of land in Canada. As Chapter 4 will show, the HBC obtained large tracks of public land in compensation for the transfer of North West Territories to the Crown and the CPR received public lands in form of subsidies to promote future investments. In dimension, this early allocation of land to these corporations was much more important than that of Argentina indeed. Measured in terms of territorial extension, the land obtained was outstandingly large. In terms of land equality, the concentration of such a large territory in the hands of two of the most powerful Canadian corporations at the time is not a topic to forget in any comparative analysis. Moreover, both corporations maintained fluid connections with Canadian business and political elite over the period. It is important to mention that Donald Smith, the HBC's principal shareholder and president of the Bank of Montreal was elected Member of the Legislative Assembly of Manitoba in 1870 and Member of Parliament for Montreal later on. Among other commercial endeavors, Smith, his cousin George Stephen¹¹⁴ and other important businessmen from Montreal and Toronto were the main beneficiaries of the

¹¹¹ Engerman and Sokoloff, "Factor Endowments, Inequality, and Paths of Development among New World Economies," 45.

¹¹² *Ibid.*, 56–57.

¹¹³ *Ibid.*, 61.

¹¹⁴ Stephen was also president of the Bank of Montreal and founder of the CPR in 1880. See Alexander Reford, "Stephen, George, 1st Baron Mount Stephen," *Dictionary of Canadian Biography Online* (University of Toronto/Université Laval, 2005), http://www.biographi.ca/en/bio/stephen_george_15E.html.

government railroad expansion. Their initial railroad venture in the small line that connected Winnipeg with the American border in 1878 grew into their major investment, the CPR, from 1880.¹¹⁵

In the same line that Solberg contributed to the study of institutions earlier, Acemoglu, Johnson, and Robinson and Engerman and Sokoloff argue that as land remained in a few hands, political power and policies favoured the elite and that increased inequality.¹¹⁶ Following Solberg's arguments, Engerman and Sokoloff also claim that Argentina had no national land policies compared to Canada. As discussed earlier, Argentina did have in fact land policies, yet presumably less effective than those of Canada in granting ownership to small holders. Similar arguments that help to perpetuate a (North American) bias appear in several works that analyze the role of ("good") institutions as promoters of development. A brief summary would be then, bad land policies represent the image of a less efficient state that developed under bad institutions; hence, bad policies are the product of bad institutions. Good policies are the outcome of good institutions.

However true these accounts could be, they do not clearly explain how certain institutions promote economic growth and development and others do not.¹¹⁷ Engerman and Sokoloff acknowledge that in an early article. While Canada and the United States utilized small farms to produce grains, Argentina maintained bigger estates and it managed to succeed in the production of grains by utilizing a tenancy system. Arguably, they state that it was true that production reaped similar outputs but the different land holding systems increased inequality.¹¹⁸ This latter observation could be certainly true, but inequality per se does not restrain economic growth and there are sufficient examples in today's distribution of wealth across the world. As the following chapter will

¹¹⁵ Alexander Reford, "Smith, Donald Alexander, 1st Baron Strathcona and Mount Royal," *Dictionary of Canadian Biography Online* (University of Toronto/Université Laval, 1998), http://www.biographi.ca/en/bio.php?id_nbr=7710.

¹¹⁶ Engerman and Sokoloff, "Factor Endowments," 64.

¹¹⁷ In similar fashion, Francis Fukuyama de-constructs this intriguing argument in a review of Acemoglu and Robinson's latest work. See Francis Fukuyama, "Acemoglu and Robinson on *Why Nations Fail*," *The American Interest*, March 27, 2012, <http://www.the-american-interest.com/2012/03/26/acemoglu-and-robinson-on-why-nations-fail/>.

¹¹⁸ Sokoloff and Engerman, "History Lessons," 224.

show, Canada, Australia, New Zealand and Argentina remained close in terms of immigration, GDP and GDP per capita until the first decades of the twentieth century.

Although institutional arrangement is very important, Engerman and Sokoloff's conclusions are that other factors might have influenced the persistence of inequality in Latin America in the long term. Institutions in Canada and the United States, they argue, performed better because they opened more opportunities for economic development by intensifying public education, providing political opportunities through the enfranchisement of broad segments of the population that, ultimately, restrained the elite's political power.¹¹⁹ The shortcoming of this evaluation is that they overemphasize enfranchisement as a fundamental advance toward some sort of liberal democracy instead of demonstrating real political participation in the election process. In the case of Canada, popular participation before the inclusion of women in the election of 1921 was in fact very low. In the first election held in 1867, less than 10 percent of the population were registered voters; of those, only 73 percent did in fact cast a vote. In the following elections, people's participation increased slightly to reach 27 percent of the population as registered voters in the election of 1917.¹²⁰ How such a small number of electors demonstrates that popular participation in the election process checked elite's power in Canada during the nineteenth century and early twentieth, as Engerman and Sokoloff suggest, is certainly an unsolved mystery. This thesis argues that it is not the formal opportunity that people have to participate in an election that empowers liberal democracy but the actual participation of people in the election. Canada's lower participation rate until 1917 could hardly be considered a "check" to elite's power.

2.7 Conclusion

This chapter has gathered important discussions on staples, land endowment, institutions, growth and development that attracted the attention from different theoretical (and ideological) perspectives. Innis' staple "theory" or approach of economic growth and development based on natural resources exploitation became the foundation of the history of Canadian economic geographic. Yet he did not explicitly formulate a theory, other scholars attempted to model Innis' approach by analyzing it with the tools

¹¹⁹ Sokoloff and Engerman, "History Lessons," 224–225. Certainly, they describe the electoral opportunities opened for white male participation.

¹²⁰ Elections Canada, "Voter Turnout at Federal Elections and Referendums," October 15, 2015, <http://www.elections.ca/content.aspx?section=ele&dir=turn&document=index&lang=e>.

available at that moment. In this way, econometrics, neo-classical models, structuralist and neo-Marxist approaches provided different answers to the role played by natural resources in Canada's growth, dependence and late development. Other scholars compared Canada with other countries of recent settlement, namely Argentina. Adelman and Solberg based their study on one staple: wheat. In some sense, they follow Innis' approach, as they state that the production of wheat molded the distribution of land and the enforcement of property rights in the land to serve the interests of the production of natural resources for export. In this way, government policies in both countries followed the needs of the historical conditions.

A renewed discussion on natural resources, geography and institutions attempted to establish a theory of institutional development based on a "natural experiment". The models discussed very often provide a well-established argument; however, their binary explanations are diverse and rather unconvincing and certainly cannot provide the elements to posit a "theory" about the role of institutions as agent of economic growth because there are abundant examples of economic growth based on bad or extractive institutions, in words of Acemoglu et al. Following the above discussion, it is clear that the theoretical approaches enter into what Fogarty calls the description of the "pure type" examples.¹²¹ On one hand, we can distinguish those countries that applied the "correct" land policies, attracted immigrants and formed solid political institutions like the countries of the Anglo-world, included the United States. On the other hand, we can situate those countries that in plain terms became a "failure." The former promoted liberal individualism, respect for private property of the land, freedom and, as Frederick J. Turner claimed, democracy.¹²² The latter, under the shadow of extractive institutions performed poorly, their political institutions benefited the landed elite, retarded the application of democratic institutions and therefore their economic growth rate was rather modest.

In light of Latin America's present performance compared with developed countries, the analysis is tempting; however, its binary polarization between good and bad institutions overlooks the particular and regional characteristics of the area under evaluation. As Jeffrey Sachs points out, the study must be dynamic as regions change

¹²¹ Fogarty, "The Comparative Method," 415.

¹²² Frederick Jackson Turner, *The Frontier in American History* (New York: Courier Corporation, 1920), 30.

not only their institutional arrangements but also as factors such as technology, markets demand or timing vary.¹²³ This explanation is a good example of Argentina's performance regardless of the characteristics of its economic and political institutions. Until the World Wars, the country performed in similar terms to Canada or Australia even though it had institutions inherited from the Spanish Crown, different, as NIE theorists claim, from those of the Anglo-World.

In the case of Latin America, different countries organized their economic institutions and their societies in a different way and obtained diverse economic performance over time. While some countries like Argentina and to less extent Uruguay (and Brazil after 1950s) performed at par with other Western Offshoots, other Latin American countries did never catch up with the core and diverged markedly at the turn of the century. The shift of the international demand from one natural resource, minerals, to others, coffee in Brazil or grains and beef in Argentina and Uruguay, produced marked differences between countries.¹²⁴ Interestingly, they all inherited the same Spanish (or Portuguese) institutions. It is of great utility to perform a comparative evaluation in historical perspective; more importantly, the emphasis on the historical aspects of said evaluation is a factor of a proper analysis of time and space. To blame Latin America's actual performance on the organization of their colonial institutions is, as Leandro Prados remarks, "short-sighted."¹²⁵

How do these theoretical approaches advance in the formulation of this dissertation's framework? First, they locate this dissertation toward a critical evaluation of institutions and the "grand narratives" associated within, principally the institutions of settler capitalism. They secondly give arguments to evaluate regions of recent settlement in context by comparing Canada and Western Canada with other regions that experienced similar spatial and structural transformation during the period. In so doing, this chapter revised sources and methodologies that other scholars used to evaluate the

¹²³ Jeffrey D. Sachs, "Government, Geography, and Growth," *Foreign Affairs*, 2012, <http://www.foreignaffairs.com/articles/138016/jeffrey-d-sachs/government-geography-and-growth?page=show>.

¹²⁴ For a description of Latin American exports, see V. Bulmer-Thomas, *The Economic History of Latin America since Independence*, Third edition, Cambridge Latin American Studies 98 (New York: Cambridge University Press, 2014), 63–68.

¹²⁵ Leandro Prados de la Escosura, "The Economic Consequences of Independence in Latin America" in V. Bulmer-Thomas, John H. Coatsworth, and Roberto Cortés Conde, eds., *The Cambridge Economic History of Latin America: The Colonial Era and the Short Nineteenth Century*, vol. I (Cambridge, UK: Cambridge University Press, 2006), 522.

region. Third, they contribute to position the historiography of Canada's settlement within a broad narrative of natural resources exploitation and state formation and lastly, they provide arguments to re-evaluate Western Canada settlement by using other sources, data and methodology. This chapter particularly challenged the qualitative evaluation of historical sources and provided another interpretation of past events. The tone of the discussion will reverberate over the whole thesis.

The first era of globalization witnessed an unprecedented spatial transformation. The expansion of the "Great Frontier", as Walter Prescott Webb defined it,¹²⁶ energized the movement of capital and persons into new areas of the world and initiated an important economic structural transformation. In so doing, the settler state organized new institutions and enforced a new regime of land tenure under its new sovereign domain. The rest of this dissertation will evaluate the historical development of Canada and Western Canada, particularly in the second half of the nineteenth century. Its aim is to obtain a more nuanced understanding of a region that became part of a "successful" country and evaluate the degree of difference or similarity with other countries that started their structural transformation in the same period.

¹²⁶ Walter Prescott Webb, *The Great Frontier* (Reno/Las Vegas: University of Nevada Press, 2003), 10–12.

Chapter 3

Building Canada: Historical, Economic and Demographic Context

3.1 Introduction

The formation of the modern Canadian state was the product of external and internal forces.¹ In 1850 Canada, in fact, was more an idea than a reality. A group of colonies that had their centre of gravity in Montreal and to a lesser extent in Toronto was sensible to the changes experienced in Great Britain. Internally, the political and economic elite sought to realize the idea of a transcontinental nation and an expansionist movement generated renewed designs of nation building. By the turn of the century, an expanded, cohesive Canada had achieved an important national status and international importance as one of the major producers of natural resources for export. This chapter will enquire into Canada's position in the world economy by comparing it with other countries, like Australia, New Zealand and Argentina, that expanded their frontiers of settlement, opened their ports to the arrival of massive wave of immigrants and became

¹ Andrew Smith, *British Businessmen and Canadian Confederation: Constitution Making in an Era of Anglo-Globalization* (Montreal: McGill-Queen's Press - MQUP, 2014), 6–8.

as well important producers of natural resources for export. The main questions this chapter will ask are: Was Canada a particular case of development? Or did it follow the trends of other countries of recent settlement? If there are no “universal laws” to explain particular historical development, how does Canada compare with other countries in economic growth and immigration? The second inquiry will be on the quality of data commonly used to evaluate those countries. Some scholars used official estimates of population growth according to censuses figures and immigration data reported by different government agencies during the period. Others used historical statistics from contemporary sources like the *Historical Statistics of Canada*. This thesis raises the same concerns than other studies observed; however, it is less optimistic regarding the methodological aspects used to obtain a clearer understanding of population and immigration figures.

The chapter continues as follow: Section 3.2 illustrates Canada’s historical and political context. Section 3.3 evaluates Canada in comparison with other countries that experienced similar trends of growth and development during the period. Section 3.4 discusses further the process of immigration to Canada and to Western Canada and data quality associated with it. It also recasts early discussions on the United States-Canada border-crossing controversy in times of lax migration control. Section 3.5 concludes.

3.2 Historical Background

3.2.1 The Idea of a Nation

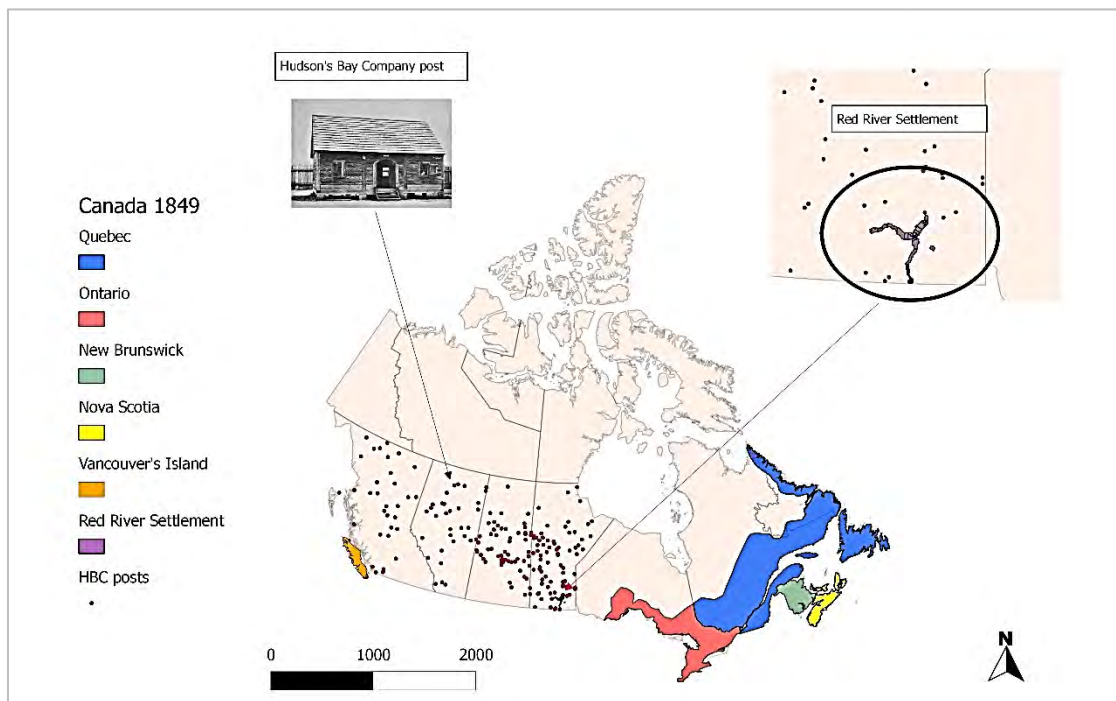
In 1849, British North America was a small colony divided into four provinces on the northeast side of North America. Farther west developed the independent colony of Vancouver Island on the Pacific coast and the Red River Settlement at the confluence of the Red and Assiniboine Rivers, present day Winnipeg, established in 1812 under the tutelage of the Hudson’s Bay Company (HBC).² The western territory integrated the HBC domains through an important number of trading posts across the territory (Figure 3-1). With the Act of Union of 1840, the Crown put an end to French rebellions in Lower Canada (Quebec) and consequently consolidated Upper Canada’s (Ontario) English-speaking dominance in the Provinces.³ By 1848, the British government

² James Maurice Stockford Careless, *The Union of the Canadas; the Growth of Canadian Institutions, 1841-1857* (Toronto: McClelland and Stewart, 1967), 20.

³ *Ibid.*, 4.

granted the colonies the political status of “responsible government”. The Crown transferred the colonies’ political power to local authorities elected to their respective assemblies.⁴ Except for the Red River Settlement, which formally remained in control of the Hudson’s Bay Company until 1870, by 1856 the rest of the colonies had obtained the administration of their own affairs.

Figure 3-1 Canada in 1849.



Sources: Author’s GIS design based on *National Atlas Maps* © Natural Resources Canada. Source: (<http://www.nrcan.gc.ca/earth-sciences/geography/atlas-canada/selected-thematic-maps/16884#territorialevolution>). HBC posts from Hudson’s Bay Company Archives at Archives of Manitoba. Red River Settlement map from CCRI shapefiles, University of Toronto.

In the 1850s, businessmen in Quebec and Ontario started to show interest in the West as the Hind and Palliser’s expeditions reported that the area was prepared for agricultural production as the fertility of the soil in certain places demonstrated.⁵ Influ-

⁴ Ibid., 120–131. For responsible government in the Maritime provinces (Nova Scotia and New Brunswick), see William S. MacNutt, *The Atlantic Provinces: The Emergence of Colonial Society, 1712-1857* (Toronto: McClelland and Stewart Limited, 1965), 224–230.

⁵ A. A. den Otter, *Civilizing the West: The Galts and the Development of Western Canada* (Edmonton: University of Alberta Press, 1986), 8. See also Henry Youle Hind and George Gladman, *Report on the Exploration of the Country between Lake Superior and the Red River Settlement* (Toronto: John Lovell, 1858), 10, 143, 204; John Palliser, *Papers Relative to the Exploration by Captain Palliser of That Portion of British North America Which Lies between the Northern Branch of the River Saskatchewan and the Frontier of the United States; and between the Red River and Rocky Mountains: Presented to Both Houses of Parliament by Command of Her Majesty, June 1859* (London: G.E. Eyre and W. Spottiswoode, 1859), 4, 11, 13, 30.

enced by those early assessments, a group of important politicians, lawyers and businessmen like George Brown, the owner and editor of the Toronto *Globe*, William McDougall, Alexander Galt and Sandford Fleming, among others, started to discuss the idea of the expansion to the Western territory and the creation of a transcontinental state.⁶ Furthermore, the end of available agricultural land in the East,⁷ threats from the always expanding American frontier to take over the farther and unpopulated West north of the 49th parallel and the necessity of bringing together the isolated colony of Vancouver Island revamped in the minds of those influential persons the necessity of a new expanded state.⁸

The expansion of the American railroad into the territory that later became the state of Minnesota raised the alarm among eastern politicians. In 1858, Minnesota had become a state. A scarcely populated territory of about 6,000 peoples, it increased its population to 172,000 the following decade. Years early and challenging the HBC's economic power in the territory, fur traders started to deal directly with indigenous hunters and undermined the HBC's monopoly. A faster railroad connection to the market via the United States changed the economic dynamic of the region. The commercial interest of Red River settlers and traders slowly turned its back to the Company and increasingly became partners with Minnesota merchants. Steamers, carts and riverboats loaded with furs from the Red River settlement and goods from St. Paul's wholesalers shipped to Fort Garry's merchants circulated across the Red River during the season

⁶ Arthur Silver Morton and Chester Martin, *History of Prairie Settlement* (Toronto: The Macmillan Company of Canada limited, 1938), 36. See also Doug Owsram, *Promise of Eden: The Canadian Expansionist Movement and the Idea of the West, 1856-1900* (Toronto: University of Toronto Press, 1980), 4. A. A. den Otter, *The Philosophy of Railways: The Transcontinental Railway Idea in British North America*, 1st Edition edition (Toronto ; Buffalo: University of Toronto Press, Scholarly Publishing Division, 1997), 160–161.

⁷ For land scarcity and farming in Quebec see Gérard Bouchard, "Family Reproduction in New Rural Areas: Outlines of a North American Model," *Canadian Historical Review* LXXV, no. 4 (1994): 475. Bruno Ramirez also comments on Quebec's land problems in Bruno Ramirez, *Crossing the 49th Parallel: Migration from Canada to the United States, 1900-1930* (Ithaca, N.Y: Cornell University Press, 2001), 7–8. Gagan's seminal work on land scarcity in Ontario is commonly used to explain the migration to better lands. See David Gagan, "Land, Population, and Social Change: The 'Critical Years' in Rural Canada West," *Canadian Historical Review* 59, no. 3 (September 1, 1978): 295–296, doi:10.3138/CHR-059-03-01.

⁸ Gerald Friesen, *The Canadian Prairies: A History* (Toronto: University of Toronto Press, 1987), 111.

and augmented HBC's economic uncertainties about the territory.⁹ In Ottawa, the American aggressive expansion into the West was viewed as a real threat, military, then economically. The construction of a Canadian transcontinental railway would serve then to integrate the farther Western territory into the new state and to defend the region from that possible commercial threat.¹⁰ In 1867, the *British North American Act* brought together the Provinces of Canada (Quebec and Ontario), Nova Scotia and New Brunswick to join a Confederation and form the Dominion of Canada.¹¹ In 1869, the new Dominion acquired Rupert's Land and the North West Territories from the Hudson's Bay Company for £300,000 while the company retained one twentieth of all the arable land once the Dominion finished the survey.¹²

3.2.2 Resistance and Integration: Louis Riel

The acquisition of the Territories and political dynamics in the new Dominion energized the interest on the West. In 1869, the new federal government put in motion the survey of the recently acquired western land. Surveyors, however, faced a firm resistance when Louis Riel, a recognized leader of the French and *Métis* community of the Red River Settlement, present City of Winnipeg, and an important group of French-speaking *Métis* confronted the Federal Government, took over the Hudson's Bay Company administration house and formed an independent government. The aftermath of the so-called Red River Resistance was not the feared annexation of the territory to Minnesota but the creation of the Province of Manitoba in 1870, which became part of the Confederation. In Canadian historiography, the figure of Louis Riel is very controversial. After the 1990s when indigenous and *Métis* issues obtained more relevance, he

⁹ Vernon C. Fowke, *The National Policy and the Wheat Economy*, Social Credit in Alberta, Its Background and Development 7 (Toronto: University of Toronto Press, 1957), 43. See also Friesen, *The Canadian Prairies: A History*, 101, 114–115 and K. H. Norrie, Douglas O'ram, and John Charles Herbert Emery, *A History of the Canadian Economy*, 3rd ed (Scarborough, Ont: Nelson, 2002), 138–139; Alan F. J. Artibise, *Winnipeg: A Social History of Urban Growth, 1874-1914* (Montreal: McGill-Queen's University Press, 1975), 7–8; Harold A. Innis, *A History of the Canadian Pacific Railway* (Toronto: McClelland and Stewart, 1923), 30–33.

¹⁰ Fowke, *The National Policy and the Wheat Economy*, 44–49.

¹¹ *An Act for the Union of Canada, Nova Scotia, and New Brunswick, and the Government Thereof; and for Purposes Connected Therewith*, 1867, <http://www.legislation.gov.uk/ukpga/Vict/30-31/3/contents>.

¹² Charles John Brydges, *The Letters of Charles John Brydges, 1879-1882, Hudson's Bay Company Land Commissioner*, ed. Hartwell Bowsfield, Publications of Hudson's Bay Record Society 31 (Winnipeg: Hudson's Bay Record Society, 1977), 287–296.

was vindicated. Riel and his movement were sometimes compared to the Argentinian *caudillos* or strongmen.¹³ While both movements resisted the expansion of the central state, there were differences in their organizations and political programs. In Riel's case, in 1873 he was elected by acclamation to represent *Métis*' interests, although he never took his seat. Significantly, this French-Catholic and Aboriginal alternative to the Anglo-Protestant state failed.

Certainly, there were not only religious or cultural motives in Riel's movement. The division and allocation of land to new settlers also sparked signs of uncertainty in the *Métis* community. The agreement between the *Métis* and the Federal government in 1870 lessened the uncertainties and for the community, in the short term, the results somehow suggested a victory. Under the Manitoba Act, *Métis* children would receive 1,400,000 acres of land, and they would keep their language, religion and schools.¹⁴ Moreover, in 1871 the First Legislature of the new province provided a balanced representation of French and English speaking politicians.¹⁵ That sense of cultural, social and political satisfaction, however, was short lived. For Riel himself, the agreement with the federal government meant exile. *Métis*' influence in Manitoba's politics also waned over the years. By the 1880s, the Anglo Protestant elite, in fact, dominated Manitoba's politics.

In 1871, the incorporation of the Province of British Columbia into the Dominion completed the dream of a transcontinental state. In March 1885, however, Louis Riel and a number of *Métis* and Aboriginal groups alongside old settlers resisted the expansion of the state and again confronted the federal government in the present Province of Saskatchewan. In this case, as it happened in other places before, the railroad, the telegraph and the newly invented machine gun put an end to any further resistance.¹⁶

¹³ See for instance, Carl Solberg, "Land Tenure and Settlement: Policy and Patterns in the Canadian Prairies and the Argentine Pampas, 1880-1930" in D. C. M Platt and Guido Di Tella, *Argentina, Australia, and Canada: Studies in Comparative Development, 1870-1965* (London: Macmillan in association with St. Antony's College, Oxford, 1985), 54.

¹⁴ Friesen, *The Canadian Prairies: A History*, 128.

¹⁵ David Burley, "The Emergence of the Premiership, 1870-74" in Barry Ferguson and Robert Wardhaugh, eds., *Manitoba Premiers of the 19th and 20th Centuries* (Regina: University of Regina Press, 2010), 6-7. Emily Katherine Grafton, "The Manitoba Legislative Assembly," *Canadian Parliamentary Review* 34, no. 1 (2011): 35.

¹⁶ See, for instance, David Rock, *State Building and Political Movements in Argentina, 1860-1916* (Stanford, Calif: Stanford University Press, 2002), 56-57; Friesen, 225-240.

In November 1885, the transcontinental dream became a reality when the Canadian Pacific Railway connected the country from coast to coast. The Canadian expansion to the west culminated a political program outlined in the 1850s but which became a reality in 1879 under Prime Minister John A. Macdonald's National Policy, or as Alan Greer suggests, under the influence of George Brown's ideas.¹⁷ Although private funding financed the Canadian Pacific Railway in contrast with the Dominion funded Intercolonial Railway built in the Central Canada and the Maritimes, the CPR, ultimately, received important subventions and government grants, and both served the government ideological program of state expansion and integration. In this sense, as Fowke put it, railroads were "agencies of the state designed for the furtherance of the national policy."¹⁸

3.2.3 The Transcontinental Dream

The acquisition and appropriation of new frontier land in this period and its subsequent transformation into private property determined a future course toward development but also toward inequality, economic privileges and political power. Macdonald's National Policy provided a capitalist program of national development based on the extension of the railroad, the settlement of European immigrants and high tariffs to protect the infant Canadian industry. This program unevenly expanded the frontier to the West while new cities and towns became incorporated into the national and international economy. Towns and villages that were initially set up alongside old fur trade trails and rivers joined an extending network of new towns and villages that flourished alongside the railroad lines. This transformation was very important because urban centres provided the country with regional hubs of consumption and distribution. Important cities like Winnipeg and later Brandon, Regina, Saskatoon, Edmonton and Calgary became the centre of attraction to new immigrants and to the establishment of financial institutions and industrial facilities.¹⁹ This pattern would determine the location of these new cities as concentration hubs that linked the hinterland with the national

¹⁷ Allan Greer and Ian Walter Radforth, eds., *Colonial Leviathan: State Formation in Mid-Nineteenth-Century Canada* (Toronto: University of Toronto Press, 1992), 3.

¹⁸ Fowke, *The National Policy and the Wheat Economy*, 52.

¹⁹ See for instance, Alan F. J. Artibise, "In pursuit of growth: Municipal Boosterism and Urban Development in the Canadian Prairie West, 1871-1913," in I. Gilbert Stelter and Alan F. J. Artibise, *Shaping the Urban Landscape: Aspects of the Canadian City-Building Process* (Montreal: McGill-Queen's Press - MQUP, 1982).

and international economy in the years to come, as the following chapters will show. Local merchants, traders, and financial and real estate agents organized their own class institutions and through them exercised a de-facto political control.²⁰ Not only did the National Policy provide a clear program

Figure 3-2 Canada in 1901.



Source: Based on *National Atlas Maps* © Natural Resources Canada. Website (<http://www.nrcan.gc.ca/earth-sciences/geography/atlas-canada/selected-thematic-maps/16884#territorialevolution>)

of capitalist development, but it also found in Macdonald a dynamic leader eager to incorporate the capitalist class program as his own and advance further in the consolidation of the nation-state. As Figure 3-2 shows, by the end of the century Canada had already incorporated the Provinces of Manitoba and British Columbia into the Dominion and the North West Territories were divided into a number of administrative territories under the federal government's domain. Unlike British Columbia, which obtained administrative autonomy of its land since its incorporation to the Dominion in

²⁰ Gustavo F. Velasco, "Land, Class Formation, and State Consolidation in Winnipeg, 1870-1885" (M. A. Thesis, University of Manitoba, 2011), <http://mspace.lib.umanitoba.ca/handle/1993/4441>. For city-building process in the nineteenth century, see Larry S. Bourne and James W. Simmons, *Systems of Cities: Readings on Structure, Growth, and Policy* (Oxford [England]: Oxford University Press, 1978); David Allan Hamer, *New Towns in the New World: Images and Perceptions of the Nineteenth-Century Urban Frontier* (New York, Oxford: Columbia University Press, 1990).

1871, Manitoba and the North-West Territories did not obtain the administration of their land and revenue generated from it until the 1930s.²¹

From the 1850s to 1914 Canada achieved political autonomy from Britain, expanded its territory under a national state, created territorial divisions and new provinces and started a process of immigration and settlement. Although this transformation did not reach the levels of violence and political turmoil that experienced other countries of recent settlement, especially the wars of independence in Latin America and the war against the Aboriginal peoples and the Civil War in the United States, the outcome was costly, not only economically but also socially indeed. A large economic history literature praised the “democratic” allocation of land to white European settlers. This dissertation argues that the displacement of indigenous peoples from their land to make place for the arrival of European settlers and the uneven allocation of land in the hands of corporations like the CPR and the HBC also created the conditions for unequal distribution of wealth in Canada and in western Canada particularly.

3.3 Canada in Context

3.3.1 Population, Immigration and Data Quality

This investigation starts in the 1850s. The period is rich enough in economic, historical, and political terms to analyze growth and development in context. This was a period of great territorial transformation for each of the settler countries. In general, data from 1850 to 1870 are scattered and incomplete; for a later period, Angus Maddison’s time series is commonly regarded as a good approach.²² For some countries included in this section, for instance Argentina, records start in 1870 and data were irregularly recorded until 1900, mainly based on Argentinian censuses. While under the Viceroyalty Argentina had a census in 1810, it only reported for Buenos Aires. In the nineteenth century, Argentina had censuses in 1869 and 1895 and the first one of the twentieth century was taken in 1914. While the 1914 census expanded its scope to include economic variables, the previous censuses were very limited.²³ A more complete

²¹ Lambrecht, *The Administration of Dominion Land, 1870-1930*, 4–5. Chester Martin, *Dominion Land Policy*, ed. Lewis H. Thomas, The Carleton Library No. 69 (Toronto: McClelland and Stewart Limited, 1973), 9.

²² Angus Maddison, *The World Economy: A Millennial Perspective*, vol. 1–2 (Paris: Development Centre of the Organisation for Economic Co-operation and Development, 2001).

²³ Irene (Barnes) Taeuber, *General Censuses and Vital Statistics in the Americas: An Annotated Bibliography of the Historical Censuses and Current Vital Statistics of the 21 American Republics*, the

dataset for Argentina population hence was extracted from Bulmer-Thomas.²⁴ Canada, on the other hand, had censuses since colonial times—the first one recorded was in 1666—but the accuracy and data quality of them fluctuate.²⁵ Starting in 1851, Canada had national decennial censuses and in 1886, 1896, 1905 and 1916 Manitoba and the North West Territories had regional censuses, which give a more nuanced illustration of the region’s growth and development.²⁶

It is not the purpose of this section to perform a comprehensive evaluation of nineteenth century census methodology, but to observe some of the general shortcomings. Regardless of empiricists’ endless optimism, nineteenth century data must be used with caution, as national statistics agencies were not fully developed at the time and census enumeration had its limitation in both personnel training and methodology.²⁷ Furthermore, the incorporation of new territories and the resulting new geographic divisions that emerged afterwards produced inconsistencies in the information gathered and thus regional disparities between censuses because areas that were part of one political division in one census became incorporated into a new region in the following

American Sections of the British Commonwealth of Nations, the American Colonies of Denmark, France, and the Netherland, and the American Territories and Possessions of the United States (Washington, D.C.: U.S. Govt. Print. Off., 1943), 3–4.

²⁴ Bulmer Thomas includes several sources to produce the population estimates for Argentina and several other countries. The figures, as he acknowledges, are “educated estimates”. V. Bulmer-Thomas, *The Economic History of Latin America since Independence*, Third edition, Cambridge Latin American Studies 98 (New York: Cambridge University Press, 2014), 483–484, 497.

²⁵ M. C. (Malcolm Charles) Urquhart and Kenneth Buckley, eds., *Historical Statistics of Canada* (Toronto: Cambridge University Press, The MacMillan Company of Canada Ltd., 1965), 1–3.; David A. Worton, *Dominion Bureau of Statistics: A History of Canada’s Central Statistical Office and Its Antecedents, 1841-1972*, Canadian Public Administration Series (Montreal, QC, Canada: McGill-Queen’s Press - MQUP, 1998), xiii.

²⁶ Taeuber, *General Censuses and Vital Statistics in the Americas*, 99.

²⁷ In the case of Canada, see Worton, *Dominion Bureau of Statistics*, 4, 6. For the investigation of Canadian early censuses and enumeration methods see Bruce Curtis, *The Politics of Population: State Formation, Statistics, and the Census of Canada, 1840-1875* (Toronto: University of Toronto Press, 2002), 123–130. Richard Steckel observed the shortcomings of nineteenth century American censuses and the problems of enumeration. He estimated that the cases of underenumeration in different nineteenth census data were from 6 to 18 percent. See Richard H. Steckel, “The Quality of Census Data for Historical Inquiry: A Research Agenda,” *Social Science History* 15, no. 4 (1991): 588, doi:10.2307/1171470. Similarly argues Peter Knights in his sample evaluation of the American censuses of 1850-80 in Massachusetts. See Peter R. Knights, “Potholes in the Road of Improvement? Estimating Census Underenumeration by Longitudinal Tracing: U.S. Censuses, 1850-1880,” *Social Science History* 15, no. 4 (1991): 517–26, doi:10.2307/1171466.

ones, as Urquhart and Buckley observe for Canada.²⁸ Data from individual provinces, colonies or states were collected in different years and the aggregate figures that appear in different reports frequently reflect a broad estimate.²⁹ For instance, while Canada or the Provinces of Canada kept population records from colonial times, Rupert's Land and the North-West Territories were not taken into account, especially concerning the indigenous population. It is important to observe this because Aboriginal and *Métis* traders were the main participants alongside the HBC in the North West economic activity. In his lengthy report of 1858, Hind gathered information from the HBC posts he visited and estimated that more than 50,000 Aboriginal traders visited the HBC's posts annually to trade or pick up food and implements. Of course, this information was not methodically collected and the possibility exists that same persons visited more than one post during the year. Still it was an important description of the North West population mobility and economic activity that was not taken into account in Canadian censuses.³⁰ The Hudson's Bay Company's contributions to the country's general statistics were not included, leaving the place of Aboriginal labour in the production and trade of furs unmeasured.³¹

Immigration data are more questionable indeed and became a field of discussion among statisticians and historians. Countries rarely kept a rigorous statistics of arrivals and departures until the twentieth century. In the case of Canada and the United States, the large territory and the various ports of entries and crossing between both countries made the task very difficult. Canadian immigration data therefore must be taken as a guesstimate.³² Immigration annual series were reported for immigrants that declared

²⁸ Urquhart and Buckley, *Historical Statistics of Canada*, 1. See also Canada. Dominion Bureau of Statistics. General Statistics Branch, *The Canada Year Book 1936. The Official Statistical Annual of the Resources, History, Institutions and Social and Economic Conditions of the Dominion* (Ottawa: J. O. Patenaude, I.S.O., King's Printer, 1936), 103–104.

²⁹ For the case of Australia and its different colonies see, Robin Haines and Ralph Shlomowitz, "Nineteenth Century Government-Assisted and Total Immigration from the United Kingdom to Australia: Quinquennial Estimates by Colony," *Journal of the Australian Population Association* 8, no. 1 (May 1, 1991): 50–61, doi:10.1007/BF03029555.

³⁰ See Hind and Gladman, *Report on the Exploration of the Country between Lake Superior and the Red River Settlement*, 415–416. The HBC kept records of the Red River Settlement and the vicinity by taking regular censuses. See Census of Assiniboia at "Censuses of Canada - 1665-1871 | Queen's University Library," accessed August 22, 2015, <http://library.queensu.ca/data/census-1665-1871-west>.

³¹ Gerhard Ens analyzes the importance of *Métis* economy and labour in the fur trade; especially family labour and manufacture. See Gerhard J. Ens, *Homeland to Hinterland: The Changing Worlds of the Red River Metis in the Nineteenth Century* (Toronto: University of Toronto Press, 1996).

their intentions to remain in Canada. Return migration was not reported. In the case of Argentina, in the 1970s, the national statistics agency produced a pioneer microdata study on population.³³ These data account for arrivals and returns and provide a clearer understanding of Argentina's net immigration patterns. Other Argentinian publications that provide yearly immigration data, for instance, the statistics on immigration published by the Ministry of Agriculture prepared for the Universal Exhibition of St. Louis of 1904 accounts for immigrants arrivals only.³⁴ Australia and New Zealand recently published updated data for net immigration.³⁵

Nevertheless, with all the cautions, data available at this time guesstimate some statistics that are useful to obtain a sense of population and immigration patterns of the countries under evaluation. What this dissertation remarks is that nineteenth century population, immigration and growth statistics are far from being precise and consequently every quantitative assessment must bear this in mind. This dissertation does not solve the problems outlined above which, ultimately, go beyond the analyses of any individual researcher.³⁶ Stylized analysis that uses econometrics must be careful when

³² Urquhart and Buckley, *Historical Statistics of Canada*, 6–29. For a critical evaluation of Canadian census and population and immigration data see Duncan M. McDougall, "Immigration into Canada, 1851-1920," *The Canadian Journal of Economics and Political Science / Revue Canadienne d'Economie et de Science Politique* 27, no. 2 (May 1, 1961): 162–75, doi:10.2307/139138. In 1954, Kuznets and Rubin produced an estimated account of arrivals and returns to the United States. See Ernest Rubin and Simon Kuznets, "Immigration and the Foreign Born," Occasional Papers 46 (New York: NBER, 1954), 95–96, <http://www.nber.org/chapters/c1690.pdf>.

³³ Alfredo Enrique Lattes, *La Población de Argentina*, vol. 1 (Buenos Aires: República Argentina, Ministerio de Economía, Secretaría de Estado de Programación y Coordinación Económica, Instituto Nacional de Estadística y Censos, 1975).

³⁴ Argentina. Ministry of Agriculture. Immigration Department, *The Immigration Offices and Statistics from 1857 to 1903* (Buenos Aires: Argentine Weather Bureau, 1914).

³⁵ Australian Bureau of Statistics, "Australian Historical Population Statistics, 2006," August 2008, <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3105.0.65.00>; Statistics New Zealand, "New Zealand's International Migration Statistics: 1860–1921," International Travel and Migration Articles (Wellington, N.Z.: Statistics New Zealand, 2010) and Statistics New Zealand, "Long-Term Data Series," *Long-Term Data Series*, accessed April 21, 2015, http://www.stats.govt.nz/browse_for_stats/economic_indicators/NationalAccounts/long-term-data-series/population.aspx.

³⁶ The task of transcribing census manuscript into digital format is a lengthy and costly endeavor far beyond the limits of any individual researcher. In Canada, only the Census of 1881 has already been completed at the time of writing this dissertation by The Church of Jesus Christ of Latter-day Saints (<http://www.bac-lac.gc.ca/eng/census/1881/Pages/about-census.aspx>). For the other censuses, only small samples are already available. For nineteenth century Manitoba and the North West Territories there are no data other than the published censuses aggregated data.

drawing absolute (heroic) conclusions derived from regressions that uncritically make use of these data.³⁷

3.3.2 Population and Immigration in the New World

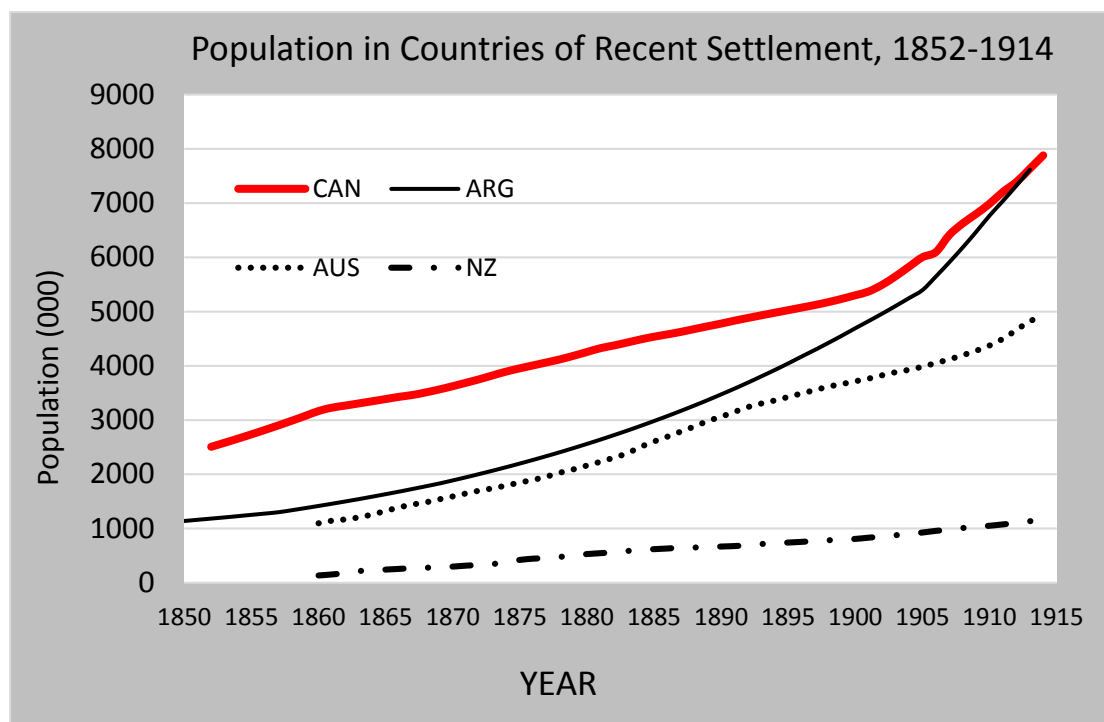
From the 1850s until the First War, about 55 million people left Europe in searching for better social and economic opportunities in the New World.³⁸ One of the important evaluations of this period has been the study of immigration and population growth because population mobility estimates a pattern of settlement, urbanization and economic growth in new regions. For this reason, this section compared the four countries under evaluation to show the similarities and differences among them with respect to population growth and immigration contribution. In addition, some evaluations used the United States data as a benchmark.

Figure 3-3 shows Canada's population growth with respect to Australia, New Zealand and Argentina. Australia and Argentina experienced similar rates of population growth until the mid-1880 when Argentina received its first boost and approached Canada's population by 1910. In 1870, Canada had a bigger population compared to the rest of the countries under evaluation. Its growth followed a positive smooth trend until the turn of the century. From 1900 until 1914, it experienced an important upward slope interrupted by a small decline at the beginning of World War I. This period coincides with an important wave of immigration. From 1850s to 1898 almost two million immigrants arrived in Canada at an average rate of 7.5 percent annually; for the period 1899-1913, however, immigration reached almost three millions at a rate of more than 22 percent annually. Argentina, differently, started to increase its population later. In the 1850s, it remained a less populated country than Canada, close to Australia, another European offshoot that followed similar growth trend. Argentina's population, however, increased at a steady rate, outnumbered Australia at the end of the nineteenth century and converged with Canada by 1914. New Zealand's population

³⁷ For an evaluation of data quality in Maddison, see Giovanni Federico, "The World Economy 0–2000 AD: A Review Article," *European Review of Economic History* 6, no. 1 (April 1, 2002): 111–20, doi:10.1017/S1361491602000059. For a critique of Latin America data see Appendix 3 in Bulmer-Thomas, *The Economic History of Latin America since Independence*, 480–525.

³⁸ Timothy J. Hatton and Jeffrey G. Williamson, *The Age of Mass Migration: Causes and Economic Impact* (New York: Oxford University Press, 1997), 3.

Figure 3-3 Population in Countries of Recent Settlement.



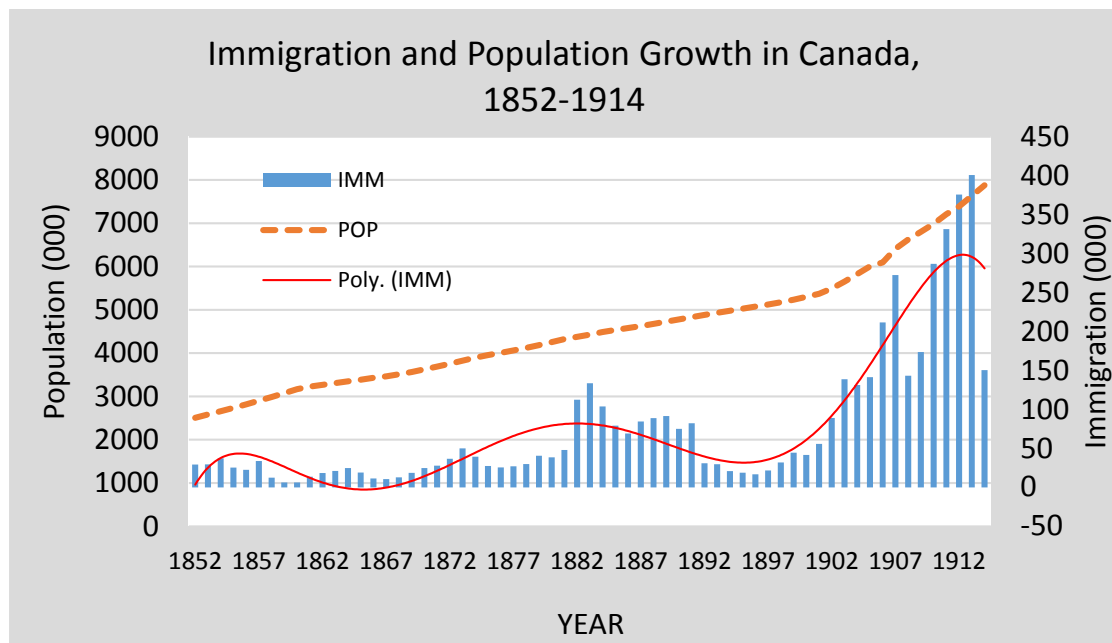
Sources: Australian Bureau of Statistics, “Australian Historical Population Statistics, 2006,” August 2008, <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3105.0.65.00>; Statistics Canada, “Historical Statistics of Canada: Section A: Population and Migration,” October 22, 2008, <http://www.statcan.gc.ca/pub/11-516-x/sectiona/4147436-eng.htm#4>; Statistics New Zealand, “New Zealand’s International Migration Statistics: 1860–1921,” International Travel and Migration Articles (Wellington, N.Z.: Statistics New Zealand, 2010) and <http://www.stats.govt.nz/infoshare/default.aspx>. For Argentina, Bulmer-Thomas, V. *The Economic History of Latin America since Independence*. Third edition. Cambridge Latin American Studies 98 (New York: Cambridge University Press, 2014), 483-484.

growth remained constant during the period analyzed. Certainly, it was a small country compared with the other ones but its rate of growth is very important, indeed. New Zealand population simple average growth was 4.11 percent annually for the period while for Argentina was 3.78 percent and for Australia and Canada 2.83 percent and 1.87 percent respectively. The case of New Zealand is very particular as its population growth after the 1870s was mainly sustained by natural increase, as its immigration rate for the period was negative. If one uses the United States as a benchmark, its population growth shows similar trends than Canada, Argentina and Australia. From the period 1850-1914, the United States population grew at an annual simple average of 2.3 percent.³⁹

³⁹ Estimated percent derived from data cited in the respective figures.

Immigration data for the period 1850-1914 show great volatility in all the countries under evaluation and reflect different internal and external conditions. Immigration studies have accounted for the variety of reasons this volatility might have occurred.⁴⁰ During the period, immigration from Europe to areas of recent settlement increased as transportation costs declined and government sponsorship boosted the flow of immigrants to the New World. Figure 3-4 and Figure 3-5 show the patterns of population growth and immigration to Canada and countries of recent settlement included

Figure 3-4 Immigration and Population in Canada



Source: Statistics Canada. “Historical Statistics of Canada: Section A: Population and Migration,” October 22, 2008, <http://www.statcan.gc.ca/pub/11-516-x/sectiona/4147436-eng.htm#4>. Immigration data are from arrivals at different entry ports. Passengers continuing to the United States were not counted in the final statistics. For net immigration see Table A-7-8 in Appendix.

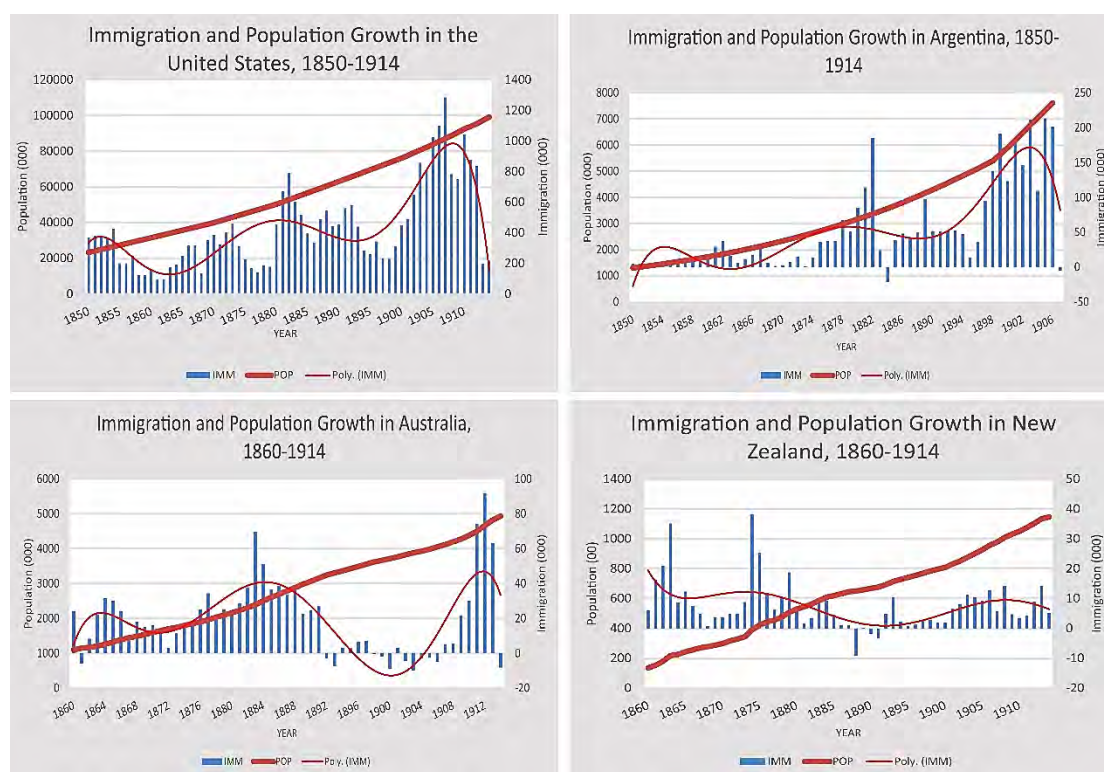
the United States. In order to smooth the high volatility of the period, immigration data for all the countries include polynomial trend lines that identify three different long-term swings in the period.

Despite some differences between countries, it is possible to identify particularly three periods of increase and three periods of decrease. The first positive increase initiated in the 1850s and lasted until the late 1860s, the second wave started in the early

⁴⁰ For different historiographical interpretations of immigration causes see, Frank Thistlethwaite, “Migration from Europe Overseas in the Nineteenth and Twentieth Centuries,” in *A Century of European Migrations, 1830-1930* (Chicago: Urbana and Chicago, 1991), 17–57.

1870s and interrupted in the late 1890s and the third one lasted from the 1890s to 1914. Blanca Sánchez-Alonso suggests that the 1890s immigration decline in Argentina was due to the Baring crisis.⁴¹ While the decline was important shortly after 1890, it appeared more visible in 1895-6, several years after the crisis erupted. The argument might be reasonable but it does not explain similar general tendencies in all the countries under evaluation. Australia and New Zealand experienced deeper decline than Argentina did but they did not experience directly the consequences of the Baring crisis. They received indirectly the aftermath of the crisis some years later with the bank fail-

Figure 3-5 Immigration and Population Growth in Countries of Recent Settlement.



Sources: Australian Bureau of Statistics, “Australian Historical Population Statistics, 2006,” August 2008, <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3105.0.65.00>; United States. Bureau of the Census. *Historical Statistics of the United States: 1789-1945, a Supplement to the Statistical Abstract of the United States*. Washington, D.C.: Government Press, 1949, 26, 33-34; Statistics New Zealand, “New Zealand’s International Migration Statistics: 1860–1921,” International Travel and Migration Articles (Wellington, N.Z.: Statistics New Zealand, 2010) and <http://www.stats.govt.nz/infoshare/default.aspx>; Alfredo Enrique Lattes, *La Población de Argentina*, vol. I (Buenos Aires: República Argentina, Ministerio de Economía, Secretaría de Estado de Programación y Coordinación Económica, Instituto Nacional de Estadística y Censos, 1975), 200. Except for the United States where immigration data is from arrivals only, for the rest of the countries immigration numbers reflect net immigration, arrivals minus returns.

⁴¹ Blanca Sánchez-Alonso, “Labor and Immigration” in V. Bulmer-Thomas, John H. Coatsworth, and Roberto Cortés Conde, eds., *The Cambridge Economic History of Latin America: The Colonial Era and the Short Nineteenth Century*, vol. I (Cambridge, UK: Cambridge University Press, 2006), 383.

ures of 1893 and the reassessment of financial risks from London lenders that cut investments in the colony.⁴² Canada's decline after 1892 almost coincided with the outbreak of the crisis but the relationship is difficult to probe.

Certainly, the Baring crisis set the alarm off to other speculative investments in the new frontier countries; however, the direct connection between the crisis and immigration flow is not clear as countries reacted differently and with different timing. In general, these booms and busts coincide with the long swings or Kuznet's cycles of 15-20 years that Hatton and Williamson describe for the migrants leaving the United Kingdom to the New World in a similar period.⁴³ Overall, they estimate that wage differential (wages 69 percent higher in the United States) and lower transportation costs might have influenced long-term fluctuations but business cycles, they claim, played a more important role in this movement.⁴⁴ All the countries under evaluation experienced similar swings, although, New Zealand and Australia showed a more pronounced decline in the 1890s until the turn of the century. Region, culture, common history and economic opportunities linked both countries together and an increase or decline in one of them provoked a reaction into the other. The depression of the 1890s and a catastrophic drought in 1901 provoked an important population outflow from Australia, which was experienced as well in New Zealand.⁴⁵ Although there was a strong correlation between the Baring crisis in Argentina and Great Britain, Bordo and Murshid did not find any correlation between the Baring crisis and the rest of the other countries of recent settlement.⁴⁶

The movement of immigrants to the New World reflects, overall, a pattern of great volatility that some studies present as a product of different "fevers" or "rushes." Periodical boosts were also the outcome of government intervention, mainly from the

⁴² David Tolmie Merrett, "The Australian Bank Crashes of the 1890s Revisited," *Business History Review* 87, no. 03 (2013): 407–29, doi:10.1017/S0007680513000706. Ian W. McLean, *Why Australia Prospered: The Shifting Sources of Economic Growth* (New Jersey: Princeton University Press, 2013), 129.

⁴³ Hatton and Williamson, *The Age of Mass Migration*, 64.

⁴⁴ *Ibid.*, 66–67.

⁴⁵ McLean, *Why Australia Prospered*, 16.

⁴⁶ Michael Bordo and Antu Murshid, "Are Financial Crisis becoming more Contagious?: What is the Historical Evidence on Contagion?" in Stijn Claessens and Kirsten Forbes, eds., *International Financial Contagion* (New York: Springer Science & Business Media, 2001), 378–382.

receiving countries, but in the case of Great Britain from the sending country as well. In New Zealand, the initial boost in the 1860s was the product of an ephemeral gold rush in the area similarly experienced in Australia.⁴⁷ The following boost in 1870 was a response to government sponsorship to attract immigrants. In the peak year of 1874, the government sponsored 86 percent of immigrants.⁴⁸ The marked decline in the late 1880s was a reaction to the removal of government sponsorship, mainly free passages from the United Kingdom and an economic depression product of land prices and commodity prices decline.⁴⁹ The number of immigrants arriving in New Zealand compared to the total population makes the fluctuation more pronounced.

Although, the majority of immigrants in Canada established themselves in Quebec and Ontario, the land rush of the 1880s in the Western region provoked an important internal migration into the area. When that migration waned, the government increased expenditures to promote immigration to Canada.⁵⁰ Similarly, the big boost in Argentina's immigration from the late 1880 to 1892 was a product of government assistance, which provided subsidized tickets to European immigrants.⁵¹ Australia implemented a system of assisted immigration process as well; however, as Haines and Shlomowitz show, other sources were used to sponsor British immigrants to Australia, mainly parishes' contributions and the Poor Law Union.⁵² In general, different charities and societies provided help or assisted British migrants not only to Australia and New Zealand but to Canada and the United States as well.⁵³

⁴⁷ McLean, *Why Australia Prospered*, 26.

⁴⁸ Gary R. Hawke, *The Making of New Zealand: An Economic History* (CUP Archive, 1985), 12. See also Statistics New Zealand, "New Zealand's International Migration Statistics: 1860–1921," *International Travel and Migration Articles* (Wellington, N.Z.: Statistics New Zealand, 2010).

⁴⁹ Statistics New Zealand, *New Zealand's International Migration Statistics: 1860–1921*, 6.

⁵⁰ See 3.4 for a detailed explanation of immigration to Western Canada.

⁵¹ Argentina. Ministry of Agriculture. Immigration Department, *The Immigration Offices and Statistics from 1857 to 1903*, 24–25.

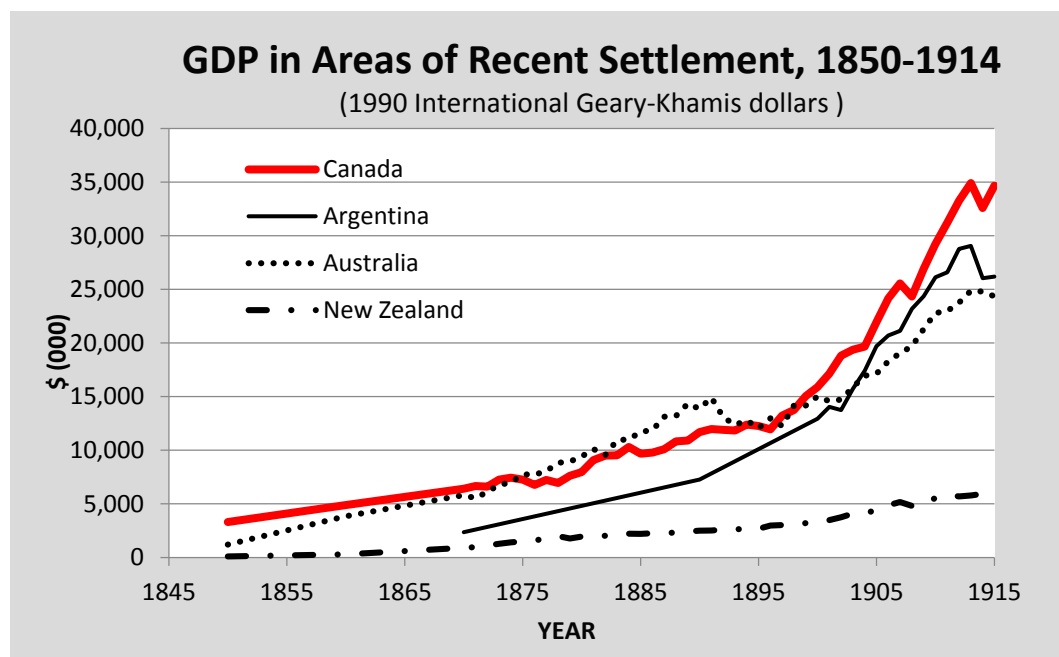
⁵² Haines and Shlomowitz, "Nineteenth Century Government-Assisted and Total Immigration from the United Kingdom to Australia," 56.

⁵³ Stanley Johnson, *A History of Emigration from the United Kingdom to North America, 1763-1912*, *Studies in Economics and Political Science* (London: George Routledge and Sons, Limited, 1913), 68–100.

3.3.3 Measuring Growth

The age of mass migration, as Hatton and Williamson described it, contributed to the development of regions as immigration, urbanization and economic growth ran hand in hand.⁵⁴ The discussion on economic growth will help to understand similar or differential patterns among countries in comparison with Canada. GDP data for the period 1850-1870 is scattered for all the countries. Maddison's figures, widely used, estimate data for ten years intervals.⁵⁵ For Argentina, his estimates are from 1870, 1890 and 1900. Like population and immigration data, GDP figures for all the countries under evaluation must be critically assessed and used with caution. Figure 3-6 shows that even though Argentina's GDP was smaller than that of Canada and Australia until 1900,

Figure 3-6 GDP in Countries of Recent Settlement.



Sources: Maddison, *The World Economy*, 184, 194.

it followed a convergence trend toward both countries. By 1900, the three countries converged. From 1896 until World War I Australia, Argentina and Canada experienced an important growth rate. For periods, Argentina converged with Canada, especially after the 1890s. Australia performed very well until the 1890 and then slowed down its

⁵⁴ Hatton and Williamson, *The Age of Mass Migration*.

⁵⁵ His figures for the Western Off-shoots start in 1500 and at 100 years interval until 1820 and then 10 years interval until 1870. See Maddison, *The World Economy*, 184, 194.

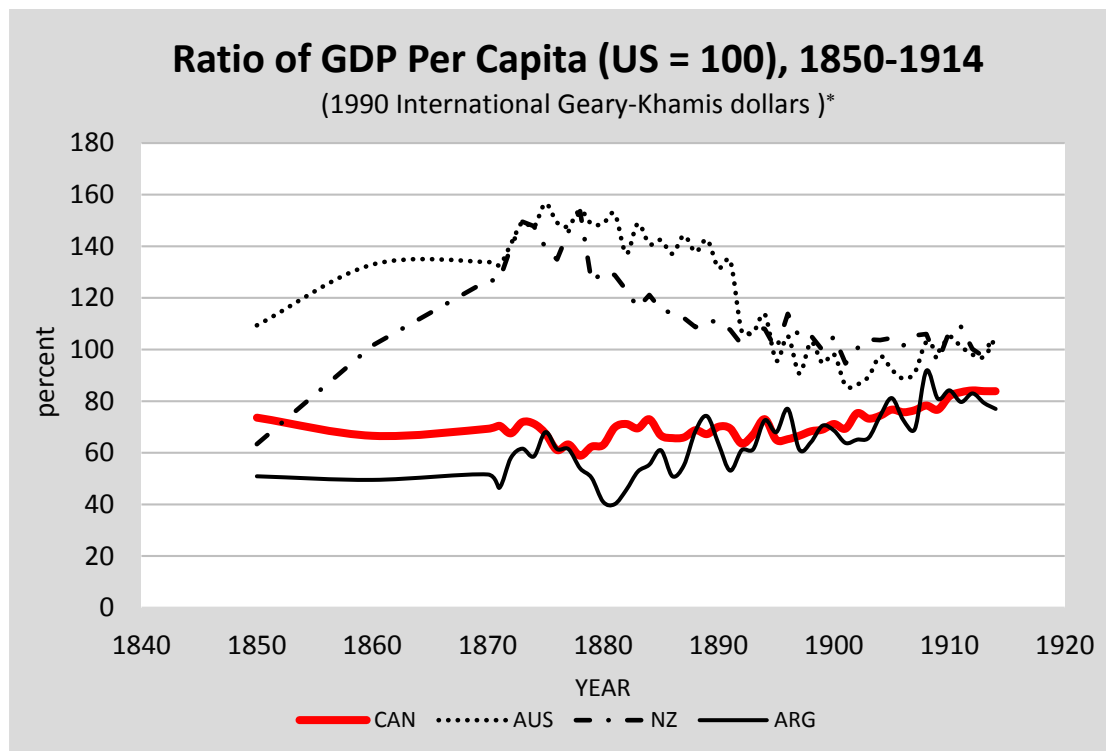
growth. In 1890, it experienced a negative trend to recover in 1897 and experience less growth compared to Canada and Argentina until 1914. In the case of New Zealand, its growth rate was smaller than Canada, Australia and Argentina as its economy was smaller as well. However, it maintained a steady growth and in appearance, New Zealand was not affected by the international crises as the other three countries were, especially by the turn of the century. What these countries show is the monumental growth rate they all experienced from 1850 to 1914. Australia experienced a 417 percent growth, New Zealand 590 percent, Canada and the United States more modest indeed, but important nevertheless, 250 and 270 percent respectively while Argentina had 375 percent growth during the period.⁵⁶

Undoubtedly, GDP evaluation gives a glimpse of economic growth and estimate the importance of these countries as producers of staples for the international market. If the observation is on their GDP per capita in comparison with that of the United States, a reference country to estimate productivity and industrialization, data are more significant (Figure 3-7). Australia and New Zealand outperformed the United States but decreased importantly in the 1890s. Canada and Argentina, differently, experienced a smooth improvement during the period to reach 80 percent of the American productivity per capita by 1914. Two important observations: Worsening economic conditions in Australasia reflected the poor performance of Australia and New Zealand after 1890; nevertheless, their GDP per capita remained similar to that of the United States. On the other hand, Canada and Argentina's initial differential GDP per capita might respond to the procedure of gathering data as Bulmer-Thomas explains, where incidentally data from Argentina were extracted to make this graph.⁵⁷ Importantly, Bulmer-Thomas' sources to build the time series coincide after 1900 with that provided by Maddison. The comparisons showed in this section are a guide to understand Canada's performance in context with countries that also relied on the export of natural resources products.

⁵⁶ See Maddison, *The World Economy*, 184, 194.

⁵⁷ See Bulmer-Thomas, *The Economic History of Latin America since Independence*, 494–497.

Figure 3-7 GDP per capita of countries of recent settlement compared to the United States.



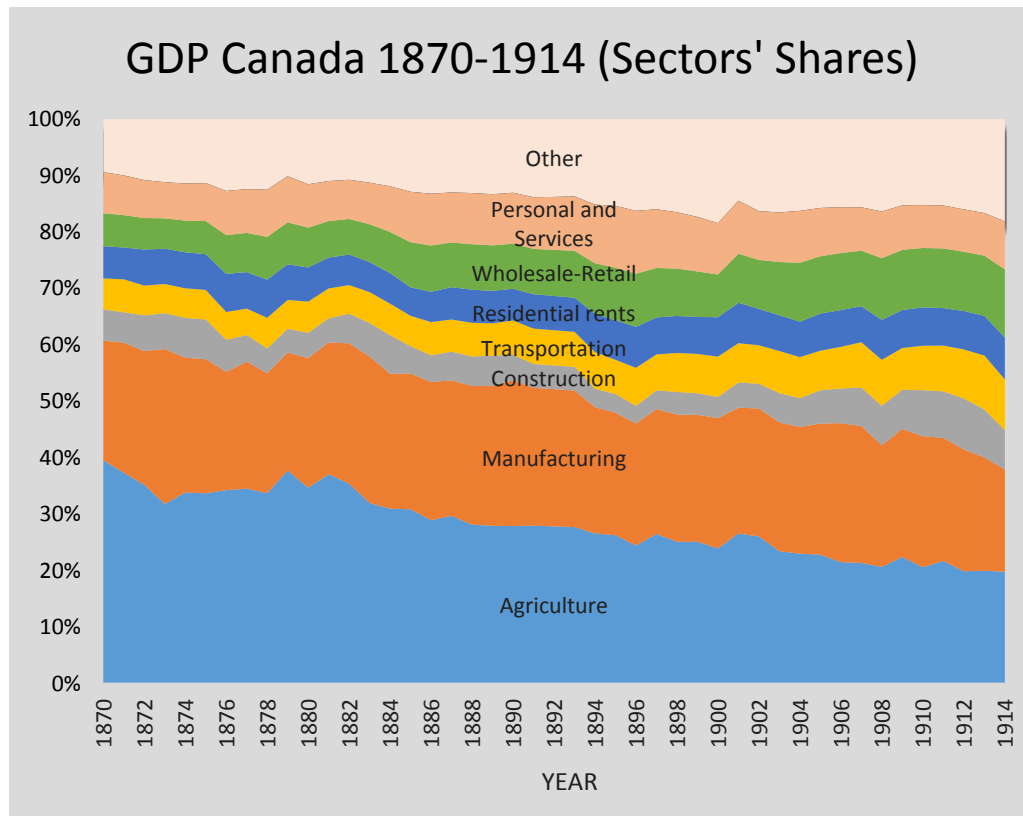
Sources: Maddison, *The World Economy*, 184, 194. *For Argentina, data are derived from Bulmer-Thomas, V. *The Economic History of Latin America*, 491-492. The straight lines for the period 1850-1870 result because data are computed every ten years.

3.3.4 The Canadian Economy by Sectors

During the second half of the nineteenth century staples economies performed in similar terms. Land abundant, labour scarce countries received an important influx of European immigrants and expanded their frontiers of settlement further. How did the Canadian economy react to those important structural transformations? Figure 3-8 shows the share of the most important sectors from 1870 to 1914 and the significant economic transformation that was taking place in Canada prior to World War I. In 1870, Canada was largely a rural country (Figure 3-9). By 1914, however, the country changed its sectors' composition, which suggests some signs of modernization and transformation. While in 1870 agriculture comprised 40 percent of the production's share, by 1914 it decreased to 20 percent. The country did not become more industrialized—manufacturing maintained a 20 percent share—but other sectors that reflected the change of the country's economic composition demonstrated strong signs of urbanization and modernization. Wholesale and retail, transportation, financial and personal services and banking increased the sector's share in the period. Under the item "Other,"

data include forestry, hunting and trapping, fisheries, mining, electricity, communications, education and different government administrations. Although a small share compared individually with the rest of the sectors, there is an important component of natural resources exploitation included in that group. Davis and Gallman, on the contrary,

Figure 3-8 GDP in Canada by Sectors' Shares, 1870-1914.



Source: Data from Urquhart, M. C. *Gross National Product, Canada, 1870-1926 the Derivation of Estimates*. Kingston [Ont.]: McGill-Queen's University Press, 1993, 11-15. Wholesale and Personal and Services records are from decennial censuses. For the purpose of the graphic, data were interpolated.

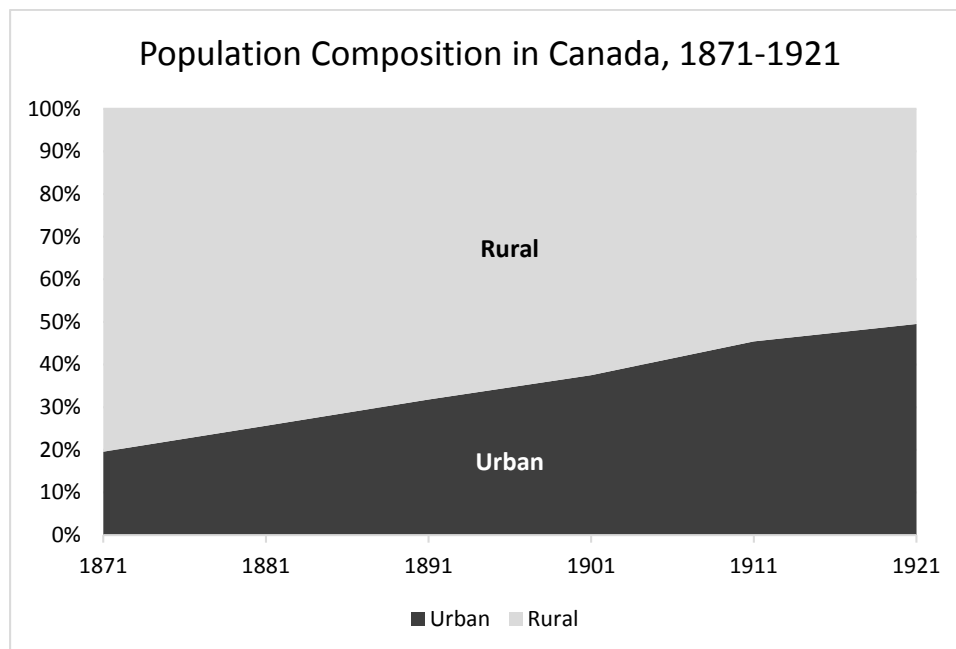
bring a more optimistic view of Canada's industrialization as they analyze it in terms of primary, secondary and tertiary economy. They include "manufactured gas, construction, transportation, electric power and communications" under the "manufacturing" sector and in so doing, the sector shows an important increase during the period 1870-1914.⁵⁸ Our graphic evaluates "manufacturing" alone and include the other sectors—although with a small share—under the category "Other". In this case, "manufacturing" did not show any change during the period under evaluation. Of course, as

⁵⁸ Lance Edwin Davis and Robert E Gallman, *Evolving Financial Markets and International Capital Flows: Britain, the Americas, and Australia, 1865-1914* (Cambridge, UK: Cambridge University Press, 2001), 352-354.

M. C. Urquhart describes it, the term “manufacturing” was very flexible as trades like blacksmiths, for instance, that were included as “manufacturing” at the initial years became part of “services” when the trade evolved and the sectors’ composition changed to a more mature economy. Similarly, other trades like tailors or dressmakers switched from small manufactures to bigger traders.⁵⁹

The composition of the Canadian economy during the period suggests the observations posited by R. T. Naylor in 2.3.5 . While the staple economy did not transfer a substantial share to the manufacturing sector, it did in fact energize the sectors linked to natural resources production and those sectors related to them: transportation, banking and wholesale as Figure 3-8 showed. What is clear is that Canada experienced an important change in the composition of its economy. Whether the staple economy was in part responsible for this change is a matter of discussion, but it is important to understand the process of settlement and immigration as key components in that transformation. New towns and villages that emerged alongside the expansion of railroads became part of a national network of business and communities that linked isolated

Figure 3-9 Population Composition in Canada, 1871-1921.



Source: *Historical Statistics of Canada*. Section A: Population and Migration, Table A67-69, Population, rural and urban, census dates, 1871 to 1976, http://www.statcan.gc.ca/access_acces/archive.action?l=eng&loc=A67_69-eng.csv

⁵⁹ M. C. Urquhart, “New Estimates of Gross National Product, Canada, 1870-1926: Some Implications for Canadian Development,” in *Long-Term Factors in American Economic Growth* (Chicago: University of Chicago Press, 1986), 43–45, <http://www.nber.org/chapters/c9678.pdf>.

areas with the national and international economy. The sectors' share increase in whole-sale, retail, construction and banking (under Personal and Services) illustrates the elements of the country's changing urban-rural composition.

In 1871, less than 20 percent of the population lived in towns. By 1921, the year of the Sixth Census, half of the population lived in towns and cities as Figure 3-9 shows. However, this pattern did not follow the same characteristic in all the country. While in Ontario and Quebec the change was noticeable, in the Prairies rural communities were the rule. In 1901, 81 percent of the Saskatchewan population lived in rural areas; in Alberta and Manitoba, 72 percent. By the following census of 1911, Manitoba resembled with the most developed provinces of Central Canada, Ontario and Quebec, while Saskatchewan and Alberta's population remained fundamentally rural (See Table 3-1).

Table 3-1 Population Composition in Canada and Selected Provinces, 1911

	RURAL	URBAN	RURAL %	URBAN %
CANADA	3,924,394	3,280,444	54	46
Alberta	232,726	141,937	62	38
Manitoba	255,249	200,365	56	44
Ontario	1,194,785	1,328,489	47	53
Quebec	1,032,618	970,094	52	48
Saskatchewan	361,067	131,365	73	27

Source: Canada. Census and Statistics Office, *Fifth Census of Canada 1911*, vol. I, V vols. (Ottawa: C. H. Parmelee, 1912), 511.

The expansion of the frontier of settlement was a key component in the economic transformation experienced in Canada during the period. Incorporated cities in the provinces remained the same in the census of 1901 and 1911 respectively, but rural towns and villages, especially in Saskatchewan mushroomed. In the Census of 1901 and 1911, the provinces of Alberta and Saskatchewan had six and four incorporated cities respectively and Manitoba, four. The number of towns increased from 15 to 27 in Alberta, 16 to 50 in Saskatchewan and in Manitoba, they remained almost the same, from 22 to 24. The great difference appeared in the number of small rural villages spread all over the Prairies; Alberta grew from 12 to 82, Saskatchewan from 9 to 195

and Manitoba from 17 to 21 villages.⁶⁰ What these figures show is that Manitoba practically did not experience substantial changes in its urban component compared to the nineteenth century; its composition reflected the trend of urbanization experienced in Ontario and Quebec. In other words, Manitoba had already developed a sufficient number of towns to service its rural population

The new provinces of Alberta and Saskatchewan, however, show the dynamic of settlement at the turn of the century and the direction and establishment of new communities. Yet small but important nevertheless, they became the links that energized already established cities that consolidated their importance as regional hubs like Calgary, Edmonton and Lethbridge in Alberta and Regina, Saskatoon, Moosejaw and Prince Albert in Saskatchewan. These new areas became a magnet for new immigrants during the following years.

3.4 Canadian Immigration and Settlement: Further Discussion

Although section 3.3 analyzed in general immigration figures by comparing Canada with other countries of recent settlement, it did not discuss in details the pattern of immigration during the period, especially migration and immigration to Western Canada. This section aims to incorporate and discuss Canadian census figures with more details in order to obtain a finer picture of the period.

The Dominion Land Act of 1872 and the subsequent modifications allowed the Canadian government to initiate the colonization of the West after the territory was surveyed avoiding the pressures that the land rush put in other countries.⁶¹ Certainly, the orderly division of the territory was not enough to attract European immigrants to settle *en-masse* as was happening in the United States in similar period. The rate of settlement in Western Canada was far behind official expectations. In 1890, the government still saw with confidence the possibility of settling the Prairies even though the figures demonstrated that that enterprise was not happening as planned. By 1890, a great portion of the territory had already been opened for settlement and surveys were almost completed and had reached the Rocky Mountains. “At the rate of five souls to a homestead of 160 acres,” said the optimistic statistical report of 1890, “these lands

⁶⁰ Canada. Census and Statistics Office, *Fifth Census of Canada 1911*, vol. I (Ottawa: C. H. Parmelee, 1912), 535–540, 549–554.

⁶¹ Section 4.2 will present the different processes and outcomes in different countries.

would sustain an agricultural population of 2,254,505.”⁶² The census of 1901, however, showed that the potential for settlement in those terms was delayed; Manitoba and the North West Territories, including the area farther north, had less than 500,000 inhabitants. The situation indeed changed considerably the following decade. In 1911, Manitoba, the Territories and the new provinces of Alberta and Saskatchewan contained 1,350,000 inhabitants; although more than double from the previous census, it was far from the more than two millions that authorities expected in 1890.⁶³

3.4.1 Immigration and Settlement: A Reappraisal

Canadian land policies aimed to increase immigration by offering a free quarter section homestead of 160 acres to potential settlers.⁶⁴ Institutional analyses have highlighted Canadian land policies because they encouraged immigration and settlement based on smallholdings.⁶⁵ How did they measure the effectiveness of those policies? Is it because of the well-developed system of dividing the land? Or is it because it encouraged private property in small plots? It is important to explain this argument further because the quality of institutions determines, according to NIE, the rate of growth and development. Since its enactment in 1872, the Dominion Land Act had several amendments in order to accommodate diverse interests and encourage settlement. From 1874 to 1900, a yearly average of 3,000 homestead entries were filled in different Land Offices in the Western prairies, with 1882 the peak year with 7,383 entries, mostly due to the wave of land speculation in Manitoba.⁶⁶ From 1900 to 1914, the numbers skyrocketed to a yearly average of 30,000.⁶⁷ The government relied on a variety of ways to encourage immigration and settlement with diverse results in different periods. Immigrations agents in Europe and later in the United States initiated campaigns to promote Western Canada as a place of immigration and settlement. In 1873, the cost of bringing

⁶² Canada. Department of Agriculture, *The Statistical Year-Book of Canada for 1890* (Ottawa: Brown Chamberlin, 1891), 498.

⁶³ Comparison between censuses in Canada. Census and Statistics Office, *Fifth Census of Canada 1911*, I:v.

⁶⁴ There was an initial fee of \$10 for administrative purpose.

⁶⁵ Stanley L. Engerman and Kenneth L. Sokoloff, eds., *Economic Development in the Americas since 1500: Endowments and Institutions* (New York: Cambridge University Press, 2012), 224–226, 236. This is not their original study on land allocation in North America, but, yet, a more recent publication.

⁶⁶ Lambrecht, *The Administration of Dominion Land, 1870-1930*, 20.

⁶⁷ See data in Appendix, Table A-14.

immigrants to Canada was about \$13 per capita. In 1874, the Dominion and the Provinces had spent \$500,000 to attract about 50,000 immigrants.⁶⁸ Bloc migration appeared in the first years of colonization and settlement to be the most feasible way to bring in immigrants. Independent agents in the United States and Europe publicized Western Canada as a great destination for farming and immigration by distributing pamphlets,

Figure 3-10 Immigration Advertisement.



Source: Free farms for the million, ca. 1893
http://www.collectionscanada.gc.ca/canadian-west/052920/05292052_e.html

books and other publications. With the help of the Dominion, agents distributed more than 800,000 pieces of information to potential settlers.⁶⁹ Posters similar to the one showed in Figure 3-10 were printed in almost all the European languages. Frequently, immigration agents were also able to obtain different blocs of land to reserve for future settlements.

From 1868 to 1914, the government spent \$25 million, or an average of \$543,000 a year to promote immigration. The relationship between government expenditure and immigration goals shows, however, a rather uneven result. The scatter diagram that plots the number of immigrants and government ex-

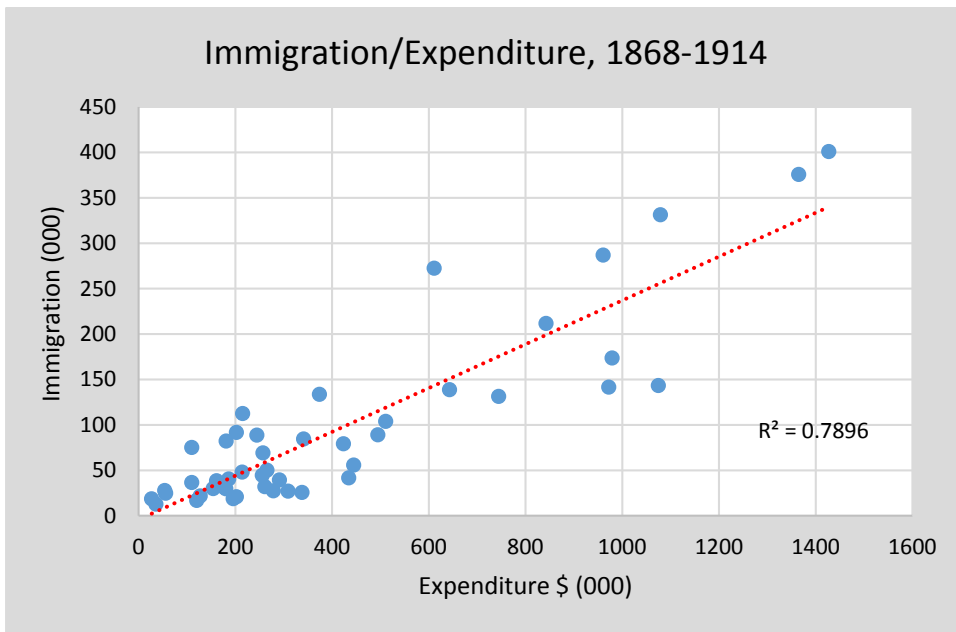
penditure in Figure 3-11 shows an important positive trend with a coefficient of correlation of 0.89 and a R^2 of 0.79. The problem with this graphic is that the period shows great volatility that reflected different institutional changes and internal and external conditions.⁷⁰ Figure 3-12 shows a time series plot of immigrants to Canada and government expenditures for the period 1868-1914. The main destination of expenses was to maintain the different offices overseas, but also a good portion was spent in running

⁶⁸ Canada. Parliament. House of Commons. Select Committee on Immigration and Colonization, *First Report of the Select Committee on Immigration and Colonization: Printed by Order of Parliament* (Ottawa: MacLean, Roger & Company, 1875), 2.

⁶⁹ *Ibid.*, 7.

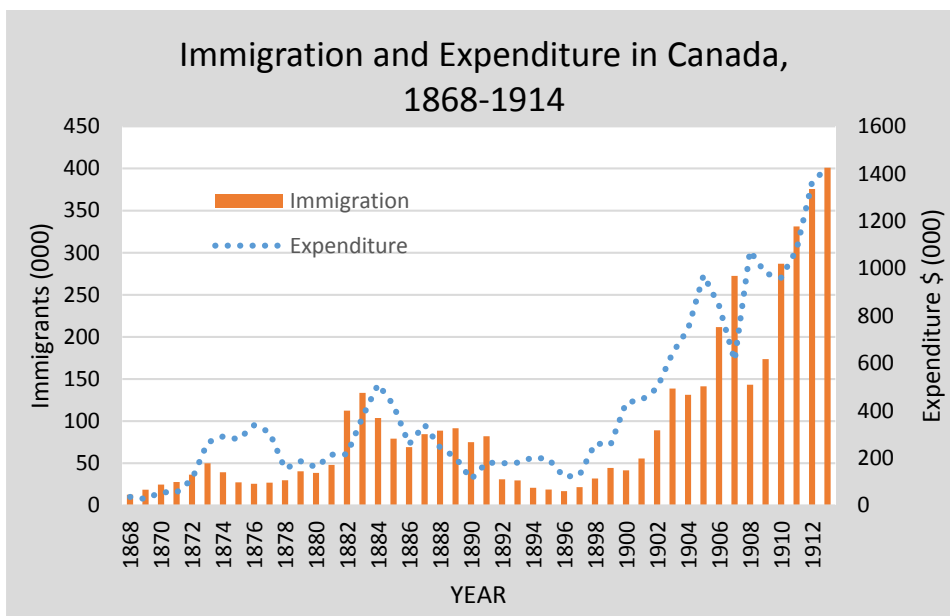
⁷⁰ The figures for immigration expenditure include the cost of quarantine once immigrants arrived.

Figure 3-11 Immigration and Government Expenditure, 1868-1914.



Source: The Canada Year Book 1916-17, 117 and Statistics Canada, Immigration (Series A350-416)

Figure 3-12 Expenditure and Immigration, 1868-1914.



Source: The Canada Year Book 1916-17, 117 and Statistics Canada, Immigration (Series A350-416)

hospitals in the ports of entry where immigrants stayed very often for quarantine. In Figure 3-12, quarantine expenditure was disaggregated from the total expenses. The graphic shows that for some moments, expenditure and immigration follow a positive trend and for other periods, that relationship diverges. One possible explanation is the different institutional changes that characterized the period and influenced the way the

Department of Interior responded to immigration policies. From Confederation in 1867 until 1874, as the graphic shows, immigration responded to Government expenditures. The advertisement and publication of pamphlets and other documents boosted immigration as the First Report on Immigration of 1875 demonstrated. In 1873, however, Prime Minister John A. Macdonald resigned because of the aftermath of the so-called Pacific Scandal.⁷¹ Macdonald and the Conservative Party were accused of receiving money for the ongoing political election from one of the investors involved in the negotiations to construct the intercontinental railroad that would connect the country from coast to coast. This set back was very important to the development of Western Canada as Macdonald's successor, Alexander Mackenzie and the Liberal Party during the world depression of the 1870s could not raise capital and find investors to expand the Western railroad.⁷² Despite the increasing of government expenditures that continued during the Mackenzie administration, they were unable to boost the numbers of immigrants.

In 1878, the Conservatives won the election and Macdonald was again Prime Minister. The National Policy, with the promises of high tariffs to protect the infant Canadian industry and the plan to continue the delayed project of railroad construction to the west, boosted immigration and government expenditures as Figure 3-12 shows; although, the graphic suggests that immigrants arrived before the government increased the spending.⁷³ The period from 1879 until 1883 reflects the wave of land speculation in Manitoba and to some extent to the rest of Western Canada.⁷⁴ The arrival of the CPR in Winnipeg in 1881 allowed immigrants to travel from the east more rapidly without the necessity of embarking on long journeys through Chicago and the American terri-

⁷¹ A detailed explanation of the negotiations between investor Hugh Allan and the government in Otter, *The Philosophy of Railways*, 158–183 and J. K. Johnson and P. B. Waite, "Macdonald, Sir John Alexander," *Dictionary of Canadian Biography Online*, XII (University of Toronto/Université Laval, 1990), http://www.biographi.ca/en/bio/macdonald_john_alexander_12E.html.

⁷² William Thomas Easterbrook, *Canadian Economic History* (Toronto: University of Toronto Press, 1988), 415–418.

⁷³ The period also coincided with an economic recovery from the international depression of the early 1870s that affected parts of Europe and North America. See Robert Margo, "The Labor Force in the Nineteenth Century," in Stanley L. Engerman and Robert E. Gallman, *The Cambridge Economic History of the United States*, vol. II (Massachusetts: Cambridge University Press, 2000), 222–223.

⁷⁴ A contemporary observer noticed that blocs of city lots changed hands several times in the same day expanding the wave of speculation further to the countryside. See Charles Napier Bell, "The Great Winnipeg Boom," *Manitoba History*, no. 53 (October 2006): 32–37.

tory. One possible explanation of that sustained government expenditure after immigrants arrived is that during this period, Winnipeg received an unusual number of immigrants who faced difficult moments trying to find accommodation in a city in its making as hotels and renting houses, even rooms, were all booked during the fever for city lots. Newspapers detailed the problems in finding accommodation and the government as a provisional measure lay out hundreds of tents and provided basic accommodation for newcomers.⁷⁵ Government assistance also included social support, translators and immigration officials. That might explain the raise in expenditures after the arrival of immigrants as Figure 3-12 shows.

In 1885, the North-West resistance led by Louis Riel in present day Saskatchewan created concern among both investors and immigrants. The report to the Board of Directors of the Bank of Montreal delivered in the General Annual Meeting of 1885 cautiously stated,

The insurrection in the Northwest is another important feature in the consideration, and although there is every reason to hope that it has received its death-blow, still I suppose it will hardly be questioned that the tendency must be to postpone the settlement of the country from which so much we expected to build up the trade of the older provinces.⁷⁶

Coincidentally, government expenditure and immigration fell. Macdonald received the accolades for completing the railroad to British Columbia but could not boost immigration and settlement in the way he had promised in the electoral campaign in 1878. This uneven, yet negative trend continued until 1896 when Wilfred Laurier and the Liberal Party won the election and finished a period of political uncertainties after Macdonald's death in 1891.⁷⁷ Laurier appointed Clifford Sifton as Minister of the Interior who initiated an aggressive campaign to attract immigrants from Europe, but especially from the United States. Sifton sent a number of immigration agents to the American West in order to encourage American farmers to move northbound to the Canadian Prairies but

⁷⁵ "The Demands for Tents," *Winnipeg Daily Sun*, December 30, 1882, 9.

⁷⁶ See: "Report of the Directors to the Shareholders at Their 67th Annual General Meeting" (Montreal: Bank of Montreal, June 1, 1885), 7–8.

⁷⁷ From 1891 until 1896, four Prime Ministers were elected marking an era of political uncertainties fueled by early deaths and accusations.

also to convince Canadian expatriates living in the United States to follow suit.⁷⁸ Sifton opened nine immigration agencies south of the border and by 1914, there were 21 agencies promoting the Western lands.⁷⁹ Moreover, to increase productivity, immigration agents instead of a salary received a commission for every immigrant arrived and settled in Western Canada.⁸⁰ Under Sifton, expenditures increased significantly reaching almost \$1,000,000 in 1905 when he resigned as Minister of the Interior. Government efforts were not futile indeed. From 1896 to 1905, the number of immigrants increased to almost 700,000 leaving behind decades of failures. Government policies paved the way to the following period of mass migration; from 1906 to 1914, more than two million immigrants arrived in Canada.⁸¹

Three periods, 1870, 1879 and 1896, marked important institutional changes that transformed Western Canada. The first period started after Confederation and showed the confidence in the newly elected government. The formation of the Province of Manitoba and the expectations generated by the survey of the territory and the possibility to obtain land fueled an ephemeral wave of immigrants. The second period initiated an era of marked optimism in 1879 with the implementation of the National Policy and culminated with the arrival of the CPR in Vancouver in 1885. The North-West Rebellion in 1885 and political uncertainties generated by the ongoing world depression delayed the expected arrival of immigrants. The third period started after 1896 and indicated the start of the economic splendour of the Prairies marked by the Canadian wheat boom the following decade. Institutional explanations are consistent with the flow of immigrants in Canada; however, other countries experienced similar trends during the period under evaluation and the timing of government intervention from these

⁷⁸ William Marr and Michael Percy, "The Government and the Rate of Canadian Prairie Settlement," *The Canadian Journal of Economics / Revue Canadienne d'Economie* 11, no. 4 (November 1, 1978): 760.

⁷⁹ James B. Hedges, *Building the Canadian West: The Land and Colonization Policies of the Canadian Pacific Railway* (New York: The Macmillan Company, 1939), 133.

⁸⁰ Harold Troper has meticulously described Sifton's mechanisms to attract American settlers into the Prairies and the immigration agents' roles in the process. See Harold Martin Troper, *Only Farmers Need Apply: Official Canadian Government Encouragement of Immigration from the United States, 1896-1911* (Toronto: Griffin House, 1972). A full length monograph of Sifton's biography in David J. Hall, *Clifford Sifton: The Young Napoleon* (Vancouver: University of British Columbia Press, 1981). A shorter version, in David J. Hall, "Sifton, Sir Clifford," *Dictionary of Canadian Biography* (University of Toronto/Université Laval, 2005), http://www.biographi.ca/en/bio/sifton_clifford_15E.html.

⁸¹ See data in Appendix, Table A-7.

countries differed as 3.3.2 showed. It is difficult to provide a clear answer to the causality of the process. Individual countries' assessments show an indication of government influence, but the answers are not clear from analyzing the process as a whole. The question comes because the quality of data available makes the explanation more difficult.⁸² Nevertheless, in the case of Canada, as this chapter suggests, government expenditure, without taking into account quarantine expenditure as Figure 3-11 and Figure 3-12 showed, might have provided a strong influence in the arrival of immigrants to Canada.

3.4.2 Census and Data Quality

Unevenly distributed over the period, immigrants arrived in Canada but the final destination was not very clear. Some figures remain certain as immigrants arrived in the country sponsored by agents and recruiters and established themselves in the Prairies following a pattern of what was called bloc-migration. For the rest, however, the final destination remains unclear. From 1850 until 1914, almost 5,000,000 immigrants arrived in Canada (Table A-7, Appendix A). As Table A-1 shows (See Appendix A), a small number settled in Manitoba and the NWT; the Manitoba provincial census of 1870 shows very few foreign-born individuals residing in the province. By 1881, however, 44 percent of the province's population was foreign born, especially in Great Britain. The numbers declined slightly in the following censuses, but the figures remain strong at almost 30 percent in each of the following censuses. In contrast, the Canadian born population who comprised 30 percent of the province's population in 1881 increased to 40 percent in the provincial Census of 1886-87 and declined slightly by the end of the century. In addition, after 1891, American immigrants increased, marking the trend that followed the settlement of the Prairies after 1900.⁸³ Nevertheless, it might be very difficult to prove that "nearly 600,000 immigrants from the United States moved into Saskatchewan and Alberta," as Karel Bicha estimated.⁸⁴ The Census of

⁸² The quality of government data was a controversial argument in the past and it continues to be in the present. Econometric estimations of the rate of settlement and immigration provide only an approach, another interpretation of an unsolved discussion. Harold Troper has also consistently pointed out the reliability and quality of Canadian government immigration data. See Troper, *Only Farmers Need Apply*, 2.

⁸³ Karel Denis Bicha, "The Plains Farmer and the Prairie Province Frontier, 1897-1914.," *The Journal of Economic History* 25, no. 2 (June 1, 1965): 263.

⁸⁴ *Ibid.*, 263.

1911 showed that there were slightly more than 300,000 Americans living in Canada; yet, the new provinces of Alberta and Saskatchewan attracted half of them (See Table A-5 in Appendix A). As 4.4 will show, settlers' mobility during the period was very high. The majority of American settlers that attempted to settle in Alberta and Saskatchewan, almost 600,000 as Bicha estimates from the Reports of the Department of the Interior, ended up returning to the United States. Census figures showed that only 200,000 remained in Canada by 1916.⁸⁵

The North West Territories (NWT) shows as well a late start (See Table A-2 in Appendix A). Figures from the period before 1881 were not available; the following censuses make a broad guesstimate according to the aboriginal population that visited the HBC posts. Census figures from 1881 show that only 5 percent were foreigners and less than 3 percent moved from the east. While the land rush of the 1880s crowded Manitoba and specially its capital city, Winnipeg, the NWT received as well an important internal migration from the east as census figures show. Almost 30 percent of the population in 1886 were Canadian born. Internal migration slightly decreased the following years but, still, by 1901, one fourth of the NWT population were internal migrants; immigrants comprised almost 40 percent of the population.

Ontario and Quebec were the destination for the majority of immigrants since early times; however, Quebec after Confederation did not show signs of being a magnet for new immigrants. In 1871, 6.5 percent of the population were foreign born; the following censuses decreased to about 5.5 percent and internal migration into Quebec was almost negligible. In the case of Ontario, in 1871, its foreign-born population was 27 percent but the following censuses decreased significantly. The census of 1901 showed that Ontario had only 15 percent of its population foreign born. Western Canada acted as a pull factor for internal migration, yet the United States appeared more successful to attract Canadian settlers into its expanding frontier (See Table A-6 in Appendix A).

3.4.3 The Canadian Exodus

In 1860, more than 400,000 Canadians were living in the United States, mainly in Massachusetts, Maine and the East coast. An important number, however, were concentrated around the Great Lakes; about 150,000 Canadians lived in Michigan, Illinois and Wisconsin (See Table A-6 in Appendix A). The American Census of 1870 shows that during the ten years period between censuses, the Canadian population living south

⁸⁵ Ibid., 268.

of the border had increased by 80,000 people. The Great Lakes region had also slightly increased with respect to the previous census. The 1880s was a period of important changes in Canada. The new government of John A. Macdonald had created great expectations when he outlined the National Policy in 1879. Internal and external migration increased importantly in Western Canada as the census shows but the enthusiasm was offset by the numbers of Canadians living in the United States. In 1880, more than 700,000 Canadians were residing south of the 49th parallel. Michigan almost doubled the number of Canadian living there compared with the figures from the previous census. Other states, especially those new Western states that opened for settlement more recently showed the most important increase. Minnesota almost doubled its Canadian population; Dakota went from 1,200 in 1870 to 10,000 in 1880. Even the farther south Nebraska showed an important increase of Canadians; the figures increased from 1,600 in 1870 to more than 8,000 in 1880. Other states also showed a significant increase in Canadian population.

The following American censuses of 1890 and 1900 continued marking the Canadian exodus to the United States. In 1900, Canada had a population of more than five millions but there were more than one million Canadians living in the United States. The pattern of Canadian destination had changed slightly. Michigan, still one of Canadians' main destinations alongside Massachusetts, increased from 181,000 persons in 1890 to 184,000 in 1900, but an interesting observation is that states that run alongside the Western Canadian provinces, like Montana and North Dakota, increased considerably their Canadian population since the 1880 census. Montana increased from almost 2,500 in 1880 to 14,000 in 1900 and the Dakotas from 10,000 in 1880 to 35,000 in 1900, reaching 54,000 Canadians living in the state in the Census of 1910.⁸⁶ In 1900,

⁸⁶ There is a substantial difference in the data produced by Randy Widdis based on the manuscripts of the Censuses of the United States of 1900-1910 and the data this dissertation are analyzing based on a more updated dataset. Widdis acknowledges the great mobility of Anglo-Canadians in the United States, principally in the Dakotas but for different reasons. He states, "The mobility of Anglo-Canadians becomes even more evident upon examination of the published and manuscript censuses. While Grand Forks County's population increased by 14 percent between 1900 and 1910, its Canadian-born population, including both anglophone and francophone and those born in Newfoundland, decreased by over 34 percent during that same decade. Canadians were leaving not just Grand Forks but the whole state over the 1900-1910 period." See Randy William Widdis, *With Scarcely a Ripple: Anglo-Canadian Migration into the United States and Western Canada, 1880-1920* (Montreal: McGill-Queen's Press - MQUP, 1998), 289. Data used in this dissertation come from Michael R. Haines, "Historical, Demographic, Economic, and Social Data: The United States, 1790-2002" (Inter-university Consortium for Political and Social Research (ICPSR) [distributor], 2010), <http://dx.doi.org/10.3886/ICPSR02896.v3>. These updated data show that the Dakotas were not indeed losing their Anglo-Canadian population; on the contrary, it increased significantly as Table A-6 shows.

almost 400,000 Canadians lived in states that had opened for settlement in the last thirty years. If one goes further to the American Census of 1910, which was one of the peak years of Canadian immigration arrivals and the peak of the wheat boom and Western settlement, figures are more surprising. There were 2,400,000 Canadians living in the United States in total and states that competed with Western Canada immigration in labour and farming almost doubled their Canadian population compared with the previous census (See Table A-6 in Appendix A).

Certainly, these figures are gross estimates based upon census data. There are not detailed demographic evaluations; for instance, estimates of rate of mortality and internal migrations are not included. This was a period of great mobility, especially in the frontier and sometimes census data and statistics did not coincide. Randy Widdis observes that Canadians that applied for a homestead in the United States were also required to sign their intentions of becoming American citizens. According to Widdis' data, the majority did so and became American citizens but did not surrender their Canadian nationality so if they moved back to Canada they were again Canadians.⁸⁷ Furthermore, Karel Bicha suggests that the immigration statistics were estimated in twenty percent more than the actual figures, as officials were certain that a substantial number of immigrants into Canada were "birds of passage" who first tried this country and then moved to the United States or elsewhere.⁸⁸ The difference is more than that. When one checks the immigration figures provided by the *Statistics Year Book* and compares these figures with those of censuses data the difference is even bigger. Taking the years of census data, from 1871 to 1901, Canada, according to the *Year Book*, received 1,600,000 immigrants but when compared with Population by Place of Birth as reported in the different censuses, the numbers are far below those provided in the Yearbooks. The numbers in the Census of 1901 taking into account Ontario, Quebec and the Prairie Provinces or territories, the more important destinations for immigrants, show that 670,000 persons answered that they were born outside of Canada. Could the one million immigrants missing from the censuses be those who lived in the United States in 1900

⁸⁷ Widdis, *With Scarcely a Ripple*, 288. This observation makes it difficult to obtain rigorous data of Canadian living in the United States during the period.

⁸⁸ Karel Denis Bicha, "The American Farmer and the Canadian West, 1896-1914: A Revised View," *Agricultural History* 38, no. 1 (January 1, 1964): 44.

and were counted as Canadians by American census officials?⁸⁹ The question is difficult to answer. Figures of foreign-born population in the census years for each of the provinces do not mean that these figures correspond to immigrants that went to the Western provinces directly from Europe. A great number perhaps did go directly from Europe but others might have been counted residing in other places in previous censuses.

Marvin McNinnis has made a rigorous evaluation of nineteenth century census data, especially immigration, natural increase, rates of mortality and fertility.⁹⁰ McNinnis found that census data were too precarious and incomplete to make a clear assumption of demographic patterns. His study of population growth and immigration in Canada during the nineteenth century is, nevertheless, very conjectural in scope.⁹¹ Certainly, he acknowledges that. In a Malthusian sense, a high fertility rate and low land availability in the older provinces provoked, according to McNinnis' estimates, higher rates of migration of Canadians to the United States where land was already open for settlement. His analysis, however, does not take into account the unreported mobility between the Canadian and American borders in the long Western frontier. Moreover, he, and other scholars for that matter, critically assess immigration data reported by government officials as optimistic, as they did not disclose clearly those immigrants that arrived in Canada with the idea of settling in the United States. Nevertheless, arrival figures reported by Canadian officers at point of entries, principally Quebec, counted those immigrants that showed interest on settling in Canada and those who continued the trip to

⁸⁹ See Appendix A for census data. Certainly some died, others might have returned to Europe, but still the figures estimated in several works do not coincide.

⁹⁰ Marvin McNinnis, "The Population of Canada in the Nineteenth Century" in Michael R. Haines and Richard H. Steckel, eds., *A Population History of North America* (Cambridge, MA: Cambridge University Press, 2000), 371–432.

⁹¹ As this dissertation has stated in several parts, the lack of reliable records on immigration and migration makes statistics a blurred zone. Scholars attempted in different ways to address this problem by using different creative models. O. J. Firestone's data of 1958 has often been used to estimate net immigration to Canada. Firestone described that in his data "[t]he number of emigrants was estimated by subtracting from the sum of births and immigrants, the sum of deaths and annual population increase. The data are thus residual." The problem with this approach is that he estimated population growth from a linear interpolation obtained from data between censuses. Thus, he assumed that Canada's population grew at a steady rate every year! See O. J. Firestone, *Canada's Economic Development, 1867-1953: With Special Reference to Changes in the Country's National Product and National Wealth* (London: Bowes & Bowes, 1958), 240-47. See Firestone's data in Appendix Table A-8.

the United States.⁹² The figures reported in several annual series reflected that methodology. Return migrants, however, were not reported.⁹³ Following the trajectory of people across censuses could probably shed some lights on the estimates of immigrants' mobility as some scholarly projects across Canada attempt to do so.⁹⁴ Certainly, the scope of such endeavour is beyond the resources of any individual researcher.

3.4.4 Census, Statistics and Nation Building

In times of nation building, statistics and censuses were tools that enforced nationality, geographic control and citizenship. More than scientific understanding of society, numbers were political tools that helped to construct the state.⁹⁵ Census taking and mapping, says Curtis, attached individuals to the territory and tested the state's capacity to delineate boundaries and political administration.⁹⁶ Similarly, as Benedict Anderson states, "[T]he census filled in politically the formal topography of the map."⁹⁷ Both arguments are connecting ideas that will be discussed in next chapter. For now, one can claim then that in settler societies where immigration played a central role in the development of new territories, statistics and censuses subtly underlined the gov-

⁹² Report of the Minister of Agriculture in Canada. Parliament, *Sessional Papers of the Dominion of Canada : Volume 2, Fifth Session of the First Parliament, Session 1872* (Ottawa: I.B. Taylor, 1872), 18.

⁹³ Moreover, Randy Widdis argues that Anglo-Canadians living in the United States and Americans living in Canada shared similar cultural and linguistic background and these characteristics make the identification of national identities difficult as both adapted easily to the new environment. See Widdis, *With Scarcely a Ripple*.

⁹⁴ A group of scholars supported by corporations, universities, government and institutions started a project that tracks immigrants' mobility. The project started with a sample data from the Canadian census of 1891 in Ontario. See "People in Motion: Longitudinal Data from Historical Sources," accessed January 11, 2015, <http://people-in-motion.ca/>. Similarly funded, Dr. Peter Baskerville and a team of scholars at the University of Alberta are working on the settlement of the province tracking down homesteaders' mobility. See "The Last Best West: The Alberta Land Settlement Infrastructure Project (ALSIP)," *Canadian Institute for Research Computing in the Arts*, accessed September 20, 2014, <http://circa.ualberta.ca/circa-collaboratories/transforming-historical-data-collaboratory/>. Some of those investigations were recently published. See, Gordon Darroch, ed., *The Dawn of Canada's Century: Hidden Histories* (Montreal: McGill-Queen's Press - MQUP, 2014); Peter Baskerville and Kris Inwood, eds., *Lives in Transition: Longitudinal Analysis from Historical Sources* (Montreal: McGill-Queen's Press - MQUP, 2015).

⁹⁵ Curtis, *The Politics of Population*, 3–8.

⁹⁶ *Ibid.*, 26, 36.

⁹⁷ Benedict R. O'G Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, 2nd. rev. and extend (London ; New York: Verso, 1991), 174.

ernment political agenda to validate with scientific evaluations the progress of the country in question. Governments used numbers as political tools more than unbiased statistical estimates of the region or country in question. This is true in the case of Canada–United States border control.

In 1886, the recently published United States statistics reports were a topic of discussion among Canadian government officials and raised a heated debate at the time. A special report by John Lowe, the Canadian Secretary of Agriculture, addressed the country’s concern about the publicized “exodus” of Canadian to the United States.⁹⁸ The discussion originated because the Washington Bureau of Statistics unveiled the numbers of Canadians who had arrived in the United States in 1885. The argument stated that American officials counted as Canadian nationals those individuals who were, actually, “in transit” from Canadian territory toward the United States. The discussion was valid because it not only addressed methodological issues but because it also undermined Canadian political credibility. Canada accused the American government of making up statistics based on uncertain information. Regardless of methodology and reliability, the report showed that in fact border control and customs offices were not able to verify information thoroughly. The Canada-United States border was, as Bruno Ramirez quoted, “[A]n imaginary line”.⁹⁹

The majority of Canadians or other migrants leaving the country at that time crossed to the United States through two main locations: Sarnia, a small town on the southern coast opposite of Port Huron, Michigan through Windsor, Ontario, on the Canadian side close to Detroit.¹⁰⁰ Lowe’s report, however, did not take into account an important factor in the flow of people across borders; the 1,400 kilometres of boundaries shared by Canada and the United States in the Western territories. A lonely custom office in Pembina, North Dakota and Emerson in southern Manitoba controlled the flow of goods and persons across the border between Canada and the United States. About

⁹⁸ John Lowe, *Report on Alleged Exodus on the Western Frontier* (Ottawa: McLean, Rogers & Co., 1886).

⁹⁹ Bruno Ramirez, “Canada in the United States: Perspectives on Migration and Continental History,” *Journal of American Ethnic History* 20, no. 3 (April 1, 2001): 51.

¹⁰⁰ John J. Bukowczyk has called the Great Lakes region a “permeable border” as port control was almost non-existent and the flow of people and capital before World War I were unrestricted. See John J. Bukowczyk, *Permeable Border: The Great Lakes Basin as Transnational Region, 1650-1990* (Pittsburgh, PA: University of Pittsburgh Press, 2005).

thirty kilometres west, across the present town of Gretna, Manitoba, a small hamlet known as Smugglers' Point in North Dakota was used for settlers and traders as an unofficial crossing point to avoid the Customs House in Pembina. Although records are not precise about the establishment of a customs control, it appears that a Canadian Customs Preventive Station operated near Gretna by the 1880s.¹⁰¹ The rest of the long boundary line was scarcely protected by the North West Mounted Police (NWMP) but they did not exercise a border control per se.¹⁰²

It was not until the last decade of the nineteenth century that other important border towns increased its influence in the region and checked the flow of goods and persons. With the arrival of branch railroad lines connecting Canada with the United States, North Portal in the present province of Saskatchewan and Coutts in Alberta became important entry ports into Canada. In 1890, the village of Coutts in southern Alberta, close to Montana, opened a railroad station. In the town of Sweetgrass, on the American side, a customs house, among other public offices, served the community and added another port of control into Western Canada. In 1893, another Customs Preventive Station opened in North Portal, in the then District of Assiniboia.¹⁰³ From Gretna to North Portal, there is a distance of 385 kilometres while from North Portal to Coutts the distance is almost 700 kilometres of open Prairie. Images like the one in Figure 3-13 shows a common Western landscape during the period, long caravans of settlers moving freely both sides of the border through old trade trails without any official control. As a report of 1871 illustrated, "The number of these [immigrants] cannot be accurately

¹⁰¹ Francis Gerhard Enns, *Gretna, Window in the Northwest* (Gretna, Manitoba: D. W. Friesen & Sons Ltd, 1987), 1–4.

¹⁰² The NWMP's role was to control any potential Aboriginal unrest, the stealing of cattle and horses, and the smuggling of liquor from the United States into Canada. It was not until the First World that they exercised border control, mainly due to the possibilities of alien "enemies" entering Canada. See William Melville Baker, ed., *The Mounted Police and Prairie Society, 1873-1919* (Regina, SK: University of Regina Press, 1998).

¹⁰³ At the turn of the century, Coutts was known as the "Windsor (Ontario) of the West" because of the important flow of migrant-immigrants across the border. "History of Coutts Alberta Canada," 2014, http://www.couttsalberta.com/history_coutts.html; "Coutts' Saskatchewan Twin – Customs & Immigration Facilities at North Portal," *Galt Historic Railway Park*, November 5, 2014, <http://galtrailway.com/2014/11/05/coutts-saskatchewan-twin-customs-immigration-facilities-at-north-portal/>.

ascertained; and there are no means to obtain statistics of the movements of population which are in constant progress in both directions, at many points, on the long frontier between the Dominion and the United States.”¹⁰⁴ In the case of American statistics, port

Figure 3-13 Settlers from the United States crossing the western prairies, heading for the wheat fields.



Source: Aubrey Fullerton, “The Lure of the Better West,” *The Canadian Magazine*, December 1905, 131.

control’s agents did not meticulously report of migrants entering the United States from Canada and during several years, there were no control. American censuses figures of Canadian entering the United States, hence, were broad estimates.¹⁰⁵

This dissertation argues that statistics and censuses taken every ten or five years could hardly capture this persistent movement across the border and that flow ultimately defined the frontier in times of state building. Certainly, censuses aggregate data are not very useful to distinguish regional particularities such as the settlement of Western Canada.¹⁰⁶ Where did immigrants settle? When did they settle? Are

census data taken every ten years an effective way to understand immigration and settlement in the very dynamic period of the production of space? How did the persistent movement toward the uncontrolled borders affect the reliability of censuses figures? Lacking a clear answer from censuses, the literature on Western Canada settlement brings a variety of responses. Social scientists attempt to analyze the period based on neo-classical theories and relying heavily on regression models. The results differ substantially and the answers very often determine that wheat prices, falling transportation

¹⁰⁴ Report of the Minister of Agriculture in Canada. Parliament, *Sessional Papers of the Dominion of Canada*, 6.

¹⁰⁵ United States Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970* (Washington, D.C.: U.S. Department of Commerce, Bureau of the Census, 1975), 97–98.

¹⁰⁶ Moreover, official statistics on Canadian population growth were estimated by using a linear interpolation between decennial censuses.

costs, technological innovation, land quality or the availability of farming land in the United States had a positive or negative correlation with the rate of settlement in Western Canada. Certainly, these estimations open the scope of historical inquiry and pose different challenges for further investigation. However, the quality and reliability of data often become a barrier to precisely capture the dynamic of the period. In this case, the focus on the historical context and the incorporation of a more complete data set, as this thesis will do in the following chapters, will contribute to a more nuanced evaluation of the region and the period.

3.5 Conclusion

Similar to other countries of recent settlement in the same period, Canada experienced an important political, territorial and economic transformation. From the 1850s when it obtained certain autonomy from the Crown, the country embraced an expansionist program that led to the union of Quebec, Ontario, Nova Scotia and New Brunswick to form a confederation: the Dominion of Canada. This political turn put in motion the expansion into the West and the formation of the provinces of Manitoba and British Columbia that joined the Confederation thereafter. This chapter compared Canada with other countries of recent settlement in terms of population growth, immigration and economic performance. Notably, during the first era of globalization, Canada, Australia, New Zealand and Argentina followed similar patterns of economic growth and development.

Certainly, data quality was an important component in those evaluations and as such, statistics for the period must be taken as guesstimates. Until the end of the nineteenth century, national statistics agencies were not created or fully developed. Moreover, until the inter-war period national accounts were not systematically produced.¹⁰⁷ The procedures to gather data were experimental as the profession of statistician was a novelty. More importantly, population data, being those from immigration or natural increase, were imprecise since countries did not report immigrants' returns or in the case of Canada, clear statistics of migration to and from the United States were difficult to estimate. Annual Reports of the diverse Dominion departments were periodically published; however, very often, aggregated data extracted from other publications,

¹⁰⁷ Thomas Piketty, *Capital in the Twenty-First Century*, trans. Arthur Goldhammer (Cambridge: Belknap Press, 2014), 57.

available to the public, published data that were not consistent compared with other reports. For instance, until 1879, Canada's aggregated data were published in the *Year Book and Almanac of Canada*. The publication's title is suggestive of the kind of facts gathered for the publication, which included information for the general audience following the tradition of other *Almanacs* published earlier that included weather forecasts, astronomical data and commercial advertisements.¹⁰⁸ The *Canada Year's Book* acquired a more scientific approach after 1885. The volumes included vital statistics, population, immigration and trade analyzed with a more scientific approach in mind enhanced by the incorporation of the first statistician.¹⁰⁹ However, aggregated data published from records obtained from departmental annual reports had inconsistencies like homesteads data will show in next chapter.

With these cautions, nineteenth century GDP data for Canada and other countries must be taken as an estimate or as Thomas Piketty has claimed for other countries, statistics are "a construct, and not a mathematical certainty... the best estimate we have."¹¹⁰ What this chapter has made clear is that numbers produced by different government agencies reflected the necessities of the time. In the case of immigration figures, countries attempted to show how their policies attracted a significant number of persons. A more fine detail of the pattern of immigration into Canada, as 3.4 discussed, demonstrated the uncertainties of data gathering and the procedures to estimate population growth. In the case of analyzing Western Canada data, the answers were more uncertain. Migrants' mobility during the period made all the efforts of gathering data uncertain. Moreover, in times of territorial expansion and state building political boundaries changed. Electoral districts changed during the period, particularly in 1892 and 1903.¹¹¹ Nevertheless, the quality of census data is not a weak link to understand the period in question; on the contrary, it invites to a further exploration and to the gathering of data that were not used before to complement and fill certain gaps in the investigation

¹⁰⁸ Canada. Statistics Canada, "The Start of the *Canada Year Book*," *Canada Year Book: Historical Collection*, March 31, 2008, http://www65.statcan.gc.ca/acyb07/acyb07_0001-eng.htm.

¹⁰⁹ Canada. Statistics Canada, "Canadian Statistics in 1886," *Canada Year Book: Historical Collection*, March 31, 2008, http://www65.statcan.gc.ca/acyb07/acyb07_0004-eng.htm.

¹¹⁰ Piketty, *Capital in the Twenty-First Century*, 58.

¹¹¹ Ian Buck et al., "Reconstructing the Geographical Framework of the 1901 Census of Canada," *Historical Methods: A Journal of Quantitative and Interdisciplinary History* 33, no. 4 (January 1, 2000): 200, doi:10.1080/01615440009598961.

of the region. To obtain a more detailed observation of Western Canada growth and development, this dissertation will incorporate an updated dataset of homestead entries and cancellations, postal records and post offices information in the next chapters.

Chapter 4

The Organization of Space in Western Canada

4.1 Introduction

In a limited way since colonial times, the exploitation of natural resources connected recently settled areas of the world with the European market. For instance, fisheries, lumber and furs in Canada, gold and silver in Mexico and Peru, hides, tallow and jerked beef in Argentina, sugar cane in the Caribbean and Brazil, among other areas, remained for a long time the connecting links of commerce and dependence between Europe and the rest of the world.¹ One of the important characteristics of the long nineteenth century has been the acceleration of trade between countries and the integration of vast areas of the world into capitalist production and, consequently, the incorporation of those areas into a more connected international market. What this chapter discusses is that the important transformation experienced in the second half of the nineteenth

¹ Kevin H. O'Rourke and Jeffrey G. Williamson, *Globalization and History: The Evolution of a Nineteenth-Century Atlantic Economy Illustrated Edition* (Harvard, Massachusetts: MIT Press, 1999), 29. For world market integration see Ronald Findlay and Kevin H. O'Rourke, "Commodity Market Integration, 1500–2000" in Michael D. Bordo, Alan M. Taylor, and Jeffrey G. Williamson, *Globalization in Historical Perspective* (Chicago: University of Chicago Press, 2005), 13–40.

century, however, was not only increased and accelerated trade between countries. Also since the 1850s, former Spanish colonies and autonomous or semi-autonomous British dominions experienced a structural transformation through geographical expansion and nation-state building as a response to the new economic conditions in Europe. In terms of political stability, the one hundred years of relatively peaceful development from about 1815 until World War I allowed the reorganization of Europe under stronger state institutions. This “Great Transformation,” as Karl Polanyi described it,² ultimately, created the conditions for the domination and consolidation of European-style political and economic institutions overseas.

In this form, areas of the world that started their spatial expansion and transformation in the second half of the nineteenth century adopted similar ideological programs of nation-state formation and market economy and attempted to build liberal democracies of some sorts. In this sense, as this dissertation maintains, state formation, territorial expansion and staple production were the main faces of capitalist development in new areas of settlement. The main outcome of this ideological program was the incorporation of newly acquired territory into the new state. The communal land shared in different forms by indigenous peoples in the New World was conquered and later transferred to the domain of the newly expanded states following a path where common land became public domain and later on, private property. This new legality of land tenure enforced by power, warfare or unbalanced negotiations between indigenous peoples and the settler state marked an era of what Acemoglu, Johnson and Robinson have called the emergence of “institutions of property rights.”³

This chapter, hence, focuses on the organization of a new settled space for the purpose of capitalist exploitation in Western Canada. It is clear that space was no longer a geographical term linked to the exploration of a rather neutral landscape as von Humboldt and Darwin appeared to classify it in their travel accounts.⁴ Space needed to be

² Karl Polanyi, *The Great Transformation: The Political and Economic Origins of Our Time*, Second Edition (Boston: Beacon Press, 2001), 5.

³ Daron Acemoglu, Simon Johnson, and James Robinson, “Institutions as the Fundamental Cause of Long-Run Growth,” Working Paper Series No. 10481 (National Bureau of Economic Research, 2004), 12, <http://www.nber.org/papers/w10481>.

⁴ Charles Darwin, *A Naturalist's Voyage Round the World: The Voyage of the Beagle* (New York: Skyhorse Publishing, Inc., 2014); Alexander von Humboldt, *The Travels and Researches of Alexander Von Humboldt* (New York: J.& J. Harper, 1833).

incorporated into the area of capitalist production, commoditized, fragmented and distributed. Space, as Neil Smith argues following Henry Lefevre, was the last margin for the survival of capitalism.⁵ In this sense, space was produced through human intervention. The production of space in a new geography needed the allocation and the enforcement of stable property rights to establish new social relations of production and allow a new cycle of capital accumulation in a new environment.⁶ It is space, or the limits that space imposes, which fixes the boundaries of property rights of the land, organize the territory under political divisions of power and sovereignty and subordinate populations to the scientific qualifications of census administrators.⁷ The production of space acted as what David Harvey following Rosa Luxemburg called “accumulation by dispossession;”⁸ the necessity of the capitalist developmental state to continue advancing into new territories in order to create the conditions for further exploitation, in this case of new natural resources.⁹ The production of space, this dissertation adds, is a method of forced relocation of a common territory into the new boundaries of an expanded capitalist nation-state. This conquest of new territories that started with the first wave of European explorations in the fifteenth and sixteenth centuries, obtained new relevance during the first era of globalization when settler states redefined and expanded the boundaries of their sovereign domains. The political economy of this period was strongly marked by the formation of the institutions of settler capitalism.

Important literature that analyzes growth and development in the New World based on the evolution of these countries’ institutions, as it was discussed in Chapter 2, praised Canada for its democratic allocation of small plots to immigrants after 1872. They differentiate Canada (and the United States) from countries of Latin America

⁵ Neil Smith, *Uneven Development: Nature, Capital, and the Production of Space*, vol. 3 (Athens: University of Georgia Press, 2008), 4. For a political and philosophical explanation of the production of space, see: Henri Lefebvre, *The Production of Space*, trans. Donald Nicholson-Smith (Oxford, UK ; Cambridge, Mass., USA: Blackwell, 1991).

⁶ David Harvey, *Spaces of Hope* (Edinburgh: Edinburgh University Press, 2000), 59.

⁷ David Harvey, *The Limits to Capital*, New and fully updated ed. (London: Verso, 2006), xix; Bruce Curtis, *The Politics of Population: State Formation, Statistics, and the Census of Canada, 1840-1875* (Toronto: University of Toronto Press, 2002), 36.

⁸ David Harvey, “‘The New Imperialism’: Accumulation by Dispossession,” *The Socialist Register* 40 (2004): 74–75.

⁹ Rosa Luxemburg, *The Accumulation of Capital*, trans. Agnes Schwarzschild (London: Routledge and Kegan Paul, 1951), 369–372.

where large estate holdings benefited the elite. Certainly the large initial allocation of land to the Hudson's Bay Company (HBC) and the Canadian Pacific Railway (CPR) did not respond to the premises posited by NIE, but it appears in their analysis that Canada (and the United States) distributed the land "democratically" since the initial division of land in the Western Territory.¹⁰ Hence, how different were Canada, the United States and Australia's land tenure from, say, Argentina? Was the division of land in small plots like the American West after the enactment of the Homestead Act of 1862 and the Dominion Lands Policy of 1872 in Canada promoters of democracy per se as Turner claimed in 1893?¹¹ As the previous chapter briefly commented, Canada divided the land into small plots and the settlement of those lands lagged behind expectations until the turn of the century. It would be fair to re-cast a previous question then. Was the specific act of dividing the land into small parcels or the later tenure of the said land that promoted a more democratic society? If the latter was the case, how one can present evidences that land and democracy were related? Some can argue that the opportunity of becoming owner of the land created a more equalitarian society that in the long run promoted a more democratic society. This chapter will present evidences that in Western Canada corporations, investors and land companies held large extensions of land and second, a large number of small farmers failed in their agricultural endeavours and very often abandoned their homesteads, not only during the period of low settlement (1872-1895) but also in the period commonly regarded as more successful (1896-1914).

This chapter analyzes the transformation of communal land into private property. It studies the role of the state in ensuring, promoting and enforcing property rights to the land with special emphasis on Western Canada's settlement and development in

¹⁰ In the American Plains, however, the so-called "bonanza farms" did not follow the description posited by NIE theorists. For instance, big corporations and investors obtained large extensions of land, from 1,000 to 61,000 acres, to embrace in agricultural business. The experiment was a failure but interesting to observe that the extension of farming land depended on the staples produced and the timing. Wheat, for instance, was produced more efficiently in small farms. In Argentina, also wheat was produced in small farms. Regardless of the tenure system, land ownership or tenancy, wheat production was similarly successful in Canada and Argentina, as Adelman observed previously. For a detailed account of the bonanza farms experiment in the United States, see Claire Strom, *Profiting from the Plains: The Great Northern Railway and Corporate Development of the American West* (Seattle, WA: University of Washington Press, 2011), 13–17. An early work on the fate of the bonanza farms in the United States in Hiram M. Drache, *The Day of the Bonanza: A History of Bonanza Farming in the Red River Valley of the North* (Fargo, ND: North Dakota Institute for Regional Studies, 1964).

¹¹ Frederick Jackson Turner, *The Frontier in American History* (New York: Courier Corporation, 1920), 30.

context with other areas. It discusses the meaning of “property” and the evolution of the idea of exclusive right to the land and describes the bureaucratic mechanisms of land administration in new areas of settlement. Section 4.3 describes government policies that organized the division and allocation of land in Western Canada. Section 4.4 evaluates traditional statistics on homestead entries and cancellations in Western Canada and confronts them with data collected by this author. The section is very important as it performs a spatial analysis with GIS that illustrates settlers’ mobility during the period. With an updated dataset on homesteads entries and cancellations, this chapter finds that settlers’ failures in Western Canada during the period were more important than previous literature assumed. Section 4.5 concludes.

4.2 State Power, Property Rights and Land Division

Recent discussions about the importance of institutions of property rights in promoting development point out the role played by central administrations in organizing the distribution of land.¹² Following these ideas, this chapter argues that the transformation of public land into private property during the nineteenth century ran parallel with the organization of the state and the centralization of political power. The enforcement of property rights of any sort in different places of the New World shared similar characteristics, although, the timing did not necessarily coincide because it was a process with great dynamics. Nevertheless, it is possible to summarize the period in broad terms. In the first place, the state obtained the control of indigenous lands by enforcing agreements, treaties or, plainly, by military occupation. Secondly, the state incorporated these newly obtained territories for the purpose of capitalist exploitation and third, the territory was prepared to receive European immigrants. In the process, the state obtained administration of new land and established diverse measures to provide legal land tenure to new settlers and avoid confrontation with other occupants, principally the diverse indigenous groups who shared their communal land under different understanding of the term “property” and the new legality attached within.

The mechanism applied to enforce those property rights and avoid conflicts had three outcomes. In the first instance, the state organized a coercive mechanism by providing security measures to protect private property. The organization of courts and

¹² Stanley L. Engerman and Kenneth L. Sokoloff, *Economic Development in the Americas since 1500: Endowments and Institutions* (New York: Cambridge University Press, 2012), 215.

police and/or military forces responded to the necessity of enforcing and obtaining the monopoly of power. In this line of argument, Levi and North argue that the state “is any organization with an absolute advantage in violence extending over a geographic area whose boundaries are determined by its power to tax constituents.”¹³ Certainly, the state function was more than violence and taxation, as Levi and North observe. Secondly, the state also provided the mechanisms to exercise another kind of power, that is, the organization of administrative institutions that supplied the legal framework for the production of space such as the legal profession, cadastral offices, financial institutions and survey departments. And third, the state generated the cultural conditions that provided the hegemonic ideology that validated the private property of the land and the exclusive use of the space to individuals or group of individuals.¹⁴

Certainly, the ability to exercise power or violence, in words of Levi and North, and thus enforce property rights depends on the state’s strength and level of political and bureaucratic organization. In places where the organization of the state was in its formative stages, the margin for enforcing property rights was a contested space between different agents. The accumulation of power and organization was not a straightforward condition; it evolved according to necessities and the timing depended on economic and political factors. First, the state needed to obtain the economic resources to put in motion its administrative force and expand its domains to the new frontiers of settlement and secondly, it needed a political agreement among the different agents in dispute to carry on such an endeavour.

This framework provided the elements that explained the organization of land distribution in a dynamic environment. The application of this mechanism, however, depended on historical conditions. In the initial period of settlement when the availability of land was large, the organization of *de facto* tenure was the customary method to hold land. *De facto* tenure is described as the right a first occupant exercises over a

¹³ M. Levi and D. C. North, “Toward a Property-Rights Theory of Exploitation,” *Politics & Society* 11, no. 3 (January 1982): 318, doi:10.1177/003232928201100304.

¹⁴ Gershon Feder and David Feeny, “Land Tenure and Property Rights: Theory and Implications for Development Policy,” *The World Bank Economic Review* 5, no. 1 (January 1, 1991): 137, doi:10.1093/wber/5.1.135.

property or territory without presenting any legal documentation that proves “ownership” other than being a first occupant.¹⁵ In contrast, *de jure* tenure means a legal possession of land under the support of a private deed or any other legal document provided and guaranteed by the state.¹⁶ During the period of state formation and consolidation, *de facto* and *de jure* methods of holding land depended on the development of the state, its level of organization and its political power to enforce property rights. Property rights in the land in this way evolved in different forms in different periods and in different places of the New World. When more immigrants and settlers arrived in these new incorporated territories, land started to become scarce and as such, disputes over “ownership” or tenure of any sort increased. The state in this case became the medium that intervened to solve disputes between parties and its political power or lack thereof defined the timing in which property rights were enforced.¹⁷ In this form, property rights and state enforcement emerged based upon the struggle for scarcity of land.

Another line of arguments that follow a neo-classical explanation states that the enforcement of property rights depended on the economic importance of the land in that historical period as an asset ready to be introduced into an expanding market. Analyzing land distribution and property rights in Australia and Argentina, Alan Dye and Sumner La Croix argue that the state enforced property rights in places where land had an intrinsic market value in that historical moment. In places where land had less value or no value at all, the government chose not to exercise its power to enforce property rights. That open access space encouraged squatting and lessened state intervention.¹⁸ Certainly, one has to define the term “value” according to the historical context, as its importance is relative because land value depended on the level of technological innovation or transportation at that time and these factors were very dynamic over the period. In this line, Dye and La Croix state that when land was extensively available and

¹⁵ The term preemption was also used to describe the occupation of land once the state attempted to organize parts of territory actually seized by squatters. See Ilia Murtazashvili, *The Political Economy of the American Frontier* (Cambridge, Mass., USA: Cambridge University Press, 2013), 64–65.

¹⁶ Lee J. Alston, Edwyna Harris, and Bernardo Mueller, “De Facto and De Jure Property Rights: Land Settlement and Land Conflict on the Australian, Brazilian and U.S. Frontiers,” Working Paper 15264 (National Bureau of Economic Research, September 2009), 2, <http://www.nber.org/papers/w15264>.

¹⁷ Levi and North, “Toward a Property-Rights Theory of Exploitation,” 320.

¹⁸ Alan Dye and Sumner La Croix, “The Political Economy of Land Privatization in Argentina and Australia, 1810-1850,” Working Paper No. 12-7 (Hawaii: University of Hawai‘i at Mānoa, Department of Economics, May 2012), 4, <http://stke.sciencemag.org/cgi/content/abstract/sci;291/5507/1304>.

had almost no market value, the government withdrew from enforcing property rights because the cost of engaging in frontier protection was more expensive than the potential revenues it could obtain from the sale of the land. Consequently, it leaves the land open for squatting. In this situation, not only settlers have to spend considerable effort and money to protect themselves and their newly appropriated land from the dangers of frontier life and aboriginal attacks but also had to negotiate the territory with other potential squatters. The cost for protecting their precarious property rights was then offset by the appropriation of land for free or for a relative low cost.¹⁹

Certainly, the initial period of land appropriation and settlement during the nineteenth century experienced different stages in different areas of recent settlement. The period shows the dynamic of territorial expansion and the response of weak states or states in formation to provide a legal framework to the process of land tenure. Neo-classical theories explain the allocation of land in the New World in terms of market efficiency or failure and put the state as another agent in the bargaining process of allocating the resources in a more efficient way; that is, reducing transaction costs. The state, however, is not only an economic agent trying to minimize transaction costs and maximize efficiency in the allocation of resources as neo-classical theories argue. As this dissertation argues, the movement of the frontier of settlement was not only an economic enterprise but also a political enterprise of nation building; one explanation cannot be separated from the other, as there were twin projects that organized the political economy of the historical period. It is this argument that it is missing in neo-classical explanations of property rights. By focusing on the economic aspect of enforcing property rights, neo-classical studies often puts aside history as they do not study the origin of property rights as an exercise of power, or, better, as an exercise of colonial and class power.

This chapter argues that the centralization of power was a key determinant in the organization of new frontier areas and in the allocation of property rights. Solid institutions of property right emerged in well-developed forms when the state moved from its initial stages of internal organization and consequently evolved into a more efficient bureaucratic structure. The weak state that negotiated the initial allocation of land and the transfer of property right in uncertain conditions evolved historically to a more cohesive, central administration and acquired the elements to enforce authority

¹⁹ Ibid., 6.

and centralize political decisions. The later part of the nineteenth century demonstrates that the allocation of new land and the consolidation of nation-states in the New World were more the outcomes of political power than the decision of firms attempting to avoid transaction costs in an open market. The exercise of sovereignty, whatever the cost, showed a more centralized state that exercised more political power and stronger in its decisions to incorporate space under its political domains. Although with different degrees of state intervention, the American Homestead Act of 1862, the Canadian Dominion Land Act of 1872, the Argentinian Campaign to the Desert from the late 1870s and the different land policies established afterward showed a change in the organization of the state to enforce, more than to mediate, the allocation of property rights. The state centralized the administration of land allocation through a more scientific bureaucratic organization of land disposal, measurement and registration that changed or improved according to the historical needs and the professionalization of the state cadres.

4.2.1 Maps, Geographies, Space

The nineteenth century was a testing period of structural changes. The “dual revolution,” as Eric Hobsbawm described the French and the Industrial Revolutions, opened the path for a transformation that marked the following period. “It was an age of superlatives,” says Hobsbawm, where liberal democracy and scientific explorations, the products of the dual revolution, merged themselves and expanded their waves of endless optimism into the New World during in the nineteenth century.²⁰ How did the scientific revolution change the administration of the state and the organization of property rights? The following section discusses the bureaucratic organization of central states in the New World and the scientific transformation that gave sense to the enforcement of property rights and legal land tenure: maps, land registries, cadastral records, census and political boundaries.

The Enlightenment promoted the systematization of knowledge and the spread of organizational techniques that transformed the methods of measuring and dividing the land, keeping records and registering properties. Victorian science, says Suzanne

²⁰ Eric J. Hobsbawm, *The Age of Revolution, 1789-1848*, 1st Vintage Books edition (New York: Vintage Books, 1996), ix, 297.

Zeller, followed the tradition of meticulous inventory and the doctrine of utilitarianism.²¹ In this sense, the organization of the new space wedded institutional arrangements with the scientific explorations of statistics and cartography. Maps and land registers identified and quantified the space and in so doing, they transformed property rights from an abstract thing into a real entity. Deeds or land titles alongside maps allocated property to a portion of territory.

If property rights defined the legal way the territory was occupied, the drawing of maps, observes Mary Louise Pratt, represented an epistemological transformation that gave another dimension to the appropriation of space.²² In similar terms, John Weaver argues that the representation of the space in documents was a metaphysical revolution where words and letters represented something larger and concrete; “[m]aps represented estates, countries, and empires; books represented history; deeds represented land.”²³ Maps, numbers, cadastral information and land titles were no longer abstract entities justified only in paper and documents; they also became real spaces of imperial and class organization.²⁴ Like cannons and wars, J. Brian Harley argues, maps became weapons of imperial control. If people claimed land in paper before it was actually occupied, maps preceded empire, claims Harley.²⁵ Surveyors very often marched alongside soldiers tracing the first lines of imperial domination, first for the purpose of general information and later as a symbol of pacification, civilization and exploitation.²⁶ Maps became weapons used to legitimize conquest and empire; maps were, in a more detailed view, also the intermediaries between property rights and the physical possession of territory, between the abstraction of legal definitions and the stakes that marked property boundaries.

²¹ Suzanne E. Zeller, *Inventing Canada: Early Victorian Science and the Idea of a Transcontinental Nation*, Reprinted (Montreal: McGill-Queen’s Press, 2009), 4–5.

²² Mary Louise Pratt, *Imperial Eyes: Travel Writing and Transculturation* (London ; New York: Routledge, 1992), 29.

²³ John Weaver, *The Great Land Rush and the Making of the Modern World, 1650-1900* (Montreal: McGill-Queen’s University Press, 2003), 93. See also Pratt, *Imperial Eyes*, 30.

²⁴ David Harvey, *Spaces of Capital: Towards a Critical Geography* (Edinburgh: Edinburgh University Press, 2001), 219–220.

²⁵ J. Brian Harley, “Maps, Knowledge and Power,” in George L. Henderson and Marvin Waterstone, eds., *Geographic Thought: A Praxis Perspective* (New York: Taylor & Francis, 2008), 132.

²⁶ Harley, 133.

Maps and land surveys, as Giselle Byrnes notes, transformed “space” into “place”.²⁷ Place, however, is not an autonomous entity but one of the manifestations that describe relations of power. Moreover, place makes sense when the meaning is attached to property. The abstract form of “property” and “space” defined in deeds and land titles of any sort acquires meaning by the actual possession of the land through, first the stake, then the fence and later the barbed wire that enforced property, disciplined the exclusive use of land to certain individuals and protected the territory from the dangers of outsiders’ occupancy.²⁸ The replication of the physical, real division of the territory, parcel or lot following the map’s layout individualizes registers and quantifies the abstract meaning of property rights. Maps and deeds gave legal sense to the uncertain distribution of land and gave the state the authority to define and determine the blurred margins of nineteenth century tenure and ownership.

4.2.2 Uncertain Property, Uncertain State Domain

In the new expanded frontier of Western Canada, the distribution of land and the enforcement of property rights followed a rather organized form where surveys, maps, deeds and land patents offset squatting activity as the state showed a strong commitment to solve disputes over a contested territory. In other incorporated areas of the American West or in Australia and Argentina conflicts over land tenure were more complicated. In the United States, the American Pre-emptive Act of 1841 allowed the right to squat on public surveyed land. Over the following years of Western expansion, the government authorized squatting in unsurveyed public land. From 1853 to 1862 California, Oregon, Washington, Kansas, Nebraska and Minnesota allowed the right to squatting in public land following the first come first serve basis arrangement.²⁹ In California, for instance, the rush for land and the delay in enforcing property rights provoked an ongoing dispute between squatters, latecomers and previous settlers who had obtained a precarious tenure under the Spanish administration. Farming and ranching land in the 1850s became increasingly important and the prospect of obtaining a land

²⁷ Giselle Byrnes, *Boundary Markers: Land Surveying and the Colonisation of New Zealand* (Wellington, N.Z.: Bridget Williams Books, 2001), 5.

²⁸ Nicholas Blomley, “Making Private Property: Enclosure, Common Right and the Work of Hedges,” *Rural History* 18, no. 1 (March 16, 2007): 8–9, doi:10.1017/S0956793306001993.

²⁹ Douglas W. Allen, “Homesteading and Property Rights; Or, ‘How the West Was Really Won,’” *Journal of Law and Economics* 34, no. 1 (April 1, 1991): 8, doi:10.2307/725412.

patent once the survey reached the region exacerbated the disputes.³⁰ California was a very special case in the American frontier as previous Spanish land tenure converged with the new approach of the American property rights understandings once the United States seized California from Mexico in 1846. Uncertain of the validity of several land grants, Congress delayed legislation and squatters and speculators of any sort took advantage of this legal vacuum especially during the gold rush of the 1850s. As the demand for land increased, prices soared. Squatters in this form attempted to obtain land in places where the price was higher in order to initiate a claim and secure a patent in the future.³¹

In other places of the American West previous to the legislation of the Homestead Act of 1862 squatters and land speculators influenced the distribution of land through the organization of claim clubs that attempted to maintain control over land distribution and discouraged or blocked access to the land to potential settlers. In this closed society, the club appropriated public land in excess of their needs to keep their holdings and negotiate later a patent with the government once the survey finished. Clubs had a well-developed internal organization and rigid structure aimed to solve disputes among squatters.³² In places where the authority of the state was still in a process of formation, private parties organized the distribution of property rights. In other places, the state very often acted as a bystander allowing the development of clubs. Alston et. al suggest that government officers were in some cases members of the clubs or associations and in other cases they received bribes to support clubs' claims.³³ Certainly, clubs and associations' intervention was not aimed at providing a fair distribution of land but to organize the distribution in a way that favoured them. In Iowa, more

³⁰ Karen B. Clay, "Property Rights and Institutions: Congress and the California Land Act of 1851," *The Journal of Economic History* 59, no. 1 (March 1, 1999): 135, doi:10.2307/2566499.

³¹ For a discussion of squatting in California see: K. Clay and W. Troesken, "Squatting and the Settlement of the United States. New Evidence from Post-Gold Rush California," *Advances in Agricultural Economic History* 1 (2000): 207–33, doi:10.1016/S1569-4933(00)01034-4.

³² Mark T. Kanazawa, "Possession Is Nine Points of the Law: The Political Economy of Early Public Land Disposal," *Explorations in Economic History* 33, no. 2 (April 1996): 234, doi:10.1006/exeh.1996.0010.

³³ Alston, Harris, and Mueller, *De Facto and De Jure Property Rights*, 6.

than two hundreds clubs or associations disputed the control of public land between settlers, latecomers, speculators and railroad companies.³⁴

In Australia, squatters continuously moved beyond the enclosed area of land available for settlement. The state through its administrators attempted to maintain formal and informal institutions of property rights and organized the allocation of grazing land. After 1834, squatters continued to seize land that was intended to be surveyed shortly. The government, in order to establish institutional control, thus extended squatting licences to keep some organization to an activity that was surpassing the limits of the legality of land tenure. In different periods, the government reacted to squatters activities by regulating the availability of land to encounter shortly after another challenge; squatters crossed again the limits of legality and forced the government to provide new measures to allocate grazing land.³⁵ As squatting activity opened up more grazing land, it created better economic opportunities and consequently, more state revenues, especially when the price of land increased. Due to the raise in the price of wool, the government, as Michael Williams comments, tolerated the occupation.³⁶ Squatters were the first occupants of grazing land and as such became the testers of the quality of the soil in advance of the survey and the future allocation to settlers after 1865.³⁷

The last quarter of the century shows a stronger state enforcing semi-permanent, yet flexible, legislations that introduced new ways to measure and allocate land. In Australia, different states enforced a variety of legislations to organize land distribution and settlement. In New South Wales, the government passed the Crown Land Act of 1861 in order to organize the distribution of land into small parcels. The system did not work and land remained concentrated in small groups. In 1884 and 1889, the government

³⁴ An early discussion on claim clubs can be found in Allan G. Bogue, "The Iowa Claim Clubs: Symbol and Substance," *The Mississippi Valley Historical Review* 45, no. 2 (September 1, 1958): 231–53, doi:10.2307/1902928. See also Terry L. Anderson and Peter J. Hill, "The Race for Property Rights," *Journal of Law and Economics* 33, no. 1 (April 1, 1990): 193, doi:10.2307/725514. Ilia Murtazashvili's book thoroughly analyzed the implications of claim clubs as organizers of a property rights regime before the state enforced its legislation in the American west. See Murtazashvili, *The Political Economy of the American Frontier*.

³⁵ A timeline of government measures can be found in John C. Weaver, "Beyond the Fatal Shore: Pastoral Squatting and the Occupation of Australia, 1826 to 1852," *The American Historical Review* 101, no. 4 (1996): 980–987.

³⁶ Michael Williams, "Delimiting the Spread of Settlement: An Examination of Evidence in South Australia," *Economic Geography* 42, no. 4 (October 1, 1966): 341, doi:10.2307/141884.

³⁷ *Ibid.*, 342.

attempted to fix previous legislation without any important achievement. The aim of these legislation was to allow the division of large pastoral tenure into small tracts to promote the settlement of farmers. The Crown Land Act of 1895 and 1905 put an end to previous land legislation and assured bona fide tenants, squatters and grazers better conditions for buying their claimed land.³⁸ In other states, the allocation of land and changing legislation were similar. Australia used a number of tenure methods and the changing legislations attempted to accommodate those legislations to the historical conditions and claimants' power. In Victoria, there was land in pastoral leases, grazing leases, agricultural allotments, grazing allotments, perpetual leases, and sales by auctions among other ways to obtain land tenure.³⁹ In South Australia, the most important legislation was the Torrens Act of 1858. The Act made the transfer and registration of land clearer as the state centralized the sales of land under a unique register. In this form, landowners had the certainty, at least in theory, that no other potential owners could claim the same land. If land registration presented irregularities because of old, uncertain methods of registering titles, the state guaranteed a due process to solve disputes.⁴⁰

The administration of public land in the Anglo world and the later privatization followed different patterns. Particularly in Australia until 1904, squatters dominated the distributions and allocation of land helped by political circumstances where corruption was a common practice.⁴¹ In some places, the goal was to raise government revenues to promote development through public works, which at the same time generated the conditions for economic growth as immigration expanded the frontiers of settlement.

³⁸ Australia. Commonwealth Bureau of Census and Statistics, *Official Year Book of the Commonwealth of Australia, 1901-1907* (Melbourne: McCarron, Bird & Co., 1908), 221–222.

³⁹ *Ibid.*, 232.

⁴⁰ *Ibid.*, 254. Manitoba adopted the Torrens system in 1886 under the Manitoba Real Property Act. See Kirk N. Lambrecht, *The Administration of Dominion Lands, 1870-1930* (Regina: Canadian Plains Research Center, 1991), 13.; Greg Taylor, *The Law of the Land: The Advent of the Torrens System in Canada* (Toronto: University of Toronto Press, 2008), 142–145. For the timing of the Torrens system adoption in Canadian provinces, see Taylor, Appendix, 169-170. An analysis of natural resources and land tenure in New Zealand in Michael Roche, "Lands for Settlement, Forests and Scenic Reserves: Nature and Value in New Zealand, 1890s-1930," in Gordon M. Winder and Andreas Dix, eds., *Trading Environments: Frontiers, Commercial Knowledge and Environmental Transformation, 1820-1990* (New York: Routledge, 2015), 138-165.

⁴¹ Peter G. Spooner, "On Squatters, Settlers and Early Surveyors: Historical Development of Country Road Reserves in Southern New South Wales," *Australian Geographer* 36, no. 1 (2005): 59, doi:10.1080/00049180500050870.

In the case of Canada, the purpose was first, to compensate the HBC for the territorial transfer and second, to subsidize the railroad companies for the construction and extension of the railroad network across the Western territory.

In the Spanish American world, the goal of selling public land followed similar characteristics. During the colonial period in the Río de la Plata, the Spanish Crown managed the allocation of land; however, local officers used diverse forms to distribute land according to the necessity of the colony. These forms of land tenure persisted well over the independence period of 1810-1816. Among them, there can be identified the *merced*, a right conceded to settlers to start a small farm in the outskirts of the town or city; the direct sale by the colonial government and the auction were the three main ways to allocate Crown land in colonial Spanish America.⁴²

In Argentina after 1810, the revolutionary government inherited all these colonial forms of land allocation and took measures to obtain a better administration of public land. Pedro Andres García under government's recommendation initiated a journey to the frontier to get an account of the condition of ranchers and farmers. García found a great disorganization of land distribution mainly allocated in large estates concentrated in a small group of ranchers. He recommended the government to initiate a proper survey, establish settlements and secure the frontier.⁴³ In 1822 Bernardino Rivadavia, Minister of Government of Buenos Aires, introduced a legislation to give tracts of land on lease for twenty years with an option to extend the contract according to determined conditions.⁴⁴ The government aimed to obtain revenues from the land lease and occupants paid annual canon to maintain the occupancy. The *enfiteusis*, as this legislation was known, alienated almost half the land available for settlement in the Province of Buenos Aires, but as Halperín Donghi argues, instead of promoting small landholdings, land went to the hands of bigger ranchers, the *hacendados*.⁴⁵ The always-changing legislation also worked against the original idea of an agrarian reform. From

⁴² Miguel Angel Cárcano, *Evolución histórica del régimen de la tierra pública, 1810-1916*, 3. ed. (Buenos Aires: Editorial Universitaria de Buenos Aires, 1972), 4.

⁴³ Horacio C. E. Giberti, *Historia económica de la ganadería argentina*, Biblioteca Argentina de Historia y Política (Buenos Aires: Hyspamérica, 1985), 117.

⁴⁴ Cárcano, *Evolución histórica del régimen de la tierra pública, 1810-1916*, 42-44.

⁴⁵ Tulio Halperin Donghi, *La formación de la clase terrateniente bonaerense* (Buenos Aires: Prometeo Libros, 2005), 58.

1822, the year Rivadavia introduced the *enfiteusis*, until 1840 sixty-one laws and decrees attempted to give a legal framework to land tenure in the Province of Buenos Aires.⁴⁶ Two important measures that emerged with the *enfiteusis* were the creation of the Topographic Commission and the Graphic Register of Property that organized and kept basic records of the distribution of land in the province.⁴⁷ During Rosas' rule, however, large areas of land that were once occupied under *enfiteusis* went back to the administration of the state and Rosas abused his power and distributed it to the military and to close associates putting an end, in fact, to legislation that was aimed at encouraging colonization and settlement.⁴⁸ In 1880, the new government introduced another land legislation to dispose of all the land that still remained under government control, especially the land in national territories. The division of that land attempted to resemble the township system in practice in the United States and Canada but the smaller allotment was 1,000 hectares (2,400 acres). The legislation also gave land titles to those who had occupied land in the frontier after 1858. Occupants could apply for a land title if their claim did not exceed 8,000 hectares.⁴⁹ The legislation in Argentina was very generous to occupants but as John Coatsworth points out, land concentration in a few hands did not mean concentration of wealth as land prices in the fringes was very low until the arrival of the railroad and technology.⁵⁰ Therefore, the possession of land per se did not transform the owners of land into economic elite, at least until land acquired certain value.

In the Province of Entre Rios, in the Argentinian *litoral*, land tenure and squatting were synonymous for a great part of the nineteenth century. Similarly, to the model applied in other Neo-Europes during the expansion of the grazing frontier, Entre Rios used diverse forms to grant land tenure: There were settlers who obtained land buying

⁴⁶ Andres M. Carretero, *La propiedad de la tierra en la época de Rosas*, Colección de temas de historia argentina (Buenos Aires: Editorial El Coloquio, 1972), 17–24.

⁴⁷ Cárcano, *Evolución histórica del régimen de la tierra pública, 1810-1916*, 31. Comisión topográfica and Registro gráfico de la propiedad in the original in Spanish.

⁴⁸ *Ibid.*, 50, 57, 60, 70.

⁴⁹ Buenos Aires, *Código rural de la provincia de Buenos Aires: seguido de la ley general de tierras públicas sancionada en 1878, del decreto reglamentario de la misma, y de la ley sobre cercos y caminos generales de mayo de 1880* (Buenos Aires: Imprenta de Pablo E. Coni, 1880), iv.

⁵⁰ John H. Coatsworth, "Structures, Endowments, and Institutions in the Economic History of Latin America," *Latin American Research Review* 40, no. 3 (2005): 131, doi:10.1353/lar.2005.0040.

the transfer from other parties or through the state and thus they held a land title of some sort. Others obtained land because they had provided a service to the provincial state and other settlers who occupied grazing land for several years but without any land title or permit to settle.⁵¹

The process of land tenure in the nineteenth century is a good model to study the structural transformation of important parts of the world because it showed the initial movements and struggles to obtain property right in land. It also showed how precarious legislation and state enforcement allowed the activity of squatters and speculators trying to secure their land claims by taking advantage of irregular situations and uncertain government regulations. The transformation of the space in the New World from communal use to exclusive use, from tenure of any sort to private property followed similar characteristics. Squatting or irregular possession of land in times of state formation created the conditions for disputes and exercise of power. Claims clubs in the American West, squatters movements in Australia or *hacendados* in Argentina's hinterland tried to take advantage of uncertain legislation. The results, however, differed. In Australia, squatters never reached the level of becoming a ruling class like in Argentina. The state, even providing great concessions, checked squatters' power; although, squatters' influence in Australia's land allocation was a de-facto parallel power in the expanding areas of settlement, as Peter Spooner describes it.⁵² In the case of Argentina, a small group of big ranchers who obtained large extensions of territory in different periods during General Rosas' government and after his fall in 1852 influenced or became part of the Argentinian ruling elite in the years to come.⁵³ As discussed earlier, the possession of land did not mean that owners became automatically wealthy.

4.2.3 From Common Land to Private Property

In Pre-Confederation Canadian north and west, the Hudson's Bay Company (HBC) exercised power over trade and territory. This unfettered domain allowed the Company to dominate the distribution of land in the western part of that isolated geography. Once trade increased, the Company established a network of provision posts that

⁵¹ Roberto Schmit, *Historia del capitalismo agrario pampeano. Los límites del progreso: expansión rural en los orígenes del capitalismo rioplatense*, vol. 5 (Buenos Aires: Universidad de Belgrano-Siglo Veintiuno Editores, 2005), 55.

⁵² Spooner, "On Squatters, Settlers and Early Surveyors," 61.

⁵³ Donald Denoon, "Understanding Settler Societies," *Historical Studies* 18 (1979): 516.

served as places to obtain supplies for the long journeys between posts. These sources of traders' supply also served as places to trade goods with different indigenous groups.⁵⁴ Through the network of posts, the HBC controlled a vast extension of these farther lands and maintained its base of operations at York factory in the Hudson's Bay. Later on moved the administrative control to the Fort Garry, in the Red River Settlement, present city of Winnipeg. The history of the HBC is the history of land control at a large scale. In 1670 King Charles II granted the Company the rights to "to give, grant, demise, alien, assign and dispose Land, Tenements and Hereditaments, and to do and execute all and singular other Things."⁵⁵ The Company, however, was more than an economic endeavor that extended its power to the administration of land and natural resources. Under the Charter, Charles II authorized the HBC to act with the authority of a state and "to make, ordain, and constitute, such, and so many reasonable Laws, Constitutions, Orders and Ordinances."⁵⁶

For two hundred years the Company acted as a particular state within the disperse territories of British North America not only by keeping the monopoly of the fur trade but also as a power house that ruled the territory as a quasi-state enforcing laws and legislations and controlling the everyday life of the colony.⁵⁷ A newcomer to the Red River Settlement in 1868 observed:

We are ruled by a Council appointed by the Hudson's Bay Co. and consisting of company servants and other residents here. It combines both executive and legislative in itself, and collects revenue by a four percent duty on imports, and spends it where it likes, sits with closed doors, and keeps its own secrets. There is also a judge who is paid by the company and rules accordingly.⁵⁸

⁵⁴ Harold A. Innis, *The Fur Trade in Canada: An Introduction to Canadian Economic History*, Reprinted Edition (Toronto: University of Toronto Press, 2001), 232–233.

⁵⁵ Hudson's Bay Company, *The Royal Charter for Incorporating the Hudson's Bay Company: Granted by His Majesty King Charles the Second, in the Twenty-Second Year of His Reign, A.d. 1670* (London: R. Causton and Son, 1816), 3.

⁵⁶ *Ibid.*, 11.

⁵⁷ For an evaluation of HBC laws and legislations in the Red River Settlement see: H. Robert Baker, "Creating Order in the Wilderness: Transplanting the English Law to Rupert's Land, 1835-51," *Law and History Review* 17, no. 2 (July 1, 1999): 209–46, doi:10.2307/744011.

⁵⁸ Quoted in Lorne A. Shropshire, "A Founding Father of Winnipeg: James Henry Ashdown 1844-1924," *Manitoba History*, no. 19 (Spring 1990), http://www.mhs.mb.ca/docs/mb_history/19/ashdown_jh.shtml. A detailed account of HBC's administrative power as a quasi-state can be found in Dale Gibson, *Law, Life, and Government at Red River, Volume I: Settlement and Governance, 1812-1872*, vol. 1 (Montreal: McGill-Queen's Press - MQUP, 2015).

Organized as sole representative to carry on discussions with different indigenous groups, the Company negotiated several agreements over land disposal. It also kept the privilege to grant tracts of land to setup colonies or to grant land to retired employees who showed interest on remaining in the region once they left the Company's service. In 1811, the Company granted Lord Selkirk, one of the Company's most important stockholders, 116,000 squares miles of land where Scottish and Swiss settlers under Selkirk's sponsorship founded the Red River Settlement after the 1820s.⁵⁹

By the time the HBC transferred the land to the Dominion of Canada in 1870, the Red River Settlement was Western Canada's most important community. After a failed attempt to settle the area in the 1820s and after Selkirk's death, the HBC took control of the settlement in 1835.⁶⁰ At the time of Confederation, the colony extended into twenty-four parishes along both sides of the Red and Assiniboine Rivers. When the Company surveyed the land and tried to organize a system of land tenure and extend land titles to Selkirk's settlers, it encountered great difficulties. The informality of Selkirk's system of registering land grants and lack of proper documentation complicated the process of granting tenure. Most of the colony's settlers were occupants in good faith because they did not hold a valid land title or a patent of any sort. Archer Martin found in 1898 that there were not clear evidences or documents that demonstrated Selkirk's grants to the settlers.⁶¹ The HBC, nevertheless, did not make a substantial change to improve this situation and continued to use an informal method of lot registration. Martin provided as an example the land certificates submitted by the Company's governor George Simpson, which were "almost invariably written on a manuscript blank in an engrossing hand, [and] the spaces being filled in nearly always by the signer."⁶² Claimants were, thus, able to delineate the boundaries of their property or to claim land they had never occupied. For the Company this methodology to register grants did not

⁵⁹ Archer Martin, *The Hudson's Bay Company's Land Tenures and the Occupation of Assiniboia by Lord Selkirk Settlers, with a List of Grantees Under the Earl and the Company* (London: William Clowes and Sons Limited, 1898), 5; Arthur Silver Morton and Chester Martin, *History of Prairie Settlement* (Toronto: The Macmillan Company of Canada limited, 1938), 201–209.

⁶⁰ Morton and Martin, *History of Prairie Settlement*, 209.

⁶¹ Martin, *The Hudson's Bay Company's Land Tenures*, 32.

⁶² *Ibid.*, 48.

seem to be an obstacle as land was available elsewhere in the settlement. It is important to note the process of land rights formation in the Red River Settlement. How these rights were allocated? How did property rights initiate in the settlement? Did old settlers keep their land holdings once the Canadian state established its own land tenure system after 1870? How did the newly established state negotiate settlers' claims? How did the Dominion Land Act of 1872 influence the allocation of land?

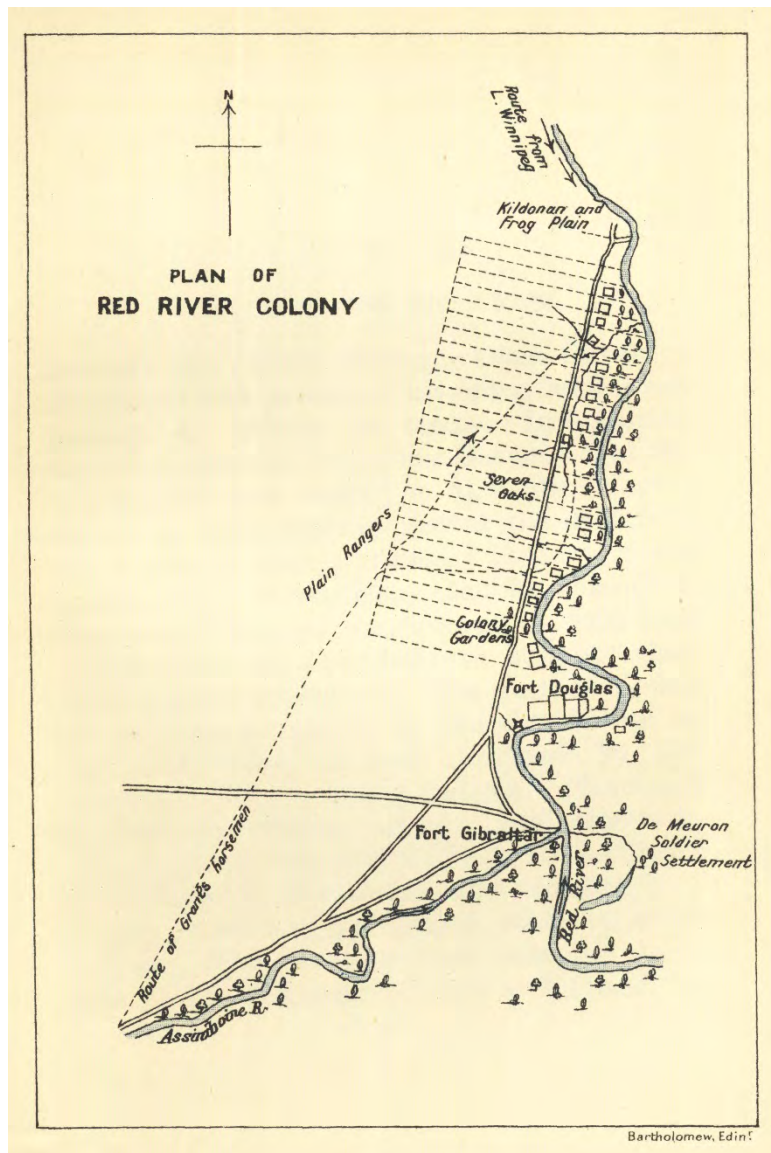
When property rights on the land did not generate dispute of any sort among settlers, the disposal of land and the provision of precarious property rights did not pose a serious problem. The appropriation of the new space was carried out very often in a legal vacuum, an activity inventing its own rules or accommodating to settlers' previous experiences. When land divisions and sub-divisions occurred in places where no other system of land allocation was ever used, settlers followed a pattern to allocate land known from previous experiences in the home country or region. In one of his visits to the Red River Settlement, Selkirk drafted a provisional plan to setup the colony. Based on that previous layout, newcomers adopted a system similar to that used in Scotland to distribute lots and consisted on "a cultivated infield and an outfield pasture."⁶³ In that way, river lots that developed in the settlement followed a straight pattern of "the land divided into long narrow strips and at right angles to the general course of the river."⁶⁴ According to this system, the first two miles of inner land were for farming and construction of dwellings, the outer two miles were for the cultivation of hay and pasture (Figure 4-1). In almost all the parishes, the outer two miles was shared in common for all the residents. The use of this common space was commonly known as "Hay Privilege," a permission granted by the Council of Assiniboia to river lot holders to cut hay from August 1st to the 15th of each year.⁶⁵ In the transition period from the HBC's rule until the transfer of power to the Dominion in 1870, the settlement experienced a precarious land tenure based on uncertain documentation and an extensive use of the common land, both from settlers and from Aboriginal and Métis communities alike.

⁶³ Weaver, *The Great Land Rush*, 253.

⁶⁴ Manitoba Métis Federation, *Riverlots and Scrip: Elements of Metis Aboriginal Rights*. (Winnipeg: Manitoba Métis Federation, 1978), 3.

⁶⁵ "Council of Assiniboia," *Nor'Wester*, 14 April 1860.

Figure 4-1 Disposition of River Lots in 1812.



Source: John George Bartholomew, "Plan of Red River Colony [1818] (1915) In: Louis Aubrey Wood. *The Red River Colony a Chronicle of the Beginnings of Manitoba*" (Toronto: Glasgow, Brook & Company, 1915).

The uncertainties of land claims when the central state was still in a process of organization and establishing its own rules and legislations were common characteristics in almost all the Neo-Europes. In Western Canada, the availability of large extensions of land and low population density were important factors in the transition from the private rule of the HBC to the public domain of the land after 1870 when the Dominion took possession of that land. Canada avoided to some extent the problems originated by squatting public land such it happened in other areas of recent settlement.

This was an important characteristic and differentiated Western Canada from the rest of the New World. As squatters' pressure to obtain land was less apparent than in the

rest of the New World and confrontations with indigenous groups were solved earlier through different Treaties, Canada developed its institutions of private property of the land with fewer conflicts than in other regions. In circumstances where claims originated conflicts, the government granted land to the parties in question through legislations or directly from the Prime Minister's Orders-in-Council.

4.3 Space in Motion, the Dynamic of Prairie Settlement after 1870

In previous sections, this chapter described the origins and meaning of property rights of the land in different places of the New World. It also showed how diverse interests contested the enforcement of property rights and the measurement and allocation of land. Canada to some extent limited those conflicts for different reasons. First, the territory was barely populated and thus squatting land in early times was not a widespread activity as it happened in other places. Secondly, the state started surveying the land in advance of settlement and it had already learned from the American experience. In the third place there was no rush for land as immigrants were not arriving in-masse to populate the Prairies, so surveyors had the time to work properly before any settler arrived in the Prairies. The combination of these factors made the experience of settling Western Canada easier and less complicated than in other places. Initial disputes arose but the federal government rapidly resolved them. The following sections will analyze the appropriation, division and allocation of land in Western Canada.

4.3.1 The Division and Allocation of Land in Western Canada.

After the passing of the British North America Act of 1867, the new Confederation put in motion the resources to initiate the campaign and move westwards its frontiers of settlements. In 1868, the British Parliament passed the Rupert's Land Act and in 1870 after several negotiations, the HBC transferred Rupert's Land and the North West Territories to the Crown, which in turn conveyed it to the new Dominion of Canada. The transfer did not provoke any important conflict between the HBC and the government as the Company retained an important extension of land around its former posts and received substantial monetary compensation. The Act of Transfer, however, did not mention how to extend previous land titles the Company had granted to settlers over the years. While some individuals had assured a land title in fee simple, the majority of settlers held their land under the uncertain lease for 999 years and others not even that,

they have just occupied land without any document that proved their holding.⁶⁶ From the time of the transfer until 1872, settlers were uncertain of their right to the land and those uncertainties became real when the federal government sent the first crew of surveyors to the Red River Settlement to initiate the measurement of the western land. *Métis* settlers were among those who saw the government's advance over the Western territory as a threat to their land holdings and reacted in defense of their rights.

The Red River Resistance of 1869-70 marked the first reaction against an expansionist state. The government, however, had the tools to negotiate—and Colonel Wolseley and the King's Rifles' participation—and the uprising ended up with the rebels' dispersal and the organization of the Province of Manitoba. Louis Riel's resistance

Figure 4-2 Cancelled Land Scrip



Sources: Library and Archives Canada. RG 15, Vol. 1387, Note 3. <https://www.collectionscanada.gc.ca/metis-scrip/index-e.html>

provoked not only the organization of Manitoba but it also gave the basis for the formulation of the Manitoba Act of 1870 that introduced legislation about the disposal of land and the allocation of property right in the land to old settlers. Sections 30 to 32, particularly, deal with the demands raised by *Métis* leaders. If immigrants were going to receive free land in the Prairies, *Métis* demanded a special arrangement to their

⁶⁶ Morton and Martin, *History of Prairie Settlement*, 42.

claims as they lived in the area for years, even though some of them followed a nomadic life style as hunters and fur traders. According to the Act of 1870, 1,400,000 acres of land were set aside and distributed among the head of families of “half-breeds residing in the Province.”⁶⁷ The government issued land scrip to distribute among *Métis* families but the system used to grant the scrip did not work as planned. A scrip was a government document that could be exchanged for cash or for land (Figure 4-2). A reduced number of *Métis* families obtained land while the majority of scrip ended up in the hands of lawyers and speculators.⁶⁸ The Dominion also respected the HBC’s land grants and gave land titles to those settlers who could prove peaceful occupancy of the land they claimed.⁶⁹

4.3.2 Section, Township and Range

In 1872 an Act of Parliament enacted legislation to dispose of the Dominion’s public land and open certain areas for settlement and railroad works. The *Dominion Lands Act* of 1872 (DLA) adopted the system of survey outlined early in the American *Homestead Act* of 1862. The system consisted in dividing the land into townships of 36 square miles divided into 36 sections of 640 acres each or one mile (See Figure 4-3 and Figure 4-4). Each section was further divided respectively into four-quarter sections of 160 acres each, the homestead. The government reserved section 8 and three quarters of section 26 for the Hudson’s Bay Company (HBC) along 50,000 acres around the company’s posts as part of the agreement of 1869-70. In addition, the Dominion reserved sections 11 and 29 to secure funding for the construction of schools. The government maintained its right to reserve any other sections of land as required for paying military services or for railway purposes.⁷⁰

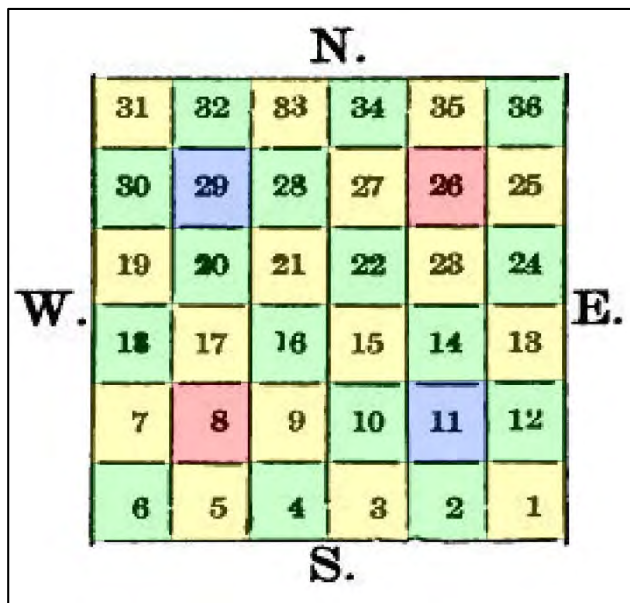
⁶⁷ Canada. Statutes, *An Act to Amend and Continue the Act 32 and 33 Victoria, Chapter 3; and to Establish and Provide for the Government of the Province of Manitoba* (Ottawa: Brown Chamberlin, 1870), 26.

⁶⁸ Lambrecht, *The Administration of Dominion Land, 1870-1930*, 9. For a further discussion on *Métis* land see Douglas N. Sprague, *Canada and the Metis, 1869-1885* (Waterloo, ON, Canada: Wilfrid Laurier University Press, 1988).; Flanagan, *Metis Land in Manitoba*.; Thomas Flanagan and Gerhard J. Ens, “Metis Land Grants in Manitoba A Statistical Study,” *Histoire Sociale / Social History* XXVIII, no. 53 (May 1994): 65–87. Manitoba *Métis* Federation, *Riverlots and Scrip: Elements of Metis Aboriginal Rights* (Winnipeg: Published by the Manitoba *Métis* Federation, 1978).

⁶⁹ Canada. Statutes, *Manitoba Act*, 26., 26-28.

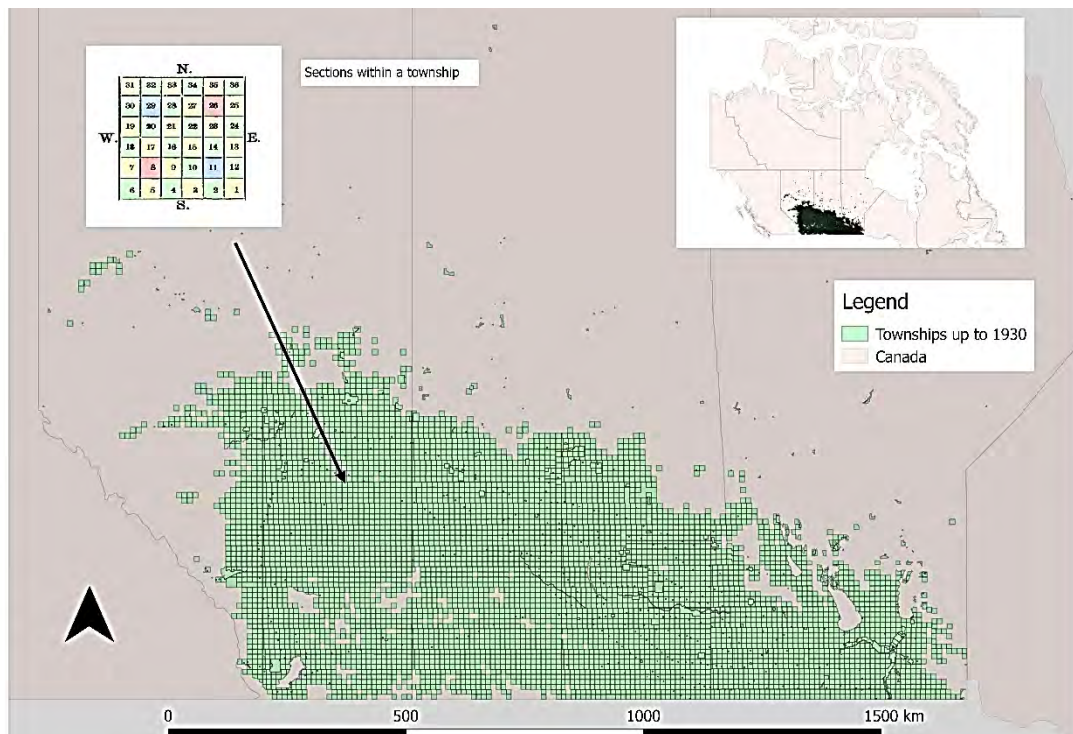
⁷⁰ Canada. Statutes, *An Act Respecting the Public Land of the Dominion* (Ottawa: Brown Chamberlin, 1872), 57–64, 88.

Figure 4-3 A Township and its Sections



Source: Canada. Statutes. *An Act Respecting the Public Land of the Dominion*. (Ottawa: Brown Chamberlin, 1872), 58.

Figure 4-4 Townships distribution in Western Canada to 1930.

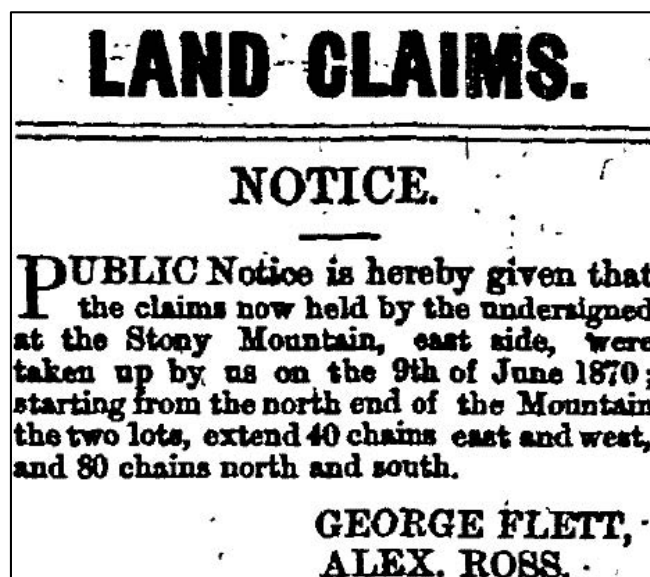


Source: GIS author's design based on Canadian Century Research Infrastructure Project (CCRI) shapefiles.

The survey, delayed by the Red River Resistance in 1869-70, acquired new momentum after the conflict settled and by 1876 had reached the southern part of the new Province of Manitoba and moved the limits of the frontier to Fort Ellice in the District

of Assiniboine. When the government decided to open up the West for settlement, it signed a number of treaties with several indigenous groups in order to extinguish Native rights to the land. Treaties 1 to 4 signed between 1871 and 1874-77 respectively set the basis for future agreements, which, among other items, set aside land to make Aboriginal Reservations.⁷¹ Additional land was also taken into consideration to grant titles to European settlers already established in the West, principally near the Red and Assiniboine Rivers, who had occupied land since 1820 under the grants and permission of the HBC. In sum, the Canadian government managed a number of situations in moments of the production of space.

Figure 4-5 Land Claims Advertisement.



Source: *Manitoban and Northwest Herald*, 2 September 1871, 3.

The survey, though less complicated than in other areas of recent settlement, still provoked conflicts because it overlapped with previous allotments and agreements. Certainly, problems of land allocation were not as disorganized as those in other areas, yet disputes of “ownership” were common, especially conflicts in the expanding urban land market. Newspapers frequently published notices similar to the one in Figure 4-5 during the period. In times of legal uncertainties, claimants sought the support of the press as a mean to provide a written evidence of occupancy and secure a future land patent. The main conflicts were with early settlers who had occupied public land without any title. Secondly, conflicts appeared with *Métis* families who had lived for long

⁷¹ Lambrecht, *The Administration of Dominion Land, 1870-1930*, 5-7.

times on different areas of the new province. In third place, disputes arose among settlers who squatted, but whose occupancy rights the Dominion Land Act recognized if they could show evidences that had settled before 8 May 1869.⁷² As the government fulfilled almost all the compromises it had acquired with old settlers, land claims of any sort by alleged occupants with political connections arose. In some cases, they obtained land patents by using their political connections in Ottawa, as several Winnipeg settlers did.⁷³ The government, however, did not want to experience again disputes over uncertain claims and acted accordingly to prevent potential disputes in other places.

4.3.3 Government Funding, Railroad Land and Settlement

After Confederation, the Dominion government had promised British Columbia that a railroad would reach the West coast rapidly. The government sought private capital to fund that enterprise but investors were reluctant to put money into that monumental rail project. As a way to raise the money needed, the government granted land to railroad companies. In this form, the CPR obtained land each side of the railway main line. After the government granted land to railway colonization companies to open up land for settlement, the CPR also received land grants to extend their branch lines (Table 4-1). To prevent squatters from taking land in advance of the proposed railroad construction, the government reserved large tracts of land for railroad purpose. In 1874, twenty miles each side of the proposed railroad line were reserved (Figure 4-6). In July 1879, the reserve augmented to 55 miles each side of the line, which amounted to about 100 million acres in the best agricultural area. In order to accommodate diverse interests, the government envisaged a system of land allocation that could potentially benefit the railroad company and did not leave the Dominion government at a disadvantage to attract settlers through its immigration programs (See Figure 4-7). In this form, it divided the land into five belts each side of the main line. It reserved the townships' odd section numbers for pre-emption and the even numbers for the railroad company. In Belt A, within five miles of the main line, land would be sold at \$6 an acre. In Belt B,

⁷² Canada. Statutes, *Manitoba Act*, 26–27; Lambrecht, *The Administration of Dominion Land, 1870-1930*, 11.

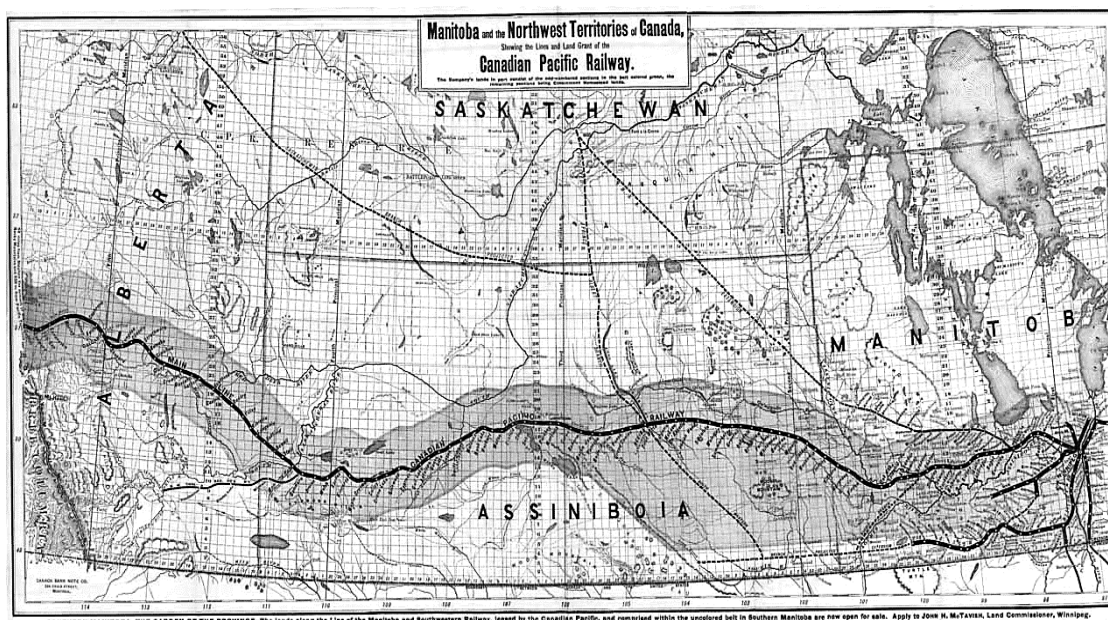
⁷³ Library and Archives Canada. Privy Council Office, series A-1-a, volume 671, Reel C-3631, Order-in-Council Number 1895-0527.

Table 4-1 Railway Land Subsidies in Western Manitoba, 1881

Company and Line	Acres per mile	Acreage earned	Acreage granted
CNR ^a	6,400	1,641,920	326,720
CPR ^b	12,500	2,520,382	1,753,920
GNWCR	6,400	320,000	6,080
MNWR ^c	6,400	889,600	368,640
MSWCR	6,400	502,400	512,000
SWR	6,400	99,880	
Total		5,974,182	2,967,360

Source: Tyman, John L. *By Section, Township and Range: Studies in Prairie Settlement*. Brandon, MB: Brandon University, 1972, 161. ^aCanadian National Railway (CNR): Operated three branch lines. ^bCanadian Pacific Railway (CPR): in addition to the main line, this company operated four branch lines. ^cManitoba North-Western Railway (MNWR), this line operated two branch lines. Acreage earned means the area the railway company obtained per mile of railroad built. Acreage granted means the area companies received after they claimed other portions of public land that they had already sold by “mistake” farther from their allocated area. GNWCR=Great North-West Central Railway; MSWCR=Manitoba South-Western Colonization Railway; SWR=South Western Railway.

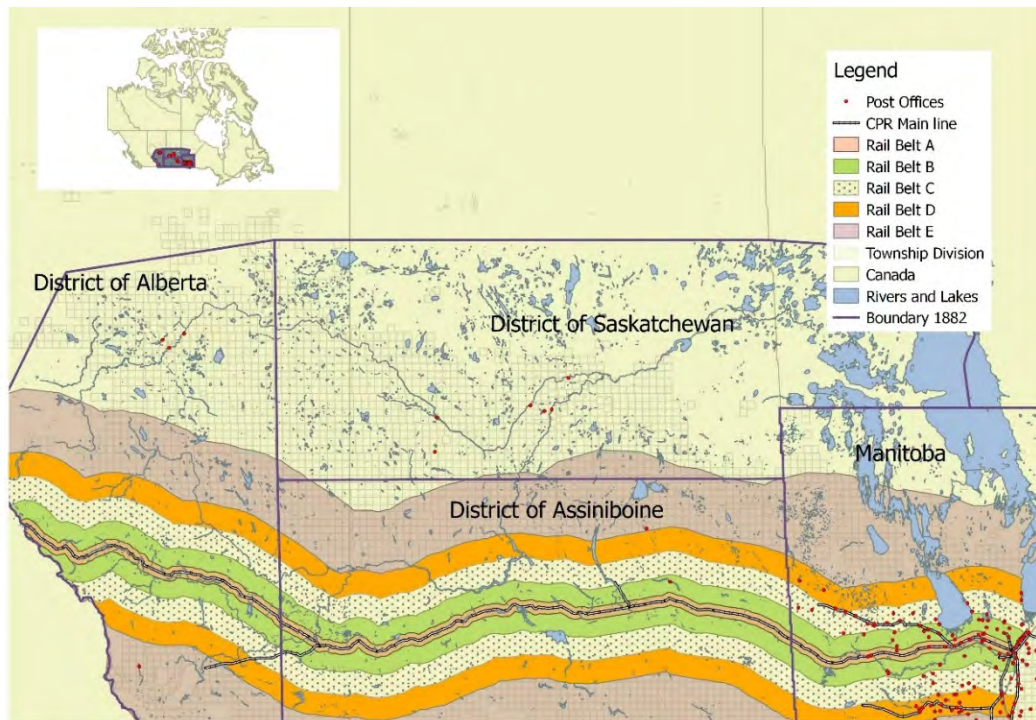
Figure 4-6 CPR Land Grant.



Source: Canadian Pacific Railway Company. *Manitoba and the Northwest Territories of Canada Showing the Lines and Land Grant of the Canadian Pacific Railway* [map]. Scale not given. In: *Canadian Pacific Railway Company. Manitoba the Canadian North-West: Testimony of Actual Settlers*. [Montreal]: Canadian Pacific Railway Company, 1886. University of Manitoba Archives & Special Collections.

15 miles within the main line, the government reserved quarter sections for pre-emption to be sold at \$2.5 per acre, another quarter section for free grants and half a section to be sold for the railroad company at \$5 per acre. The farther the belt was from the main line, the lower the price of the land.

Figure 4-7 CPR Land's Grant, 1879.



Source: Author's GIS design based on government land division each side of the railroad line in 1879 based on Library and Archives Canada. Privy Council Office, series A-1-d, volume 2760, Order-in-Council Number 1879-0976.

Government regulations, however, changed as the American Homestead Act changed the size of the homestead from 80 acres to 160 acres. In order to attract immigrants to the West, Canada had to offer future settlers conditions better than, or at least similar to those of the United States. Therefore, it increased the size of the homestead to 160 acres as well. They also reduced the price and made the conditions of sale in Belts B and C similar.⁷⁴ By 1883, 1,221 townships were surveyed in an area of the fertile belt that contained 27 million acres; of those, 1,059 townships went to railroad subsidies.⁷⁵ As

Table 4-2 shows, only 36 percent went to Free Grants. The Dominion kept about 11 percent and the Canadian Pacific Railway (CPR) and the HBC obtained together 30 percent of the land in Western Manitoba and 21 percent in the rest of the western territory, although in the latter, the amount of vacant land or under lease, such as the case of grazing land in Alberta, was more important.

⁷⁴ John Tyman, "Patterns of Western Land Settlement," *MHS Transactions Series*, no. 28, 3 (72 1971).

⁷⁵ Lambrecht, *The Administration of Dominion Land, 1870-1930*, 12.

Table 4-2 Disposition of Land in Western Manitoba and the Prairie Provinces by 1930

Categories	Western Manitoba	Prairie Provinces
	percent	percent
Free Grants (Hmstd.)	36.2	36.2
Dominion Land Sale	11.6	8.1
Half-Breed Allotments	0	0.9
North-West Half Breed Grant	0.1	0.3
Parish and River Lots	.1	0.5
School Land	5.5	6
Granted to Railways	24.8	20.4
Granted to HBC	5.1	4.5
Drainage and Swamp Land	1.7	0.7
Irrigation Land	0	0.7
Manitoba University Grants	.9	0.1
Vacant or Under Lease	14	21.6
TOTAL	100	100

Source: Tyman, John L. *By Section, Township and Range: Studies in Prairie Settlement*. Brandon, MB: Brandon University, 1972, 203.

Studies based on neo-classical literature that analyzes institutions of private property emphasizes the differences between the institutions that shaped the Anglo world and compare with the institutions that prevailed in countries that inherited the organization left by the Spanish Crown once Latin America became independent. In those evaluations, they emphasize the importance of early land distribution and the enforcement of property rights to the land that allowed Canada and the United States, for instance, to achieve a more egalitarian society through a more democratic land allocation. The story, however, was more complex than that. Canada, yet, with fewer conflicts, organized the division of land by using the system already in use in the United States but without the tiresome activity of dealing with squatters like what happened south of the border and in Australia and Argentina.

Even if we do not consider indigenous dispossession of their communal land, the distribution of public land to potential settlers was far from being equally, democratically distributed as the literature assumed. The Hudson's Bay Company and the Canadian Pacific Railway obtained an important share in the allocation of public land (See Table 4-2), especially the best farming land. Institutionalists also remarked that land policies in Latin America benefit principally the elite, as the strong evidence of

land distribution in Argentina, for instance, showed. The literature, however, downplays the involvement of the Canadian elite to secure public land for themselves. Donald Smith, one of the CPR main investors and who was for a short time the HBC Land's Commissioner, was one of the most important landholders of the period.⁷⁶ The HBC also obtained the urban land around their old posts. Rapid urbanization of key places where the HBC had land interests led to an influx of capital from eastern Canada and Great Britain that headed to a wave of land speculation in Winnipeg and elsewhere.⁷⁷ Moreover, land and railway colonization companies that received large extensions of territory in compensation for attracting immigrants and settlers to the region turned aside their "altruistic" intentions, as John Tyman remarked, and re-distributed the land among their investors and shareholders. For instance, out of 370,000 acres allocated to the Manitoba and North Western Railway Company, 120,000 acres went to private investors, not to bonafide settlers.⁷⁸ Other land companies followed similar procedure, as James Hedges had thoroughly documented in 1939.⁷⁹

Certainly, this thesis acknowledges the diverse purposes of land tenure between Canadian corporations and Latin American landowners, principally in Argentina. The CPR and the HBC never devised a productive endeavour with the land they owned. Their interest was to act as a sort of real estate agents and sell the land once the market conditions were favourable to them. Argentinian *estancieros*, on the other hand, used their land mainly as production units for cattle raising or to a less extent for agriculture. The distinction is important but the analysis must be dynamic. Canadian corporations held land until the 1930s and the process of land sale was very slow, so, in fact, there were large landowners for a long time even though their intentions were not to use these lands as productive units. Although, it is important to note that the size of land holding, ultimately, depended on the staple produced. In the case of the leased grazing land in

⁷⁶ Harold A. Innis, *A History of the Canadian Pacific Railway* (Toronto: McClelland and Stewart, 1923), 97.

⁷⁷ For a detailed account of city lots speculation in Winnipeg see Randolph Richard Rostecki, "The Growth of Winnipeg, 1870-1886" (M. A. Thesis, University of Manitoba, 1980), 50–70.

⁷⁸ John L. Tyman, *By Section, Township and Range: Studies in Prairie Settlement* (Brandon, MB: Brandon University, 1972), 183.

⁷⁹ Particularly Hedges' Chapter 6 has described the complicated process of private land alienation in the Prairies after 1896. See James B. Hedges, *Building the Canadian West: The Land and Colonization Policies of the Canadian Pacific Railway* (New York: The Macmillan Company, 1939).

Alberta, large estates developed regardless of the homestead division.⁸⁰ In the Argentinian case, not all large landowners maintained the same size of their units. Inheritance laws and the high number of children they had made that some of those large estates were subsequently subdivided among heirs. This process was particularly noticeable in older settlements, principally north of the Salado River in the Province of Buenos Aires.⁸¹ In addition, large extensions of land in Argentina were often kept unproductive as well.

4.4 Homestead Entries, Cancellations and Settlement

The Canadian Federal government started the survey of the new territories in 1870. The survey started on the so-called meridian 1 in southern Manitoba, close to the town of Emerson in the boundary between Canada and the United States, and moved eastward immediately and westward the following years. By 1914, the survey was almost finished across all the territory that occupied the boundaries established in 1882. That survey produced an orderly grid of 50,000 townships of thirty-six square miles each. While the grid formed a pattern, the actual settlement of those spaces followed an uneven pattern with some regions cluttered and other regions empty. Settlers established themselves in certain areas while other areas remained empty until the turn of the century. While initially settlers established themselves alongside rivers, principally the Red, Assiniboine and Little Saskatchewan Rivers, after 1880 that pattern changed. The arrival of the CPR main line to Winnipeg and later to Calgary passing through Brandon and Regina allowed settlers to obtain access to new areas close to the main line. The railroad alone, however, did not accelerate the rate of settlement, as next chapter will discuss.

The settlement of the Canadian prairies proved to be a dynamic environment where immigrants frequently moved away from the areas that they originally attempted to establish themselves. Neo-classical analysis of the behavior of economic agents high-

⁸⁰ An account of cattle raising and large estates in Western Canada, principally Alberta, in W. M. Elofson, *Cowboys, Gentlemen, and Cattle Thieves: Ranching on the Western Frontier* (Montreal: McGill-Queen's Press, 2000).

⁸¹ See, for instance, a detailed map of property owners in the Province of Buenos Aires in 1864, Saturnino Salas and Rodolfo Kratzenstein, "Registro Grafico de las propiedades rurales de la Provinria [sic] de Buenos Aires Construido por el Departamento Topográfico y publicado con autorización del Superior Gobierno de la Provincia; Saturnino Salas... [et. al.]," Material cartográfico (Buenos Aires: Departamento Topográfico, 1864), <http://bdh-rd.bne.es/viewer.vm?id=0000040985&page=1>.

lighted the rational choice individuals made in order to maximize their profits and minimize risks and failures. The literature on Western settlement assumed that settlers were individuals that followed a pattern of entrepreneurship and liberal individualism. Very often, those studies centre the discussion on the economic factors that determined settlers' decisions. The settlement of a new territory such as Western Canada, however, showed a variety of individuals chasing different type of opportunities, economic and non-economic alike. Not all among the initial wave of settlers to the Prairies were risk taker individuals and the settlement of the Canadian Prairies showed a variety of examples. European ethnic communities like Russian Mennonites, Mormons, Hutterites, Doukhobors, and others groups who segregated themselves in bloc settlements in close-knit communities across the Prairies, resisted to some extent the forces of market capitalism and created links of solidarity among themselves by keeping their languages, culture, schools and way of organizing their labour activity.⁸² John Lehr, for instance, has described the resilient nature of Ukrainian immigrants who resisted government suggestions to settle separated from knit and community.⁸³ This is an important observation as different type of settlers arrived in different historical periods.

If the analysis is centred on settlers' economic opportunities with the goal of obtaining cheap land then the study of the disposal of public lands is a good start. If one deconstruct the timing of settlement according to homestead entries, the settlement of Western Canada, then, shows two distinct patterns. Putting aside bloc settlement, the first pattern from 1870s to 1898 illustrates a low scale movement of individuals attempting to establish themselves in the region. Land speculation fuelled by the railroad expansion explains this period with the highest number of entries in the peak of the land speculation that lasted from 1880 to 1883-4 in Manitoba. The aftermath of the so-called "land boom" witnessed an unprecedented number of failures. In 1886, the year with

⁸² Perhaps the seminal work on bloc settlement was the study by Dawson included in the Canadian Frontiers of Settlement series published in 1936. See Carl A. Dawson, *Group Settlement: Ethnic Communities in Western Canada*, Canadian Frontiers of Settlement 9 (Toronto: The Macmillan Company of Canada Ltd., 1936). John Warkentin elaborates on the Mennonite community's slow transition from communal production to market capitalism. See John Warkentin, "Mennonite Agricultural Settlements of Southern Manitoba," *Geographical Review* 49, no. 3 (July 1, 1959): 342-68, doi:10.2307/211911. A more recent study revisits the pattern of ethnic bloc settlement in Saskatchewan. See Alan B. Anderson, *Settling Saskatchewan* (Regina, SK: University of Regina Press, 2013).

⁸³ John Lehr, "The Process and Pattern of Ukrainian Rural Settlement in Western Canada: 1891-1914" (PhD Dissertation, University of Manitoba, 1978).

almost 90 percent of homestead cancellations, the report of the Deputy Minister of the Interior said:

The greatest difficulty the Board and the Department have experienced has been in regard to the speculative class of entries, which were largely the product of what is now known as the “boom.” Persons obtaining those entries never had any intention in good faith to become actual residents upon their land and make the cultivation of it their business.⁸⁴

The second pattern, from 1899 to 1914, follows the trend marked by what analysts dubbed as the “wheat boom” and defined a period of “genuine settlers” if for that one differentiates the latter from those individuals attempting to make a speculative investment like in the previous period.⁸⁵

The description of “speculative” investments deserves a brief comment. The government faced the contradictions of a capitalist developmental state in its initial stage of formation. From a political point of view, the government sought to settle the Prairies under a democratic program of small land distribution for a small fee. On the other hand, capitalists willing to invest into new endeavours took advantage of every business opportunity available to them despite government intentions. These diverse interests in play marked the apparently tension between the government, speculators and bonafide settlers and the direction of settlement and different land booms during the period.⁸⁶

Figure 4-8 shows the number of homestead entries and the percent of cancellations during the period. While studies of Western Canada settlement emphasized the strong number of cancellations during the initial phase of settlement (1870-1898), they downplayed the same pattern during the phase of great immigration. The number of cancellations during this initial period illustrates first the expectations the new area raised among bonafide settlers and investors and secondly the character of speculative investments on land, especially urban land. After the Winnipeg land boom of 1880-

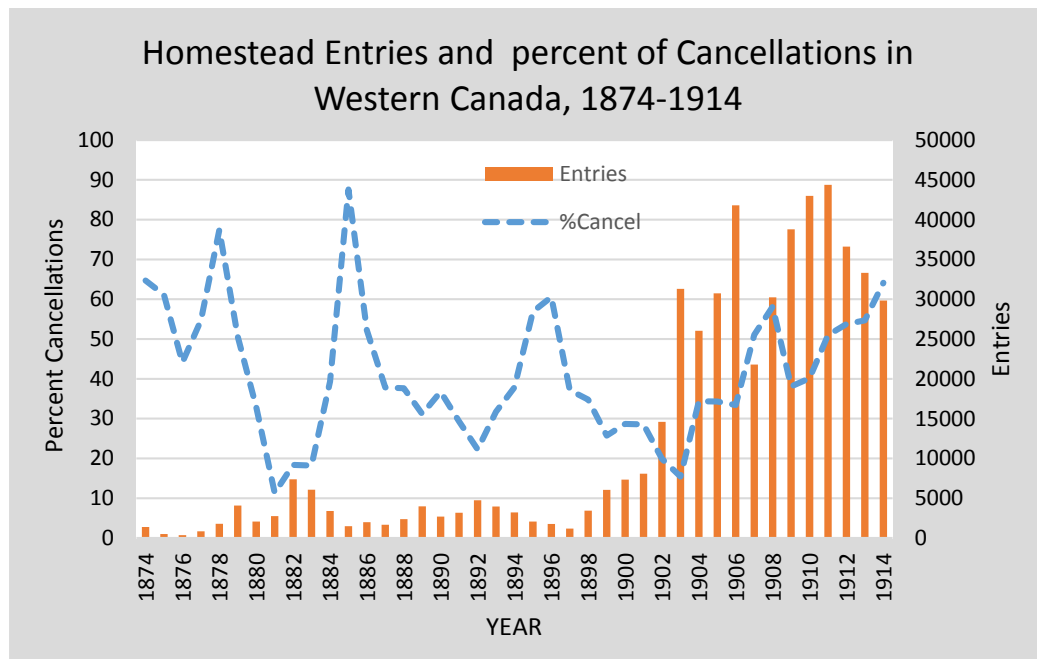
⁸⁴ Report of the Department of Interior in Canada. Parliament, *Sessional Papers of the Dominion of Canada : Volume 6, Fourth Session of the First Parliament, Session 1886* (Ottawa: McLean, Rogers & Co., 1886), xxi.

⁸⁵ Lambrecht, *The Administration of Dominion Land, 1870-1930*, 20.

⁸⁶ Analyzing the early allocation of land in Upper Canada (Ontario), John Clarke has extensively discussed the behavior of land speculators of any sort in the region. According to Clarke, the government defined a speculator as any individual or corporation who owned more than 400 acres of land and did not hold it to any productive endeavor. See John Clarke, *Land, Power, and Economics on the Frontier of Upper Canada* (Montreal: McGill-Queen's University Press, 2001), 92–190.

1883, the number of cancellations reached almost 90 percent. Despite those deep shifts, the period 1870-1898 registers an average of 2,700 homestead entries annually and an average of 42 percent of cancellations. The period 1899-1914 increased ten folds to an average of 27,000 entries annually but the number of cancellations remained similar, 39 percent.

Figure 4-8 Homestead Entries and Cancellations, 1870-1914.



Source: Annual Report of the Minister of Interior, Land Offices Inspectors in the *Sessional Papers*, 1870-1915. Data in Appendix Table A-14.

As mentioned before, the period 1870-1897 witnessed a low-density settlement pattern. Economic historians attempted to find the causal factors that describe the period and delayed settlement into the area. One of the aspects to take into account when analyzing Prairie settlement is timing. The survey that started in Southern Manitoba in 1870 was interrupted several times. The survey slowly moved west the following years and hence townships were not ready to be subdivided into quarter sections sooner.⁸⁷ Once the survey was completed and the railroad companies obtained their grants, not all the townships were available for sale or for free grants. The government expected that colonization and railroad companies initiated the land sales and therefore would promote immigration and settlement. The railroad companies, on the other hand, awaited that the government first allocated all free grants under the Dominion Lands

⁸⁷ M. C. (Malcolm Charles) Urquhart and Kenneth Buckley, eds., *Historical Statistics of Canada* (Toronto: Cambridge University Press, The MacMillan Company of Canada Ltd., 1965), 310.

Act to settlers so they could later offer their townships close to others already settled and in this way increase the land prices or the possibility of a faster sale.⁸⁸ These speculations between the government and land companies and railways, although pursuing different interests, were to some extent responsible for the delayed occupation of farming land in the period ending about 1898 because land was not fully available for sale or free grants.

4.4.1 Homesteading

If potential settlers did not arrive in the region sponsored by any land company, individual sponsors or the railroad company and, instead, attempted to venture to the territory alone, the process to obtain a homestead was simple. A person over eighteen years old was allowed to apply for a homestead entry.⁸⁹ A potential settler could apply in any of the land offices distributed across Manitoba and the North West-Territories and the land agent provided the authorization to settle in determined areas. Settlers paid a \$10 administration fee and were required to follow a series of guidelines in order to obtain the title of the land. While some of the requirements changed over time, the procedure remained almost the same. Settlers had to show that they had improved the land, built a dwelling and engaged in some sort of agricultural endeavor over three years. They also had to reside in the homestead for at least six months every year in order to fulfil the obligations. In cases where settlers had to abandon the homestead for a period, they had to apply for a “Leave of Absence” before the local land office. Once the three years of residency were satisfied, they could apply for a patent letter to the district land office in order to obtain the ownership of that land.⁹⁰ The timing to obtain a land patent sometimes exceeded that outlined in the regulations. As one inspector reported, the majority of those who applied for a patent in 1891 did so after four or five years of homesteading because they could not fulfill some of the requirements sooner.⁹¹

⁸⁸ Hedges, *Building the Canadian West*, 27–28.

⁸⁹ Initially the age was 21. Canada. Statutes, *Dominion Lands Act*, 65. The amendment of 1876 reduced the age to 18 and allowed women head of families to apply for a homestead entry. See Canada. Parliament, *Dominion Lands Acts* (s.n., 1876), 12.

⁹⁰ Canada. Parliament, *Dominion Lands Acts*, 13–15.

⁹¹ Report of the Commissioner of Dominion Land in Canada. Parliament, *Sessional Papers of the Dominion of Canada : Volume 14, First Session of the Seventh Parliament, Session 1891* (Ottawa: Brown Chamberlin, 1891), 6.

To speed up the process, inspectors frequently surveyed the area under their administration in order to encourage settlers who fulfilled their obligations to apply for a land patent before them instead of traveling to the local land office.

The number of Dominion Land Offices across the region changed over time as the government attempted to influence potential settlers to establish in determined areas. In this sense, one can say that land offices were the principal agents of the organization of settler capitalism in Western Canada. Until 1880, only seven offices serviced the area. Mainly located in Manitoba, those offices were in the charge of a land commissioner and inspectors. Once the railroad expanded and new branch lines connected distant locations, land offices opened in several new strategic areas. Some offices temporarily opened sub-offices due to the demand and dynamic of homestead entries in order to direct settlers into areas distant from the main land office.⁹² Other offices were short lived and lasted until a rush for land ended.

In general, inspectors checked the homesteads during farm season when active settlers were involved in ploughing, seeding and harvesting. During winter months, settlers could reside in other places or work in other trades elsewhere in order to save money to invest in the homestead during the agricultural season. Inspectors were benevolent in some cases and showed good disposition and understanding of the conditions settlers encountered in their new residences. They often excused occasional settlers who showed interest in their homestead but could not fulfill their residency obligations as the Lands Act stipulated. Under the Dominion Lands Act of 1874 and the amendments of 1886, a settler who had fulfilled all the homesteads obligations could apply for an adjacent homestead. This process, known as pre-emption, finished in 1890 but was reinstated at the turn of the century for a short period. The system was not free of problems, however. A settler, who hardly could fulfill his homestead obligations, complained an inspector, paid the \$2.50 pre-emption fee and assured another homestead

⁹² In 1904, for instance, the Report included entries for 41 sub-agencies. See Report of Inspector of the Dominion Land Agencies in Canada. Parliament, *Sessional Papers of the Dominion of Canada : Volume 10, First Session of the Tenth Parliament, Session 1905* (Ottawa: S. E. Dawson, 1905), 7–8. Before 1901, the reports did not include sub-agencies so performing a spatial analysis with sub-agencies would not be appropriate to obtain a finer picture for the whole period.

for speculative purposes.⁹³ This pattern strongly replicated in all the areas during the period under evaluation.

While homestead entries estimated in the annual reports reflected the interest that potential settlers had in that year, cancellations became less precise. Before 1894, inspectors reported cancellations accounted for the report's year but there were no precision about when the homestead was first settled or an entry filed for the first time. According to reports, inspectors checked the area periodically examining that settlers were actually residing in the homestead. If no settler was present and there were no signs of land improvements, the inspector cancelled the entry and it became open for a second entry or listed for sale afterward. The reports on cancellations were not precise about the date when the homestead was actually abandoned until 1894. After 1912, it included the reasons of cancellations. According to partial data obtained for the years 1912-1914, cancellations were mainly due to abandonment and default on the homesteaders' requirements. The other observation obtained from the data of the period 1894-1914 was that the highest number of cancellations came from homesteads that received entries the previous two and three years.⁹⁴ Unfortunately, there are no similar details in the data before 1894 so it is not possible to arrive to the same conclusions for the period after 1894. These data suggest that after 1894 land inspectors thoroughly checked homesteads and land agents reported the facts with more details. If inspectors did not report the homesteads for any reason, potential settlers or speculators that were looking for opportunities did so. As a report of 1904 said,

[T]he number of applications for cancellation has been unprecedentedly large, showing that if homesteaders are not prepared to carry out the requirements of the law there are others who will. Needless to say, these cancellations affect land close to railways, being closely watched by settlers with regard to the performance of homestead duties.⁹⁵

⁹³ Annual Report of the Department of the Interior. Report of the Commissioner of Dominion Land in Canada. Parliament, *Sessional Papers of the Dominion of Canada : Volume 11, Fourth Session of the Sixth Parliament, Session 1889* (Ottawa: Brown Chamberlin, 1890), 12–13.

⁹⁴ Urquhart and Buckley briefly mention that government reports included date of cancellations but they did not include that in their tables. See Urquhart and Buckley, *Historical Statistics of Canada*, 311.

⁹⁵ Annual Report of the Department of the Interior. Dominion Land. Report on Yorkton in Canada. Parliament, *Sessional Papers of the Dominion of Canada*, 1905, 30.

Homesteads close to the railroad lines or train stations became increasingly popular for an entry. As potential settlers could easily arrive at the train station and check the area, they applied for a homestead entry more rapidly. Even if they had no intention to settle immediately, at least they attempted to secure a lot. Inspectors frequently observed this speculative movement. The report of 1884 said,

I am informed, and believe the fact to be, that many of the entries which have thus been cancelled were made during the boom, by persons who had no real intention of becoming *bona fide* homesteaders; but who settled upon land and made entries therefore with the view to the sale of the same so soon as a title might be acquired.⁹⁶

The same applied for cancellations. Homesteads close to the railroad lines that did not show signs of improvements were often strong candidates to be reported as abandoned because inspectors and potential settlers with interest in the area could check them easily. Distant homesteads, instead, were less scrutinized. It is fair to suggest then that cancellations reported annually might have corresponded to homesteads close to land offices, sub-agencies and to railroad stations.

4.4.2 Homesteads Data

The records of the Minister of the Interior regarding public land sales, transfers and disposals have been the object of discussions in the past. Records were lost, information scattered and records open to the public were not methodically sorted. Kirk Lambrecht and Irene Spry's thorough investigations in the 1990s put order to a rather chaotic administration of public land records.⁹⁷ These works helped to some extent to have a better understanding of the complicated process of public land disposal. Certainly, there is still a fair amount of work to be done in order to study the dynamic pattern of Western Canada settlement. This chapter contributes with more details concerning that dynamic era.

Data on homestead entries and cancellations reproduced in several works were usually extracted from the *Historical Statistics of Canada* and the different *Statistical Year's Books* that provide partial aggregated data. Urquhart and Buckley's data, mainly

⁹⁶ Annual Report of the Department of the Interior in Canada. Parliament, *Sessional Papers Volume 7, Third Session of the Fifth Parliament, Session 1885* (Ottawa: McLean, Rogers & Co., 1885), 9.

⁹⁷ Irene M. Spry and Bennett McCardle, *The Records of the Department of the Interior and Research Concerning Canada's Western Frontier of Settlement* (Regina: Canadian Plains Research Center, 1993); Lambrecht, *The Administration of Dominion Land, 1870-1930*.

cited in different publications, used partial aggregated data extracted from the *Annual Reports of the Department of Interior* and from Chester Martin's work.⁹⁸ However useful these data may be, there are incomplete. For instance, in Urquhart and Buckley's, cancellation data for Manitoba and the North West Territories start in 1883 and they report 1,334 cancellations in that year. Our estimate for the entire region for the period 1872-1883 is 12,369 cancellations. For Alberta and Saskatchewan, they compute the number of cancellations since 1911 while there were data available since 1906, a year after they became provinces.⁹⁹ G. K. Goudry from the University of Alberta prepared section K on Land and Forests in the 1965 edition. In the updated 1983 edition, figures on homestead entries and cancellations are closer to our data but there are still important differences. Brian S. Osborne from Queen's University prepared this new section L on land. He did not mention why the figures under "cancellations" changed from one edition to the other; instead, he directs readers to see the first edition for details, which, in fact, does not provide further explanations.¹⁰⁰ Economic historians for the most part used (and still use) Urquhart and Buckley's homesteads figures to analyze Western Canada settlement.¹⁰¹ Apart from being incomplete records, these publications report for Western Canada mainly as an entire region, not from individual land offices. In this way it is impossible to estimate which region attracted more settlers and when; which

⁹⁸ Urquhart and Buckley, *Historical Statistics of Canada*, 310–311; Chester Martin, *Dominion Lands Policy*, ed. Lewis H. Thomas, The Carleton Library No. 69 (Toronto: McClelland and Stewart Limited, 1973), 170.

⁹⁹ Urquhart and Buckley, *Historical Statistics of Canada*, 320. Certainly, Alberta and Saskatchewan became provinces in 1905, but data were available for early years under different land offices located within the limits of the future provinces.

¹⁰⁰ *Historical Statistics of Canada*, 1983 edition: Online access: <http://www.statcan.gc.ca/pub/11-516-x/section1/4147441-eng.htm>.

¹⁰¹ For instance, Jeremy Adelman, *Frontier Development: Land, Labour, and Capital on the Wheatlands of Argentina and Canada, 1890-1914* (Oxford: Oxford University Press, 1994), 27., K. H. Norrie, "The Rate of Settlement of the Canadian Prairies, 1870-1911," *The Journal of Economic History* 35, no. 2 (June 1975): 410–27; Kenneth H. Norrie, "The Rate of Settlement of the Canadian Prairies, 1870-1911: A Reply," *The Journal of Economic History* 38, no. 2 (June 1978): 474–75; K. Gary Grant, "The Rate of Settlement of the Canadian Prairies, 1870-1911: A Comment," *The Journal of Economic History* 38, no. 2 (June 1, 1978): 471–73; William Marr and Michael Percy, "The Government and the Rate of Canadian Prairie Settlement," *The Canadian Journal of Economics / Revue Canadienne d'Economique* 11, no. 4 (November 1, 1978): 757–67. Buckley also highlighted the spectacular number of homestead entries after 1890 but he did not include the number of cancellations in his important work on capital formation. See Kenneth A. H. Buckley, *Capital Formation in Canada, 1896-1930*, Canadian Studies in Economics, No. 2., Carleton Library No. 77 (Toronto: McClelland and Stewart Limited, 1974), 20. Chester Martin acknowledged that between 1870-1927 there were 41 percent of homesteads cancellations, similar to this chapter's figures, but he did not expand the study year by year neither did he provide data on that matter. See Martin, *Dominion Lands Policy*, 172.

region registered the higher number of cancellations and failures and so on. The information these sources provide describe a static understanding of a very dynamic period. A comprehensive evaluation on homestead entries and cancellations is still a work to be done. The point is important because studies based on that data suggest that after 1896 Canada's land allocation was more successful compared to a previous period than in reality was. What this chapter discusses is that the period shared similar percent of homestead cancellations.

This chapter has thoroughly examined the Department of Interior annual reports included in the *Sessional Papers* and incorporated data extracted from textual and tabular records reported by each of the land commissioners for each land office over the years. Data from individual land offices start in 1881 when the frontier of settlement started the movement to the west more consistently. While for initial years, 1872-1880, figures from homestead entries and cancellations from individual land offices coincide with other publications, for the latter years there was a strong difference.¹⁰² It is important to mention that the aggregated data reported by the Deputy Minister of the Interior in the annual reports did not frequently coincide with the sum of the figures reported by each land inspector in the same report. For instance, one passage of the Report of 1900 said:

The percentage of cancelled entries during the years extending from 1882 to 1896 varied from 24 to 47 each year, whereas for the past six months it has fallen to *one percent*, (our emphasis) showing conclusively that persons who acquire the land to-day are bona fide agriculturists, who do so solely for the purpose of building up permanent homes for themselves and families, and who have the necessary means at their disposal to successfully carry out their object.¹⁰³

The sum of cancellations reported by any individual Land Agent for the year 1900, however, accounts for 2,100 cancellations or 29 percent of the total entries according to the data collected for this dissertation and not one percent as the Report stated. During the investigation, this author did not find any reason why these data discrepancies

¹⁰² See data from the *Historical Statistics's* chapter and our data in Appendix, Table A-14. This chapter presents only data for homesteads that received an entry for the first time. The Reports in some years also accounted for those homesteads that received a second entry after a cancellation. Data collected from individual land offices available online at <http://gusvelasco.sytes.net/data>.

¹⁰³ Annual Report of the Department of Interior in Canada. Parliament, *Sessional Papers Volume 10, First Session of the Ninth Parliament, Session 1901* (Ottawa: S. E. Dawson, 1901), viii.

persisted over the years other than a political one. The “booster” spirit of the time painted with a glossy cover the general reports, especially the reports on homestead entries, praising the development of the region and the importance and quality of the settlers who established themselves in the area. Officers were aware that their reports were methodically scrutinized and a successful promotion of the Prairies as a place for immigration and settlement relied mostly on data that showed the development of the region in a positive view. On the other hand, officers underreported the less glamorous evidence presented by the individual land offices data. It is interesting to point out that individual land commissioners introduced the reports remarking on the importance of homestead entries but they rarely commented on the number of cancellations, which, in fact, they did include in the tabular reports. Later reports, principally after 1915, reconciled the cancellation figures and the aggregated data for the period was very close to those included in the agencies’ reports and analyzed in this chapter. While it was possible to obtain the number of entries and cancellations for the whole period, studies on Western Canada development, however, used Urquhart and Buckley’s incomplete data. This chapter contributes to analyze Western Canada settlement with an updated dataset.

4.4.3 An Empirical Exercise

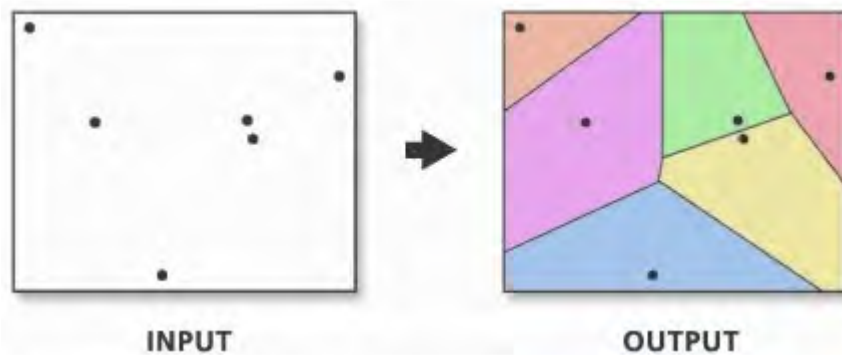
Of course, having a more complete data set for the period that include individual land offices records is a partial work. The other task is to identify the location of those land offices across the territory. The next task is to estimate the area of influence of offices as they opened and closed frequently over the years and maps of land offices areas prior to 1913 were not possible to find.¹⁰⁴ To do this, first, we georeferenced the location of land offices and then performed a spatial analysis by using Thiessen Triangulation on a GIS software.¹⁰⁵ Thiessen Triangulation is one of the methods used to perform spatial interpolation where a set of known points are unevenly distributed on a plane. A complex mathematical algorithm divides the area surrounding the points into proximal zones or Thiessen polygons (Figure 4-9); “[T]hese zones represent full areas where any location within the zone is closer to its associated input point than to any

¹⁰⁴ Tyman produced a partial map of land offices in southwestern Manitoba. See *Tyman, By Section, Township and Range: Studies in Prairie Settlement*, 39–41.

¹⁰⁵ Georeference means to position a point, line or polygon on a map according to their geographical coordinates.

other input point.”¹⁰⁶The process is effective to guesstimate unknown areas based on the location of a known point, in this case, the land office location. While we gathered data until 1914, the analysis finishes in 1905 because after that year Alberta and

Figure 4-9 Example of a Thiessen Triangulation



Source: ArcGis online. “ArcGIS Desktop,” accessed June 2, 2015, <http://help.arcgis.com/en/arcgisdesktop/10.0/help/index.html#//00080000001m000000>.

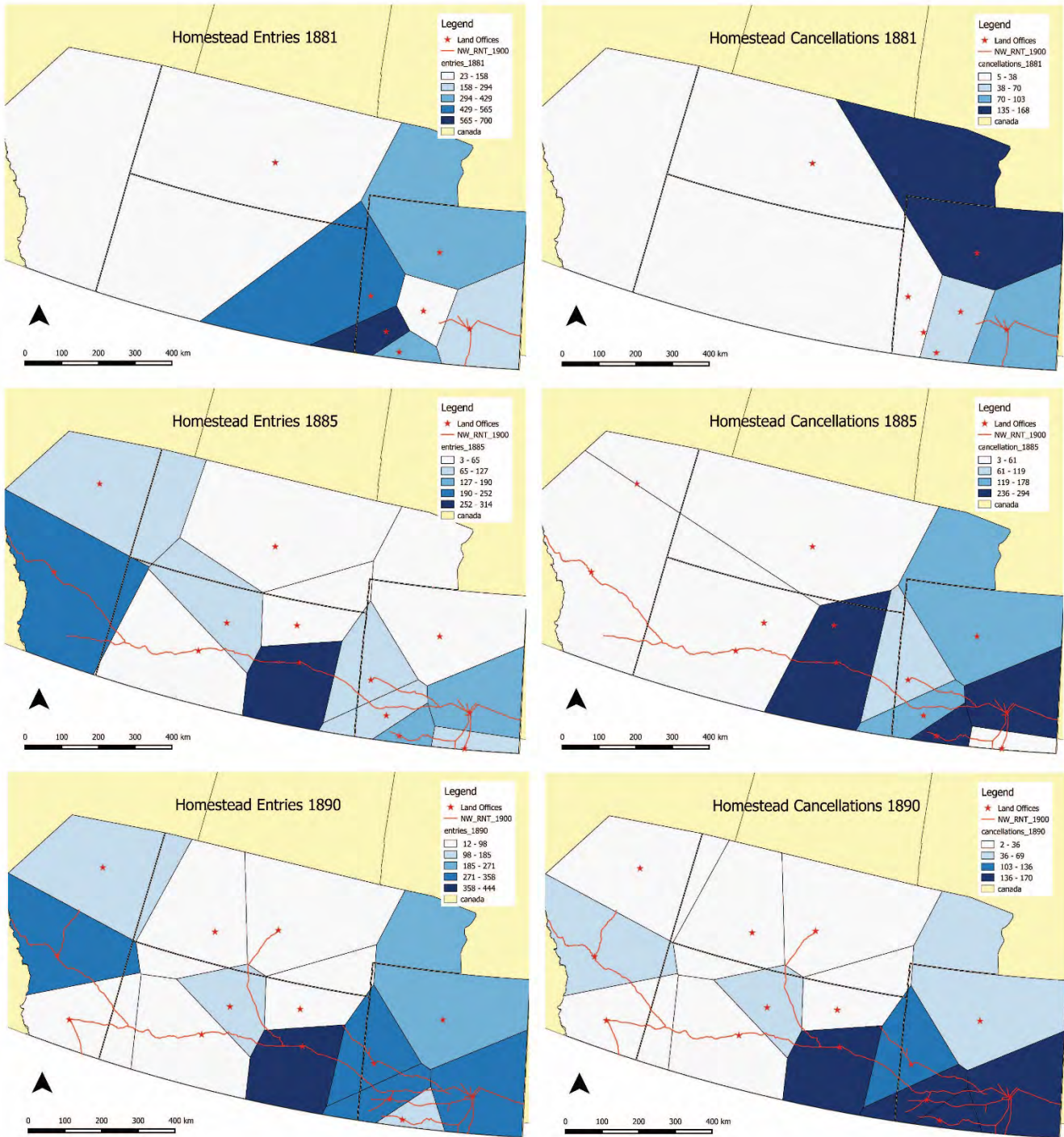
Saskatchewan became provinces, the area of the new provinces extended considerably to the north, and hence, the area under study to perform the spatial analysis changed the parameters. The visual representation becomes therefore inconsistent with the previous graphics and the comparison is not clear enough to show discrepancies over time and space. Nevertheless, only two new land offices opened in northern Alberta in the period, one in Grande Prairie and the other in Grouard, both in 1910.

4.4.1 Spatial Analysis

It is important to observe that this visual representation is an attempt to recreate an imprecise area of influence. There is no evidence that the areas land offices administered were similar to those created for this exercise but as no other reliable sources could be obtained, the interpolation exercise can show some important patterns of potential locations of entries and cancellations over the years. Figure 4-10 and Figure 4-11 show the results of the analysis. On the left side, the map series show homestead entries starting in 1881. On the right side, the figure shows homestead cancellations for the

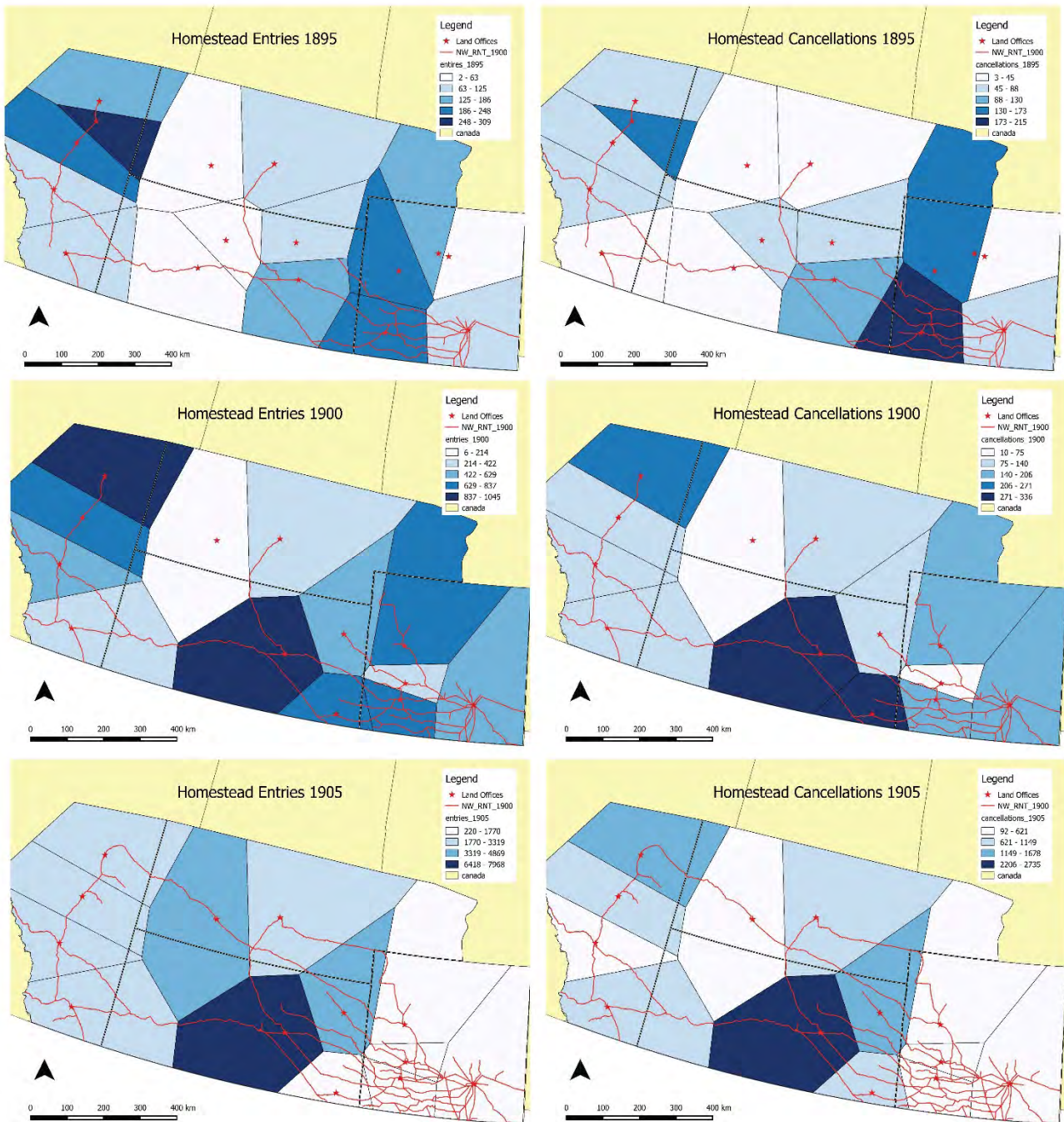
¹⁰⁶ “ArcGIS Desktop,” accessed June 2, 2015, <http://help.arcgis.com/en/arcgisdesktop/10.0/help/index.html#//00080000001m000000>. For a mathematical explanation of the algorithm involved in the calculations see, Kurt E. Brassel and Douglas Reif, “A Procedure to Generate Thiessen Polygons,” *Geographical Analysis* 11, no. 3 (July 1, 1979): 289–303, doi:10.1111/j.1538-4632.1979.tb00695.x; B. N. Boots, *Voronoi (Thiessen) Polygons* (Norwich: Geo Books), accessed January 1, 2013, <http://www.qmrg.org.uk/files/2008/11/45-voronoi-polygons.pdf>.

Figure 4-10 Land offices, railroad, homesteads entries and cancellations, 1881-1890.



Source: Authors' design based on GIS Thiessen Triangulation

Figure 4-11 Land offices, railroad, homesteads entries and cancellations, 1895-1905.



Source: Author's design based on GIS Thiessen triangulation.

same period. Darker colours represent the higher number of entries or cancellations; white, the lowest. In 1881, there were strong entries in Souris, southern Manitoba and it is possible to estimate the direction of settlement as the contiguous area to the west received an important number of homesteads entries as well. Before 1881 the main location and direction of settlers was in the Winnipeg area and in southern Manitoba. The presence farther west was very limited. The area was adjacent to that settled by the

Mennonite community in the so-called “West Reserve” since the 1870s and represented the best agricultural land in the province at the time.¹⁰⁷ If we observe the extension of the railroad network, it is possible to demonstrate that settlers were attempting to establish themselves ahead of the arrival of the railroad. Cancellations, instead, were strong in the Little Saskatchewan area, north of Winnipeg. In 1885, the transcontinental railroad reached Vancouver and linked the country from coast to coast. Even though there were an important increase in homesteads entries in Alberta, the southern part of the District of Assiniboia attracted more settlers but also experienced strong cancellations. The number of cancellations reported in the Winnipeg and Turtle Mountain offices were also very strong. The pattern of entries in 1890 did not change substantially but cancellations were strong in all Southern Manitoba.

The following map series show that the pattern of entries and cancellations moved westward while the area previously settled did not show any important movement. Manitoba shows almost no activity after 1900 and suggests the end of the homestead era in the region.¹⁰⁸ After 1910, agencies in Manitoba moved or closed and the main business of the region were managed at the Winnipeg office.¹⁰⁹ The new western areas, however, experienced the hard work of a new prairie land recently opened for agricultural production and the uncertainties of the weather conditions. Inspectors frequently reported that settlers were very vulnerable to failures and consequently they abandoned homesteads very often. It is noticeable in Figure 4-11 that at the turn of the century land on the open prairie attracted the attention of an important number of settlers as strong number of entries were reported. These lands were less productive and were the last lands to settle during the period. The high number of cancellations in this area is a demonstration of the uncertainties settlers faced in these lands.

A final observation is that the discussion highlighted in this section refers only to the so-called free land. It does not include the allocation of lease land for grazing—principally in Alberta—the sale of School land, swamp land or timber land. In 1890,

¹⁰⁷ The West Reserve comprised an area of 500,000 acres. Even though the area soon was divided into homesteads of 160 acres, the Reserve was managed as a productive unit. Lawrence Klippenstein, “Manitoba Settlement and the Mennonite West Reserve (1875-1876),” *Manitoba Pageant* 21, no. 1 (Autumn 1975).

¹⁰⁸ Certainly, other privately held land like the ones in possession of the CPR, the HBC and different land companies were offered for sale.

¹⁰⁹ Tyman, *By Section, Township and Range: Studies in Prairie Settlement*, 69.

for instance, more than two million acres of grazing land were leased to 358 individuals and companies. The average area granted was 6,392 acres per individual or company.¹¹⁰ More importantly, after 1893 the HBC, the CPR and different land companies started a strong process of land sales. From 1893 to 1914, these companies sold more than 20 million acres of agricultural land for \$134 million.¹¹¹ Settlers and companies who bought these lands at an average price of almost \$7 an acre were the class of experienced agriculturists or investors that demanded good land and larger extensions than those offered by the government for homestead and pre-emption purposes.¹¹²

The importance of performing a spatial analysis with another, more complete dataset is to add a more detailed assessment of Western Canada settlement than those made with incomplete sources. The visual representation shows that the dynamic of Prairie settlement was complex. Settlers, land companies, the government, speculators and first-time farmers unevenly converged on a new territory open for settlement. Those studies that performed regression analysis to determine the causes of late immigration or settlement could not find the answers only on variables such as the price of wheat or land quality.¹¹³ Settlers attempted to obtain land in a variety of zones regardless of wheat prices, land fertility or weather conditions. First-time farmers learnt by doing (and failing) the everyday tasks of being a homesteader. The number of cancellations in the period was suggestive of this behaviour; less rational men and more risk takers and for that, the explanation does not distinguish those who made speculative investments on land from those who attempted to learn by doing in unfavorable conditions. Mackintosh observed, “[t]he pioneer is an experimenter. Without knowledge, he is a gambler.”¹¹⁴ This is particularly visible in the last four maps in Figure 4-11. The area of plain prairie received the higher number of entries but also the highest number of cancellations from 1900 to 1905.

¹¹⁰ See Report of the Department of Interior in Canada. Parliament, *Sessional Papers of the Dominion of Canada*, 1891, 22.

¹¹¹ Annual Report of the Department of Interior in Canada. Parliament, *Sessional Papers Volume 15, Third Session of the Eleventh Parliament, Session 1911* (Ottawa: C. H. Parmelee, 1911), xxvi–xxvii.

¹¹² In 1893, they sold land at \$2.93 an acre. Settlers paid almost \$15 an acre in 1913-1914.

¹¹³ Section 2.4 discussed econometric evaluations.

¹¹⁴ William A. Mackintosh, *Prairie Settlement: The Geographical Setting*, vol. 1, Canadian Frontiers of Settlement (Toronto: The Macmillan Company of Canada limited, 1934), xiv.

4.5 Conclusion

In the first part, this chapter provided a theoretical and historiographical framework that analyzed how the enforcement of property right was a task in which the state was the main actor in the organization of space. Space was not a neutral component; it developed under the state's political intervention aimed at transforming the common land into private property. In the process, the state enforced a new legality of land tenure not based on common share but on individual ownership with private benefits. The second half of the nineteenth century witnessed this unparalleled territorial transformation in countries of recent settlement that occurred together with the organization of modern states. Australia, Argentina, Canada, New Zealand, the United States, among others, experienced similar patterns of territorial expansion and state formation during the period. Students of institutions have highlighted the difference systems of land holdings in countries that followed the tradition of the Anglo world compared to those of the Spanish world. This section presented an overview of the timing and different outcomes that the enforcing of the property rights to the land produced in different areas of the world.

The division of the land on maps and then validated on deeds and documents provided the legal tools to enforce the private property of the land under capitalist exploitation. Countries of recent settlement adapted and transformed the legal tenure of land based on the institutional arrangement they had inherited from their former colonial institutions. Studies that followed NIE and NEH theories argue that these experiences of land distribution and allocation molded a divergent path of development between those countries in the long term. In this way, countries that followed the Anglo tradition organized the distribution of land in small plots and that promoted more democratic and equalitarian institutions than countries that inherited the institutional organization of the Spanish world. This chapter provided a more detailed explanation of the legal framework that these countries adopted. It showed that the appropriation, distribution and allocation of land were processes where every country or region experienced different outcomes according to historical periods and particular political decisions. Nevertheless, all countries sought similar ends: the transformation of common land into public domain and then into private property. Whether the early division of land into small plots produced a more equalitarian society in the long run is a very subjective explanation.

The second part of this chapter discussed in detail the allocation of land in Western Canada. Traditional literature praised Canada because the allocation of land in small plots determined a more democratic society based on land ownership and family farming.¹¹⁵ This part challenged those assumptions and showed that the main beneficiaries in the distribution of land were not homesteaders or the indigenous population but big corporations like the HBC, the CPR and different land companies and their investors, even though they did not use their land holdings as productive endeavours. Furthermore, this section utilized a visual representation drawn upon spatial analyses to demonstrate that the allocation of land to settlers was an uneven task that for periods witnessed an important number of failures in different regions. What these analyses show are that dividing the land into small plots does not mean that the allocation of land was successful or more democratic in all conditions. Moreover, ranching land in Alberta utilized large estates concentrated in fewer hands, mainly individuals, but also Eastern and American corporations. First time homesteaders attracted by government advertisements and “free” land, however, were often caught without enough economic resources to embrace a variety of adverse conditions.

Studies that investigated the rate and timing of settlement into the Canadian Prairies used the decennial census or the provincial census records to estimate the flow of population into the area like the seminal works by W. A. Mackintosh in the 1930s.¹¹⁶ Other studies, mentioned in this chapter, utilized homestead entries and cancellations to demonstrate how settlers reacted to the challenges posed by a new environment. Those studies relied on partial aggregated data extracted from Urquhart and Buckley’s statistics. As this chapter has revealed these statistics are incomplete.

The contribution of this chapter is important for two main reasons. First, because it incorporated data that were not taken into consideration neither from contemporary statistics and reports nor from later studies. This chapter used detailed data from

¹¹⁵ Carl E. Solberg, *The Prairies and the Pampas: Agrarian Policy in Canada and Argentina, 1880-1930* (California: Stanford University Press, 1987), 20, 29, 52, 56, 59, 62, 67, 226–227.; Stanley L. Engerman and Kenneth Lee Sokoloff, “Factor Endowments, Inequality, and Paths of Development among New World Economies,” *Economía* 3, no. 1 (2002): 67, doi:10.1353/eco.2002.0013; Stanley L. Engerman and Kenneth L. Sokoloff, “Once Upon a Time in the Americas Land and Immigration Policies in the New World,” in *Understanding Long-Run Economic Growth: Geography, Institutions, and the Knowledge Economy*, NBER Conference Report (Chicago, IL.: University of Chicago Press, 2011), 33.

¹¹⁶ Mackintosh, *Prairie Settlement*.

individual land offices across Western Canada that provided a more nuanced understanding of the pattern of settlement in the region instead of a partial aggregated data for the entire region, as other studies did. Secondly, the GIS spatial analysis helped to estimate the area of influence of each land office and thus to evaluate with another tool the dynamic of Prairie settlement. By incorporating georeferenced data to the study of the region, this chapter provided another methodology to study a changing geography in time and space. Certainly, this method faces limitations as it provides broad estimates of a changing region based on a simulation exercise not on the actual area of influence of each land office. The importance of this method, however, resides in that even though a number of works performed micro-studies of small communities or areas, nobody has yet produced a complete record of the region.¹¹⁷ The next two chapters will go further in the study of space and will incorporate postal records to estimate with more accuracy the dynamic of Western Canada settlement in time and space.

¹¹⁷ Among others, these works study small samples of settled areas. Tyman, *By Section, Township and Range: Studies in Prairie Settlement*; Kenneth Michael Sylvester, *The Limits of Rural Capitalism: Family, Culture, and Markets in Montcalm, Manitoba, 1870-1940* (Toronto ; Buffalo: University of Toronto Press, 2001); Paul Leonard Voisey, *Vulcan: The Making of a Prairie Community*, Social History of Canada 43 (Toronto: University of Toronto Press, 1988); Lyle Dick, *Farmers "Making Good": The Development of Abernethy District, Saskatchewan, 1880-1920*, 2nd ed, Parks and Heritage Series, no. 11 (Calgary: University of Calgary Press, 2008).

Chapter 5

The Post, the Railroad and the State: New Approaches to Study Western Canada Settlement*

5.1 Introduction

By 1914, about one million homesteads of 160 acres had been surveyed in Western Canada.¹ How many of those were actually settled is debatable. According to the Department of Interior, during the period 1873-1914 the government issued almost 300,000 letters patent that granted land ownership to settlers and comprised an area of 75 million acres.² If those numbers are indication of actual settlement of public land, then it shows that only one third of potential settlers did in fact establish themselves in the region on “free” public land. Those numbers, however, did not include land sold by the HBC and CPR and other private companies; records from those sales were even more difficult to follow indeed. The point, however, is of relative little significance because what is important to analyze is the scope of “free” public lands disposal and government success in implementing its land policies. In this case, the detail of the

* A reduced and edited version of this chapter appeared in Gustavo F. Velasco, “How the Postal Network Shaped Western Canada,” *Postal History Journal*, no. 161 (June 2015): 2–14.

¹ This number comes from our estimate based on the townships contained in the GIS shapefile. The figure is close to that reported by the Department of Interior in 1915 (1,010,253 farms of 160 acres). See Report of the Deputy Minister of Interior in Canada. Parliament, *Sessional Papers Volume 18, Fifth Session of the Twelfth Parliament, Session 1915* (Ottawa: J. de L. Taché, printer to the King, 1915), xiii.

² *Ibid.*, xxiii.

Department of Interior report mentioned above did not contribute to further study of the region, as there was no clear indication of where settlers finally established themselves.

The previous chapter studied one of the main institutions that enforced and granted private property of the land in Western Canada: the Dominion Lands Office (DLO). Based on their data, the chapter produced a spatial analysis to estimate some trends on potential settlement based on homestead entries as other studies did before.³ Although it shows important trends, the use of homestead entries was very limited to show a more detailed pattern of settlement as homestead entries did not prove permanent residence, which was reflected, indeed, in the number of homestead cancellations reported during the period. Other traditional and influential literature on the history of Canadian regional economic development, as previous chapters showed, relied on census records. The Census of the Province of Manitoba of 1870, for instance, gives a sense of demographic variables but not much else, even if we consider those figures accurate.⁴ Before 1881, the year the second Federal Census of Canada took place, Western Canada data were very limited.

Another important shortcoming was the division of Manitoba into counties and municipalities during the period. From 1880 to 1883, for example, 62 new municipalities were incorporated in the province. The boundaries of these new divisions changed significantly over a short period and data taken from the census of 1881, for instance, changed and overlapped with the new divisions in the following censuses. The incorporation of new municipalities extended to over 1890 when seven more municipalities were created in Manitoba. The problem was that several municipalities lost territory to make space for the new ones so data from censuses that take into account municipal divisions during this period of formation present important differences from one census to the others.⁵ Moreover, census records taken every five (for the Prairie provinces) or

³ K. H. Norrie, "The Rate of Settlement of the Canadian Prairies, 1870-1911," *The Journal of Economic History* 35, no. 2 (June 1975): 410-27; Kenneth H. Norrie, "The Rate of Settlement of the Canadian Prairies, 1870-1911: A Reply," *The Journal of Economic History* 38, no. 2 (June 1978): 474-75; William Marr and Michael Percy, "The Government and the Rate of Canadian Prairie Settlement," *The Canadian Journal of Economics / Revue Canadienne d'Économique* 11, no. 4 (November 1, 1978): 757-67.

⁴ Archives of Manitoba. Manitoba Census of 1870. MG 9 E3 Vol. 3, 1870.

⁵ Canada. Manitoba, *The Manitoba Municipal Act, 1884 and an Act to Amend "The Judicial Districts Act, 1883"* (Winnipeg: Gédéon Bourdeau, Queen Printer, 1884); Gordon Goldsborough, "Manitoba Municipal Time Line," *Manitoba Historical Society*, November 12, 2008, <http://www.mhs.mb.ca/docs/features/municipaltimeline/index.shtml>.

ten years (in the case of the federal Census) describe an incomplete reality in a moment of great frontier dynamic. Settlers were transient, moving from place to place in order to find better economic and social conditions than those they had left behind in the east or in Europe. That changing presence of recent migrants and immigrants made census records of very limited use in understanding a society in its making. In addition, nineteenth century data were obtained with precarious, experimental methods and dubious methodology aimed at reinforcing the state presence via the quantification of its subjects as the previous chapters discussed.

The first questions this chapter asks then are how one can be more precise in studying the areas actually settled and how one can follow the dynamic of settlement year by year. This initial concern opens the enquiry for additional questions: Where did settlers establish themselves? When did they settle? Why did they choose one region and not others? Why did the settlement of Western Canada experience different, uneven waves of immigration? Which was the role of railroads in promoting settlement? This chapter attempts to answer some of those questions and proposes the use of the location of post offices in Western Canada as a proxy to obtain a more precise pattern of settlement during the period. If the post office location is an indication of settlement then one can offer a more precise pattern in time and space. The aim of this chapter is to demonstrate how the distribution and expansion of the postal and railroad networks in Western Canada from the 1860s to 1900 provides a clearer evidence of settlement and urbanization than those studies that used census records or homestead entries. The period shows more clearly the evolution of Manitoba but it also suggests the pattern of settlement in the North West Territories that became gradually settled at the turn of the century.⁶

The following section briefly reviews the interest that the postal system produced among scholars. Section 5.3 evaluates data and methodology. This section is very important as it analyzes the introduction of new postal data and it describes the methodology used to recreate the postal network and the expansion of historical railroad lines in Western Canada. Section 5.4 discusses the relationship between the spread of

⁶ The reason to finish mapping post offices in 1900 was that after that year post offices mushrooming in Alberta and Saskatchewan and to lesser extent in Manitoba. From the 1860s to 1900, about 1,000 post offices opened in the area. From 1901 to 1914, more than 2,000 new post offices disseminated across the territory. For logistical reasons I decided to end the post office mapping in 1900 as it would have been impossible to finish locating and mapping the remaining post offices in time for this dissertation.

the postal network and the expansion of state presence in the West. Section 5.5 performs different spatial analyses that evaluate the influence of rivers and railroads in the opening of new post offices and hence it reveals the presence of settlement. Section 5.6 concludes.

5.2 Networks and State Building

The importance of the study of the postal network in areas of recent settlement like Western Canada resides in the quality and details of its annual time series information that was not possible to obtain from other sources. The postal network shows the dissemination of settlements, villages, towns and cities and suggests certain state organization in the area before census records reported them. Secondly, aside from the distribution of personal correspondence, the post was an important agent in the dissemination of information in distant areas, for example, the distribution of newspapers, pamphlets or government forms. Third, it was an economic agent before the arrival of the banking system through money orders, postal notes and postal saving banks, which complemented the business operation through a dynamic parcel delivery system. With all this potential to study a region, very little has been written about the postal network in Western Canada or in Canada for that matter.

A significant nineteenth century and early twentieth century literature discussed the importance of the post from a descriptive and political approach.⁷ The post was still in its developing stage following the expansion of the state in new areas of settlement and hence contemporary politicians and historians reported its development and importance as a measure of modernization and state presence. Mainly based on government reports, these works highlighted the importance of the postal network as a

⁷ There is a large historical literature on post offices from nineteenth and early twentieth century sources. Of those, important to this work are, J. C. Stewart, *The Post-Office Savings Bank System of Canada: (provinces of Ontario and Quebec), Its History and Progress; a Paper Read before the Economic Section, British Association, at Its Meeting in Montreal, August, 1884* (Montreal: Gazette Printing Company, 1884), http://archive.org/details/cihm_28003; Mary Emma Woolley, *The Early History of the Colonial Post-Office*, Kindle Edition (Providence: Rhode Island Historical Society, 1894), <http://www.gutenberg.org/ebooks/35715>; William Mulock, *The Administration of the Post Office Department* (Ottawa: [n.p.], 1900), <http://archive.org/details/administrationof00mulo>; Bertram W. H. Poole, *The Postage Stamps of Canada* (Boston, MA: Severn-Wylie-Jewett, 1917), <http://archive.org/details/stampsofcanada00pooluoft>; George Wilcox, *History of Rural Mail Delivery in Canada* (George Wicox, 1919); William Smith, *The History of the Post Office in British North America, 1639-1870* (Cambridge: Cambridge University Press, 1920), <http://archive.org/details/history-postoff00smituoft>.

link that connected distant places. Present literature on economics and economic history, however, does not devote the same attention to the postal network as it does with other communication networks, for instance the railroad and the telegraph. The topic, perhaps, has been regarded as a minor field, important to attract the attention of stamp collectors or to those local historians interested in the study of local or regional past events.⁸ Although the postal system is randomly mentioned in several works, a small number of studies—in particular from a social and cultural history point of view—have appreciated and in fact highlighted the importance of the postal network as an indication of modernization and development in the United States and Canada.⁹ While geographers, for instance, became interested in the role of the postal network as organizer of the new frontier space,¹⁰ economic and business historians—save for a very few exceptions—have left the postal system unnoticed as a topic of discussion. Surprisingly, they do not even discuss the role of the Money Order system and Postal Savings Bank as financial agents in regions of recent settlement.¹¹

⁸ In Canada, the *Postal History Society Journal* is an example of a meticulous work on the field.

⁹ See for instance, Richard R. John, *Spreading the News: The American Postal System from Franklin to Morse* (Cambridge, Mass: Harvard University Press, 1995); David M. Henkin, *The Postal Age: The Emergence of Modern Communications in Nineteenth-Century America* (Chicago, IL.: University of Chicago Press, 2008); Richard Burket Kielbowicz, *News in the Mail: The Press, Post Office, and Public Information, 1700-1860s* (GREENWOOD Publishing Group Incorporated, 1989); Chantal Amyot and John Willis, *Country Post: Rural Postal Service in Canada, 1880 to 1945*, Mercury Series 1 (Gatineau, Quebec: Canadian Postal Museum, 2003); Francine Brousseau, ed., *Special Delivery: Canada's Postal Heritage* (Fredericton, N.B.: Goose Lane Editions : Canadian Museum of Civilization/Canadian Postal Museum, 2000). A recent PhD dissertation analyzes the role of the Chinese Postal Service as agent of nation building, Lane Harris, "The Post Office and State Formation in Modern China, 1896-1949" (Ph.D. Dissertation, University of Illinois at Urbana-Champaign, 2012), <http://hdl.handle.net/2142/31970>. Janet Hunter studies Imperial Japan through the post office expansion, Janet Hunter, "Understanding the Economic History of Postal Services: Some Preliminary Observations from the Case of Meiji Japan," Economic History Working Paper 13299 (London: London School of Economics and Political Science, Department of Economic History, 2005), <http://ideas.repec.org/p/ehl/wpaper/13299.html>.

¹⁰ John A. Alwin, "Post Office Locations and the Historical Geographer: A Montana Example," *The Professional Geographer* 26, no. 2 (1974): 183–86, doi:10.1111/j.0033-0124.1974.00183.x; Andrew G. Allen, "Post Offices as a Measure of Nebraska's Settlement Frontier" (M. A. Thesis, University of Nebraska, 2006); Morton D. Winsberg, "The Advance of Florida's Frontier as Determined from Post Office Openings," *The Florida Historical Quarterly* 72, no. 2 (October 1993): 189–99.

¹¹ Of those, Tom Velk and Terence Hines, *The United States Post Office Domestic Postal Money Order System in The 19th Century: A Nascent Banking System*, Departmental Working Paper (McGill University, Department of Economics, 2009), <http://ideas.repec.org/p/mcl/mclwop/2009-11.html> and a few conference papers, most notably Diane DeBlois and Robert Dalton Harris, 'Using the Official Registers: Local Sources of Postal Revenue' (presented at the Winton M. Blount Symposium on Postal History, Washington, D.C., 2006) started a pioneering study about the importance of the postal system, principally in the United States. In Canada, Osborne and Pike, "A Cornerstone of Canada's Social Structure" and the following series of short studies published in the *Postal History Society of Canada Journal* provided an initial understanding of the Canadian Postal system. Osborne and Pike briefly

In the case of Canada, few studies focused on the postal system and certainly, no studies have ever used the postal network as a proxy to illustrate the advance of the frontier of settlement in the Prairies as this chapter will do. This chapter will make extensive use of postal records, somehow forgotten in the evaluation of Western Canada development. This dissertation argues, and it was analyzed earlier as well, that the expansion of the frontier of settlement and the organization of the state were twin aspects of the development of modern Canada. Perhaps the most comprehensive work that describes the role of the Canadian post office system as an institution of state building was Ian Lee's dissertation, which similarly compared both aspects of Canada's development starting with the organization of the postal system after 1851. For Lee, the post office acted as the Canadian elites' essential nation building tool since colonial time.¹² For Lee, nation building and state building were similar elements. If a centralized post office system became the main organizer of nation building, says Lee, regional post offices built the periphery of the central state.¹³ In this centre-periphery relationship, the Royal Mail exercised power toward the colony and the colony similarly exercised power toward the hinterland.¹⁴ In this sense, post offices revenues and expenditures cannot be measured as proofs of efficiency (or lack thereof) but as a tool of nation building.¹⁵ Lee's work comprises a general study of the political more than the economic and geographic task of nation-state building through the operation of a state bureaucracy. His analysis, however, needs a further study as his idea of nation building centers mainly on the politics of Quebec and Ontario. Undoubtedly, they were the most important provinces since colonial times but Lee's nuanced description of the evolution of the postal network did not include the process of state building in the West. The postal system, as this chapter argues, was one of the key components that molded the expansion of the new Canadian nation-state in the second half of the nineteenth century;

evaluate the role of saving banks in Ontario and Quebec in Brian S. Osborne and Robert M. Pike, "The Postal Service and Canadian Social History Part 3 : ' Un Encouragement Aux Habitudes d'Economie,'" *Postal History Society of Canada*, no. 42 (June 1985): 24.

¹² Ian R Lee, "The Canadian Postal System: Origins, Growth and Decay of the State Postal Function, 1765-1981" (Ph.D. Dissertation, Carleton University, 1989), 33.

¹³ *Ibid.*, 19.

¹⁴ *Ibid.*, 56.

¹⁵ *Ibid.*, 20.

the other was the Dominion Lands Office. If the DLO divided the territory into a regular grid of townships and quarter sections, the postal network and the location of post offices organized microstructures of state control. The bureaucratic organization of the space through the allocation of new post offices allowed the state to have an important presence across the extended territory.

Daniel Carpenter similarly describes the American postal system as a powerful state bureaucracy that organized the political activity through the dissemination of information. The post, argues Carpenter, set up banks, distributed newspapers, pamphlets and operated postal roads among other progressive activities.¹⁶ In the same vein, Richard John states that the first revolutionary element that emerged after the American Revolution was the creation of an important postal network.¹⁷ This state structure, says John, was responsible of the information revolution that preceded the telegraph and the railroad network, and became afterward not a competitor but a complement. The American postal system initiated an information revolution that changed the flow of information from the seaboard to the hinterland.¹⁸

5.2.1 The Post as social foundation

Other works that analyze the postal network focus on understanding the “social” or “cultural” importance of the post office instead of the “political”, even though the “political” cannot be separated from the “social” in the understanding of the history of new societies. In Amyot and Willis’ study of the rural post offices in Canada for instance, the postal system was not only an institution of government as Lee and Carpenter argue but also a “medium of communication” that linked rural life with the city.¹⁹ Nevertheless, Amyot and Willis’ work acknowledges that the post office was the main government institution in vast parts of the country.²⁰ In this dual relationship government institution and medium of communication, rural post offices as institutions and

¹⁶ Daniel P. Carpenter, “State Building through Reputation Building: Coalitions of Esteem and Program Innovation in the National Postal System, 1883–1913,” *Studies in American Political Development* 14, no. 02 (2000): 121–122.

¹⁷ Richard John, “Recasting the Information Infrastructure for the Industrial Age” in Alfred D. Chandler and James W. Cortada, eds., *A Nation Transformed by Information: How Information Has Shaped the United States from Colonial Times to the Present* (Oxford University Press, USA, 2000), 55–56.

¹⁸ *Ibid.*, 104.

¹⁹ Amyot and Willis, *Country Post*, 19.

²⁰ *Ibid.*, 43.

postmasters as state agents, emphasize Amyot and Willis, acted as a nexus of social interaction by providing a sense of cultural identity.²¹

Similarly, David Henkin argues that the importance of the American postal network was not ultimately the construction of a state bureaucracy or a medium of communication; its importance resided in that the postal network transformed the post office from a state institution into a popular place where people interacted and socialized with each other.²² People, not the state, argues Henkin, “laid the cultural foundation” of a “modern communication network.”²³ As people moved and relocated in different places the need for easy communications transformed the “mail into a mass ritual.”²⁴

For Richard John the postal system as a social process put in motion a communication revolution that changed the United States. From being a copy of the Royal Mail that connected communities with irregular frequency, it became a bureaucratic organization that employed almost one third of the public administration work force.²⁵ John, as Lee, analyzes the political role of the post office as creator of citizenship. Through the postal system, observes John, the government publicized its government acts allowing citizens to receive information regarding political changes and government policies. In this way, the diffusion of news through the postal network created an information market sixty years before a goods market.²⁶ All these works detailed the importance of the postal network to connect distant areas with the core through the spread of post offices. However, they did not make a direct connection between the location of post offices and the transformation of the new regions like the American West or the Canadian Prairies. Is it possible to establish a further discussion that goes to the cultural and social aspects of the post and use postal records to study with more precision the spread of new settlements?

²¹ Ibid., 106.

²² Henkin, *The Postal Age*, 42.

²³ Ibid., ix, xi.

²⁴ Ibid., 30.

²⁵ John, *Spreading the News*, 3, 24.

²⁶ Ibid., 35–37.

5.2.2 The Post as a proxy for settlement

Geographer John Alwin used the post office locations as a proxy to understand a pattern of settlement and development in new regions or places, like the American West. In his short article, Alwin described the spread of settlement in Montana from 1865 to 1900 in a series of maps that estimated population density according to the location of post offices.²⁷ Alwin used government postal maps and census records to delineate a link between the location of post offices and the establishment of new settlements. The shortcoming in Alwin's work was that it did not include the expansion of the railroad network in the same period. As a consequence, a one factor approach shows only a general tendency of post offices and settlement movements but which, individually, could not provide further information about the region under scrutiny, for instance to estimate certain economic activity.

John Lehr and Brian McGregor, also geographers, used a similar approach to estimate settlement in southern Manitoba. Instead of post offices, they used the location of schools to determine a pattern of settlement.²⁸ Their scope focused on a small region but they claim that schools were a better approach than post offices to estimate settlement because the determination to open a school was not influenced by political decision but for clear settlers' necessities.²⁹ The use of schools is an important approach as generally small villages and towns included a post office, a school and a church. However, the use of schools alone to determine a settled area produced a bias perception toward families with children. While the latter part of the nineteenth century reflected an important movement of entire families, census records showed that a larger proportion of men alone ventured to the West. The Census of 1901, for example, shows that men outnumbered women, and single men and women outnumbered married men and women.³⁰ For previous censuses, this difference was even bigger. This dissertation does not disregard the use of schools, but the location of post offices is a clearer indication of settlement for the whole period, regardless of family composition.

²⁷ Alwin, "Post Office Locations and the Historical Geographer."

²⁸ J. C. Lehr and B. McGregor, "Using Schools to Map the Frontier of Settlement on the Canadian Prairies," *Great Plains Research: A Journal of Natural and Social Sciences* 18 (Spring 2008): 53–66.

²⁹ *Ibid.*, 55–56.

³⁰ Canada. Parliament, *Fourth Census of Canada of 1901*, vol. I (Ottawa: S. E. Dawson, 1903), 26.

Morton Winsberg studied the expansion of Florida's settlements from 1850 to 1920 by using post offices records.³¹ He found problems similar to those encountered by other researchers in estimating the evolution of regions using census records. The most important issue he learnt was that the frontier of settlement changed rapidly and administrative areas changed from one census to the other and the information collected became uncertain.³² Similar to Lehr and McGregor, Winsberg revealed that prior to 1850 post offices openings responded more to political influence than to settlers needs. Furthermore, Congress determined that post offices should be self-sustained and that played against the survival of several locations. In this case, post offices were not a good measure of settlements as politicians could influence Congress to authorize the opening of post offices elsewhere.³³ Regardless of that initial problem in analyzing post offices, Winsberg concludes that the spread of post offices through Florida while not precise is a good indicator to estimate with certain reserves the spread of settlements and as such is an alternative method to use alongside population density based on census records.³⁴ Similar to Alwin and to Lehr and McGregor's school analysis, Winsberg's exercise uses only one factor to study the advance of the frontier of settlement, the location of post offices. Florida certainly had a settler dynamic other than that experienced in the mid-West and the Prairies but it would have been of great utility to determine trends of settlement to include river transportation routes and the railroad connections. This chapter instead will include the expansion of the railroad network in Western Canada for a more complete evaluation of the region and will test the relationship between river and rail transportation and the location of post offices.

5.3 Sources and Methodology

This study introduces data from the Annual Reports of the Postmaster General of Canada and incorporates them into Geographical Information System (GIS) to map the dynamic transformation of Western Canada during the second half of the nineteenth century. Almost one thousand post offices have been mapped with certain precision,

³¹ Winsberg, "The Advance of Florida's Frontier as Determined from Post Office Openings."

³² *Ibid.*, 189–190.

³³ *Ibid.*, 191.

³⁴ *Ibid.*, 199.

which allows one to consider the importance of the region by comparing revenues year by year from the 1870s to 1900. Spatial analysis of distance to rivers and railroads illustrate the importance of geography and technology as determinant of settlement and eventually economic development. By comparing both post offices and railroads over time it is clear how both communication and transportation systems moved together. While post offices opened mainly in areas already settled, the presence of railroad lines describes an uncertain pattern. Settlers, informed themselves of the prospect of railroad extension in certain areas, flocked to the region in advance of the arrival of the line in order to guarantee land. In other cases, the railroad expanded branches or main lines and settlers arrived thereafter.

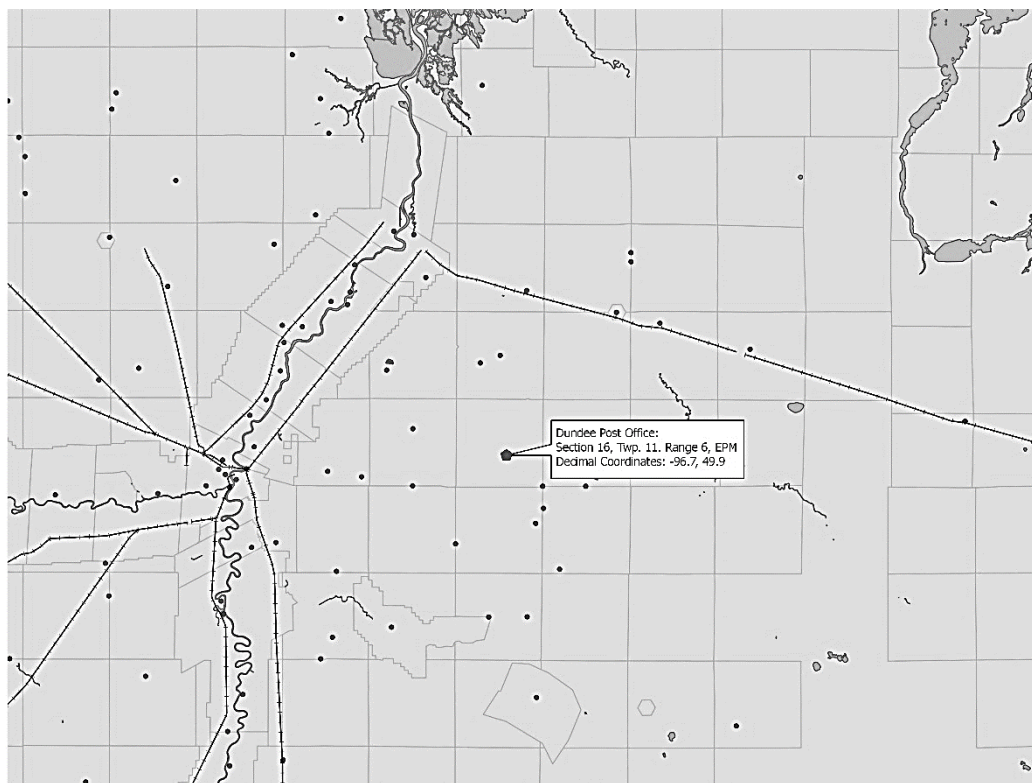
Postal data were extracted mainly from Library and Archives Canada (LAC), Postmasters and Post Offices Records. This database is very important because the records show the name of the post office, census district, name of postmasters and the dates they were in service, when it was opened, when it closed (if closed) and where it was located following the Dominion Lands Act notation to register homesteads, i.e.: Section, Township, Range, Meridian. This notation used to divide the new territories is very valuable to map with certain precision the location of post offices. This important characteristic is not found in post offices located in central Canada and the Maritimes where the name of the post office referred to imprecise locations within counties or towns whose names very often changed or disappeared over the years and therefore it was very difficult to follow individual post offices trajectory over time.³⁵

Another valuable information was found in the Annual Report of the Postmaster General of Canada published within the *Sessional Papers of the Dominion of Canada* from 1867 to 1915. The Reports are rich enough to analyze post offices' performance over time because in addition of providing the general figures about the Canadian postal system, they provide detailed accounts for each post office opened in Canada during the period. These records provide a detailed postal information of the regions year by year. In this way, researchers can incorporate these data to study the region, as this chapter does, and estimate the flow of information between regions, between rural and urban post offices and between post offices located close to the railroad line with others farther away.

³⁵See this observation in 'CANIND71- Places and Maps', accessed 17 March 2014, http://www.canind71.uoguelph.ca/places_maps.shtml.

To estimate the locations of post offices into a readable GIS format, records were transformed from the township notation used by Dominion Lands Offices (DLO) and surveyors (Section-Township-Range-Meridian) into decimal coordinates.³⁶ For instance, Dundee Post Office, a rural post office that opened in 1879 and closed in 1927 was located in section 16, township 11, range 6 east of the principal meridian in Manitoba (16-11-6-E in DLO notation).³⁷ Once converted, the decimal notation was 96.70 decimal degree of longitude west from Greenwich and 49.92 decimal degree of latitude north from the Equator (See Figure 5-1). The transformation of the post office location into a decimal coordinate system helped to situate post offices into a GIS map. In this

Figure 5-1 Township notation and decimal degree transformation.



Source: Author's design based on collected data.

way, almost one thousand post offices were mapped and geo-referenced with certain precision across the Prairies. Some post offices, however, changed their initial locations

³⁶ I used an online service to transform the location into decimal coordinates, <http://www.prairielocator.com>.

³⁷ See <http://www.bac-lac.gc.ca/eng/discover/postal-heritage-philately/post-offices-postmasters/Pages/item.aspx?IdNumber=7340&>

over time. Sometimes they moved from one-quarter section (homestead) into another within the same section. Other times, they moved closer but to the contiguous section or even township. All the evaluations in this chapter took into account the initial location reported, not the following movements. The reason was that this movement does not change substantially the quality assessment this study examines.

5.3.1 The use of HGIS to revisit the post

The use of GIS in economic and economic history analysis is becoming increasingly important because it helps to create a new narrative of the geography of the past, as Gregory and Healy have described it.³⁸ The geography of the past, for instance, will help to analyze different patterns of settlements in Western Canada enhancing with a better visual and statistic representation the scope provided by other analysis. Certainly, the use of GIS is not limited to drawing maps. The interconnection of space and data plotted on a world map following its geographical coordinates allow researchers to study with more precision the local or regional economic activity. Historical GIS allows one to connect sparse dots of information into a comprehensive analysis of the region in question. Furthermore, spatial queries can separate different sets of data to provide more precise information in the micro-level analysis: for instance, when and where settlers occupied an area, when it became economically important and so on. In sum, a historical database incorporated into a GIS produce a fine grain analysis in time and space and as such, it is able to recreate new explanations of historical transformations.

In this form, the use of GIS to perform spatial analysis became valuable in an interdisciplinary study where history, geography, economics and politics combine their particular methodologies to bring about a more systematic and comprehensive understanding of the societies of the past. Certainly, this chapter does not establish itself as a hallmark of HGIS analysis. Different projects around the world already contributed in a new way to position the fields of history, geography and economics together. The use of postal data, however, produced a limited number of studies that connected geography with economic history. In this sense, this chapter opens new avenues for historical inquiry. Other studies, for instance, in Great Britain, Historical GIS developed and extended the limits of the study of geography to include vital census data and Poor Laws

³⁸ Ian N. Gregory and Richard G. Healey, "Historical Gis: Structuring, Mapping and Analysing Geographies of the Past," *Progress in Human Geography* 31, no. 5 (October 1, 2007): 644–645, doi:10.1177/0309132507081495..

records from early nineteenth century until 1970.³⁹ Similarly, the National Historical Geographical Information System (NHGIS) at the University of Minnesota has made available the United States census records from 1790 until 2014 compatible with GIS shapefiles. The Spatial History Project at Stanford University investigates a number of interdisciplinary projects that make use of HGIS approaches and Harvard University maintains a dynamic project on China's HGIS.⁴⁰

In Canada, Historical GIS, although in a developing stage, has recently expanded its studies.⁴¹ The Canadian Century Research Infrastructure (CCRI), a collaborative project of seven Canadian universities with the support of Statistics Canada completed public use samples from Canadian censuses from 1911 until 1951.⁴² A partial analysis based on a sample of industries and rural studies from the Census of 1871 that analyze county settlements in Ontario have produced, still limited, a new approach to digitize census data.⁴³ GIS work on previous censuses and other geo-referenced historical statistics are a work yet to be completed. This chapter contributes to the effort of providing a more easily accessible historical spatial data of Manitoba and the North West Territories for future research. This dissertation's most important contributions are the reconstruction of the historical railroad and the location of the postal network from 1878 to 1900. In addition to the LAC database, this author included data extracted from published government documents, historical maps, almanacs and gazetteers and

³⁹ Gregory and Healey, "Historical GIS", 640.

⁴⁰ See "National Historical Geographic Information System," *Minnesota Population Center, University of Minnesota*, 2010, <https://www.nhgis.org/>; "Spatial History Project," *Spatial History Project*, 2015, <http://web.stanford.edu/group/spatialhistory/cgi-bin/site/index.php>; "China Historical GIS," *China Historical GIS*, 2010, <http://www.fas.harvard.edu/~chgis/>.

⁴¹ Recently an edited volume by Canadian scholars across the disciplines put together an initial work that deals with space or historical space from different point of views; although, there are no studies on Western Canada. See Marcel Fortin and Jennifer Bonnell, eds., *Historical GIS Research in Canada (Canadian History and Environment)*, vol. 2, Canadian History and Environment 2 (Calgary: University of Calgary Press, 2014).

⁴² Chad Gaffield, "Conceptualizing and Constructing the Canadian Century Research Infrastructure," *Historical Methods: A Journal of Quantitative and Interdisciplinary History* 40, no. 2 (2007): 54–64; Gordon Darroch, ed., *The Dawn of Canada's Century: Hidden Histories* (Montreal: McGill-Queen's Press - MQUP, 2014).

⁴³ A project that reconstructed the location of Canadian industries according to the Census of 1871 can be found in "Canadian Census of Industrial Establishments 1871," 2008 1982, <http://www.canind71.uoguelph.ca/index.shtml> and the production of flax on one Ontario county in "Rural History | University of Guelph," 2004, <http://www.uoguelph.ca/ruralhistory/resources/GIS-caseStudy.html>.

incorporated them into GIS analysis. Some caveats, of course, apply. Published records vary according to the time there were published, the publisher or the political body in charge of the publication and this fact cannot be more accurate than in the case of published railroad maps.

5.3.2 Challenges of Mapping the Past: Historical Railroads

Working with maps published during the period encompasses certain risks in precision and accuracy, not to mention bias. During this investigation this author found sets of maps published from different sources and, possibly, with different agendas in mind.⁴⁴ The Department of Interior often published maps that highlighted the evolution of Western Canada. In these maps finished and projected railroad lines were frequently plotted alongside the location of schools, churches and post offices. Similarly, the Canadian Pacific Railway (CPR) published its own maps reflecting the extension of the rail network or the proposed extension. Land companies that worked in partnership with rail companies regularly distributed maps to potential settlers with information about the state of development in the region where they had land interests. Other sources, mainly booklets and pamphlets aimed at promoting the “West” to potential settlers produced their own maps. While these records are of invaluable importance, they often reflected the “booster” spirit of the times.⁴⁵ Frequently, the extension of the railroad network plotted in different maps did not coincide in time and space when compared with similar maps from different sources or with textual records, for instance the reports of the Postmaster General of Canada (RPGC), who described the evolution of the railroad network year by year in his Annual Reports.

This study takes into account these disparities. The mapping on GIS of the evolution of the railroad network is based on the actual railroad network of North America.⁴⁶ For the purpose of visual simplicity, the GIS study has filtered all the railroads

⁴⁴ See the list of maps consulted in the bibliography.

⁴⁵ Alan Artibise has explained the “booster” spirit and the idea of selling Winnipeg to potential investors and settlers. See Alan F. J. Artibise, “Advertising Winnipeg: The Campaign For Immigrants and Industry, 1874-1914,” *MHS Transactions*, 3, no. 27 (71 1970), <http://www.mhs.mb.ca/docs/transactions/3/advertisingwinnipeg.shtml> and on the Prairies in general, Alan F. J. Artibise, “Boosterism and the Development of Prairie Cities, 1871-1913” in R. Douglas Francis and Howard Palmer, *The Prairie West: Historical Readings* (University of Alberta, 1992), 515–543; James Belich, *Replenishing the Earth: The Settler Revolution and the Rise of the Angloworld* (Oxford: Oxford University Press, 2009), 70-72.

⁴⁶ Canada. Natural Resources Canada. ‘GeoBase - List of Available Datasets’, accessed 10 March 2014, <http://www.geobase.ca/geobase/en/search.do?produit=nrwn&language=en>.

that do not belong to the area. This study then includes only those railroad lines that ran within the old political boundaries established in 1881, in the case of Manitoba, and 1882 when the North-West Territories became three distinct regions: District of Saskatchewan, the District of Assiniboia and the District of Alberta.⁴⁷ Similarly, topographic information displayed in maps and representations include only principal rivers within the old boundary. To represent the evolution of the network over time, the database incorporated a “YEAR” column into the GIS project to reflect the year a line extension became operative according to the Report of the Postmaster General (RPGC) (See Figure 5-2).⁴⁸ While highly detailed, the layout of maps on GIS confronts

Figure 5-2 Extract of a Report by the Postmaster General of Canada.

RAILWAY MAIL SERVICE.

Since November, 1882, 1,076½ miles of Railway, over which Mails are carried have been put in operation, viz:—

Name of Railway.	Places between which Railways have been opened since November, 1882.	Miles.	Total Miles.
Montreal, Portland and Boston.....	Farnham and Frelighsburg.....	19	28
	Marieville and St. Cesaire.....	9	
Grand Trunk..... Canadian Pacific, Eastern Division.....	St. Isidore Junction and St. Isidore Station.....		4
	Mattawa and Sturgeon Falls.....	69	78
	Hochelaga and Montreal.....	1	
	St. Thérèse and St. Rustache.....	8	
Kingston and Pembroke..... Midland.....	Mississippi and Lavant.....		10
	Manilla Junction and Wick Junction..... Less reduced distance by removal of station at Belleville.....	7 1½	5½
Canada Southern..... Canadian Pacific, Western Division.....	Essex Centre and Windsor.....		16
	Winnipeg and Gretna.....	70	300
	Rat Portage and Port Arthur.....	300	
	Pembina Junction and Manitou.....	47	
Regina and Calgary.....	483½		
Manitoba and Northwestern.....	Portage la Prairie and Gladstone.....		90½
Total.....			344½
			1,076½

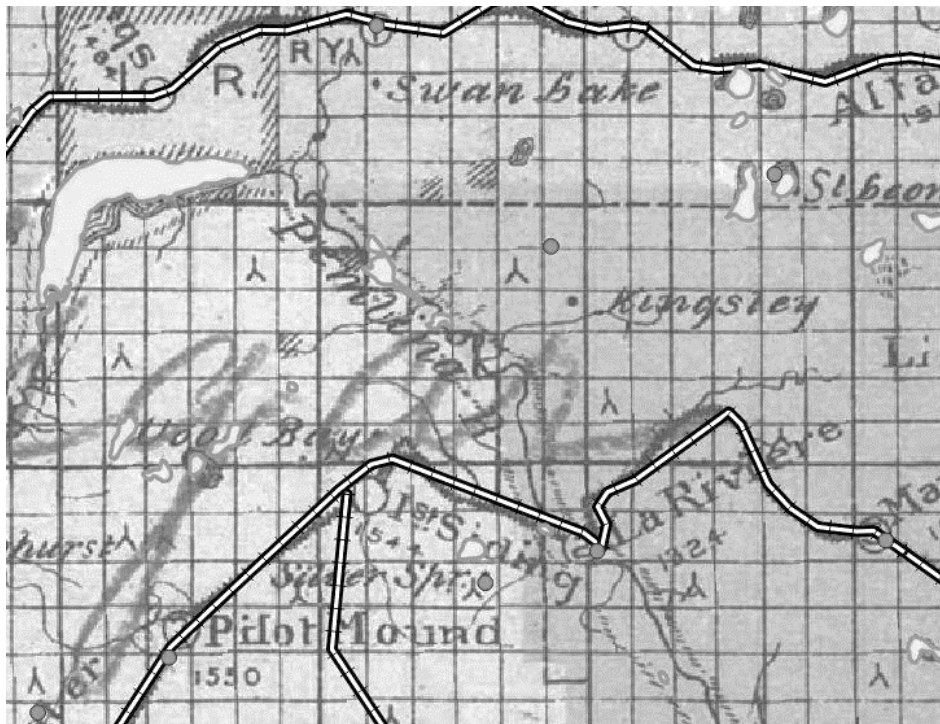
Source: Canada. Sessional Papers, *Annual Report of the Postmaster General for the Year Ending 30th June, 1883*, vol. IV (Ottawa: McLean, Rogers & Co., 1884), xi.

⁴⁷ Saskatchewan and Alberta became provinces in 1905. Manitoba changed its area in 1881 and obtained its actual size in 1912.

⁴⁸ Thomas Thévenin et. al used similar method to reconstruct the French historical railroad. See Thomas Thévenin, Robert Schwartz, and Loïc Sapet, “Mapping the Distortions in Time and Space: The French Railway Network 1830–1930,” *Historical Methods: A Journal of Quantitative and Interdisciplinary History* 46, no. 3 (July 1, 2013): 134–43, doi:10.1080/01615440.2013.803409. Also see Richard G. Healey and Trem R. Stamp, “Historical GIS as a Foundation for the Analysis of Regional Economic Growth Theoretical, Methodological, and Practical Issues,” *Social Science History* 24, no. 3 (September 21, 2000): 593–600, doi:10.1215/01455532-24-3-575.

technological constraints, mainly coming from the transformation of a nineteenth century paper map into a geo-referenced digital version. The plot of rail tracks on paper maps were represented with solid, thick lines and did not reflect any scale or proportion. Therefore, the comparison of the railroad lines from paper maps of different visual quality and the digital version of the actual track suffers from certain imprecisions due to scale problems, geo-referencing stretching and coordinate systems (See Figure 5-3).⁴⁹ Taking into account these glitches and once compared with maps of the time,

Figure 5-3 Extract of a digitized and geo-referenced map.



Source: Author's design based on a Manitoba map of 1897.⁵⁰

the railroad lines overall did not experience substantial changes. The maps on GIS reflect the evolution of the network year by year as it appeared in the RPGC enhanced

⁴⁹ This is a common problem for every researcher. See for instance Jeremy Atack, "On the Use of Geographic Information Systems in Economic History: The American Transportation Revolution Revisited," *The Journal of Economic History* 73, no. 02 (May 23, 2013): 313–38, doi:10.1017/S0022050713000284. A similar issue was raised in William G. Thomas, "Map Inaccuracies in Railroad Sources," *Railroads and the Making of Modern America*, 2011, <http://railroads.unl.edu/views/item/mapping?p=4>.

⁵⁰ Excerpt from Bulman Bros. and Co, "Map of Manitoba Published by Authority of the Provincial Government" (Winnipeg: Manitoba Department of Agriculture and Immigration, 1897), University of Manitoba: Archives and Special Collections.

with the incorporation of missed information extracted from digitized and geo-referenced maps. In this way, quality control was performed with different sets of data; the one extracted from the textual records and with data from digitized and georeferenced maps. As it happened with other assessment of data quality, visual data and representation are as accurate as possible.

Base GIS shapefiles of Canada and the provinces come from different sources but mainly the dataset of Western Canada townships distribution comes from CCRI and Atlas Canada.⁵¹ Additional data incorporated into GIS tables were extracted from *Historical Statistics of Canada* and *Canada Year Book*.⁵² Certainly, data collected for this study face some restrictions as they are based on a limited number of published records, mainly due to time constrains; nevertheless, the use is valid as no other source based on post offices and railroad development in Western Canada has been published at the present.

5.3.3 Post Offices Data

The Postmaster Annual Reports published in the *Sessional Papers* from 1867 to 1915 provide gross revenues from the sale of stamps year by year for each post office in operation in Canada. In the case of Manitoba and the North West Territories, complete records began in 1872 until the year 1889. After this year, records show only the performance of those post offices that became “accounting offices,” that is, those offices that in addition to selling stamps acted as postal saving agencies and issued and received money orders and after 1898, postal notes. The exceptions were the years 1892, 1899 and 1900 when the Annual Reports incorporated an appendix with the revenues of all non-accounting offices in Canada. Non-accounting offices were rural post offices that reported very low revenues during the period. Accounting offices represented those offices located in areas of importance. Over the years, accounting offices grew incorporating some of those non-accounting offices, as the areas became more consistently settled. In 1889, less than ten percent of more than 500 post offices that reported revenues were accounting offices. By 1900, the number of accounting offices

⁵¹ “Census of Canada, Contextual Data, Geography,” *Canadian Century Research Infrastructure*, accessed September 30, 2012, <https://cri.library.ualberta.ca/enindex.html>.

⁵² Statistics Canada, ‘Historical Statistics of Canada: Sections’, accessed 10 March 2014, <http://www.statcan.gc.ca/pub/11-516-x/3000140-eng.htm>; Statistics Canada, ‘Canada Year Book (CYB) Historical Collection’, 31 March 2008, http://www65.statcan.gc.ca/acyb_r000-eng.htm.

increased to 19 percent, although, the number of post offices in Western Canada were 980 and those that reported revenues during that year were 827. In 1889, accounting offices generated 75 percent of Western Canada's revenues. By 1900, those post offices generated about 88 percent of the total revenues. Taking into consideration those key years where data were complete for all post offices, accounting and non-accounting offices—1892, 1899 and 1900—I performed a simple linear interpolation between the years that the Reports did not provide information from non-accounting offices. In this way, the database was completed with estimated and real revenues from 1872 to 1900.

Additional data, for instance, money orders, postal saving bank deposits and Dead Letters Office analyzed in the following chapter were also extracted from the same source. Few post offices lacked of locational information in the LAC collection. In this case, the help of local and regional history sources that investigated the fate of ghost towns or the location of old schools or cemeteries provided information on the geographic location of those post offices.⁵³ Contemporary textual records, especially guides, gazetteers and city directories, also helped to locate missing information.⁵⁴ Some post offices had a short life—about 150 closed from 1870 to 1901—and others changed the names, so it was necessary to track down all the changes in order to obtain a clearer picture of the dynamic of state formation. The reconstruction of those post offices with partial or no geographical references consequently became an archeological task but it helped, nevertheless, to perceive the sense of dynamic and mobility in a period of territorial expansion and state formation.

⁵³ For Manitoba, "Historic Sites of Manitoba," *Manitoba Historical Society*, May 28, 2015, <http://www.mhs.mb.ca/docs/sites/>. For the North West Territories, "1901 NWT Census. Sask Gen Web, Placename Index," *Saskatchewan GenWeb*, June 2002, <http://www.rootsweb.ancestry.com/~cansk/census/notice-census.html>. Other sources were, Natural Resources Canada Government of Canada, "Place Names - Query by Name," *Natural Resources Canada*, August 28, 2015, <http://www4.rncan.gc.ca/search-place-names/search?lang=en>; Frank Moore, *Saskatchewan Ghost Towns* (Regina, SK: Associated Printers, 1982); "School District Listing Organisation Saskatchewan Gen Web," *One Room School Project*, September 2015, <http://www.rootsweb.ancestry.com/~cansk/school/SchoolDatabaseOrganisation.html>; Bill Barry, *People Places: Saskatchewan and Its Names* (Regina, SK: Canadian Plains Research Center - University of Regina, 1997).

⁵⁴ *Waghorn's Guide [No. 131 (Nov. 1894)]* (Winnipeg: J.R. Waghorn, 1894); *MacDougall's Illustrated Guide and Practical Handbook for Manitoba and the North-West* (Winnipeg: W. B. MacDougall, 1883); Peter Alfred Crossby, ed., *Lovell's Gazetteer of British North America* (Montreal, QC, Canada: J. Lovell, 1874); *Henderson's Manitoba and Northwest Territories Gazetteer and Directory for 1897* (Winnipeg: The Henderson Directory Company, 1897).

5.4 Post Offices and State Formation

Canada had established a postal service long before Confederation. Ontario and Quebec were the most important provinces and captured the biggest numbers of post offices, although, Nova Scotia and New Brunswick maintained a lively flow of information with the other provinces. The Post Office Act of 1867 sanctioned in the First Parliament set the basis for the administration of the postal service in the new Dominion. The Postmaster General was the main figure in the administration of the postal service and had the power to organize the regional or provincial administration. The Postmaster General, among other tasks, had the authority to open or close post offices and to appoint postmasters. Postmasters received a government salary and a commission according to the post office's performance. Public tender allocated postal routes to private contractors every four years.⁵⁵ The petition for and approval of new post offices, especially in the new areas of settlement, followed a procedure determined by postal authorities. Among other considerations, the petition should include as many settlers' signatures as possible, the section and township location of the proposed office, the number of inhabitants that the proposed postal facility would serve, the distance to the nearest village, town or city and the number of stores, mills and taverns close to the proposed location.⁵⁶ In central Canada, post offices opened mainly where communities were already organized and in this case, the sense of centrality was strongly considered when opening a new office. For centrality, authorities considered those locations that reflected the dynamism of burgeoning commercial centres where stores, a church and small factories were already established.⁵⁷ Different was the case in Western Canada where the state opened post offices where settlers required its presence regardless of important commercial activity.

5.4.1 The Post in Western Canada

The location of post offices was very sensitive to the location of settlers since the organization of the Red River Settlement. An editorial published in 1860 in the

⁵⁵ See Canada. Parliament, *The Post Office Act, 1867, and the General Regulations Founded Thereon* (Ottawa: G. E. Desbarats, 1868), 20–22. John Dewé, *Canadian Postal Guide: Containing Calendars for 1867 and 1868* (Montreal, Que: John Lovell, 1867), 43.

⁵⁶ Dewé, *Canadian Postal Guide*, 52.

⁵⁷ Brian S. Osborne and Robert M. Pike, "The Postal Service and Canadian Postal History. Part 2: The Locational Decision," *Postal History Society of Canada*, no. 41 (March 1985): 14.

Nor'Wester, the first newspaper in the region, warned local authorities about the settlement's lack of communications. The article complained that "[t]he time seems to have come when our post Office system should be organized. The simple machinery that has hitherto preva[i]led is not sufficient to meet the conveniences or wants of the place."⁵⁸ The complaints continued even after Manitoba became a province in 1870. As an editorial published in the *Manitoba Free Press* in 1874 stated, "[I]n our intercourse with the new settlers, we found an almost common complaint on the want of post offices and postal facilities...It must be as apparent to Governments as to all others, that nothing has a more healthful influence in promoting settlement in a new country than good postal accommodation."⁵⁹ If the press unveiled local concern, no less important was the perception postal inspectors observed. As settlements expanded to the West, the federal government sought to organize its domains by establishing a network of post office distributed according to settlers' necessities. In the Annual Report of 1879, the Postmaster General described the relationship between settlements and post offices:

The impulse given last summer to the settlement of the unoccupied land in Manitoba and the contiguous sections of the North-West Territories, rendered it necessary to send the Chief Post Office Inspector to that part of Canada, to ascertain by personal examination and enquiry what was required to give such postal accommodation as might be needed by the new settlements, and to organize accordingly the new Post Routes and Post Offices found to be necessary.⁶⁰

The Post Office Inspector reporting about the needs of the Western settlements also marked the connection between settlements and the postal service:

The circumstances of this part of the Dominion are so constantly changing, the population is scattered over such a vast area, and the progress of the settlements so rapid, that it is difficult, if not impossible, to foresee what provision it will be desirable to make for the extension of the postal service during the coming year. Much will of course depend on the number, extent and direction of the various new settlements in regard to which even the most careful estimates may be at fault.⁶¹

⁵⁸ "Branch Post Offices," *Nor'Wester*, March 14, 1860, 2.

⁵⁹ "Deficient Postal Facilities," *Manitoba Free Press*, November 30, 1872, 4.

⁶⁰ Canada. Sessional Papers, *Annual Report of the Postmaster General for the Year Ending 30th June, 1879*, vol. V (Ottawa: McLean, Rogers & Co., 1880), 9.

⁶¹ Canada. Sessional Papers, *Annual Report of the Postmaster General for the Year Ending 30th June, 1882*, vol. III (Ottawa: McLean, Rogers & Co., 1883), xxxi.

What these fragments suggest is that post offices opened where immigrants had already settled. Thus, following the location of post offices it might be possible to estimate with more precision where and when immigrants homesteaded, which areas were populated, which others became urbanized over time or which was the role of railroads and post offices.

5.4.2 Post and Railroad in Time and Space

The use of maps to describe the areas occupied or settled was a government strategy to demonstrate the evolution of the region and to lure more settlers into the West. Some maps, highly detailed, showed the number of homesteads still available in each township. Initial studies on the character of Western Canada development used similar strategy. A. W. Mackintosh's seminal work in the 1930s followed this methods and he estimated population density based on Censuses records.⁶² Based on the technology of the time, he registered the spread of settlement according to a gross estimate based on optimistic evaluations rather than on accurate empirical evidence. His evaluation, nevertheless, remained an important source for the years to come, even as atlases' sources. The approach was remarkable as other sources, namely homestead records, land patent records and railroad land records were not fully available at the time. Even if those records had been available, the task of extracting information from them it would have been almost impossible.

By 1914, one million homesteads were surveyed but cancellations, sales, transfers or wills documents were not fully available until the 1990s. Digital records of Land Grants are almost complete until 1930 but the task of extracting information from digital images and inputting them into a machine-readable document is not possible for any individual researcher.⁶³ This section, instead, uses a time series of maps similar to those provided by Mackintosh. The difference is that it uses post office locations as an

⁶² For instance in Chapter IV, "The Spread of Settlement," he used time series maps to demonstrate the evolution of the Prairies. See William A. Mackintosh, *Prairie Settlement: The Geographical Setting*, vol. 1, Canadian Frontiers of Settlement (Toronto: The Macmillan Company of Canada limited, 1934), 60–68.

⁶³ See Library and Archives Canada, "Land Grants of Western Canada, 1870-1930," March 22, 2013, <http://www.bac-lac.gc.ca/eng/discover/land/land-grants-western-canada-1870-1930/Pages/land-grants-western-canada.aspx>.

estimate of settlement. As records exist for all the years under evaluation, hence, the result gives a more nuanced understanding of a dynamic moment.

Figure 5-4 to Figure 5-6 show a map series from a GIS render that illustrates post office locations alongside the evolution of the railroad network in time and space.⁶⁴ At a first glance, the map series provide the elements to analyze the dynamic of settlement in Western Canada. In 1853, only one post office administered the information between the Red River Settlement and the rest of the world. The post office controlled the flow of information between Fort Garry where the HBC had its administrative centre of operations in the west, and York Factory in the Hudson's Bay where the Company controlled its operations. Unofficially, the Red River Settlement delivered and received mail from the Pembina post in the present state of North Dakota since the 1850s.⁶⁵ The service was not reliable but it offered more frequency than the HBC and settlers could avoid the control of the Company, which in 1844 had issued a proclamation demanding that all mail sent via the HBC should be left open.⁶⁶

By 1870 post offices opened in old settlements alongside the Red River, north of Winnipeg and to the west along the Assiniboine River. In 1871, the Canadian government made an agreement with the United States to deliver Manitoba's mail through Pembina three times a week. The agreement institutionalized a situation that was already in place for several years. The arrangement marked an important advance in the "official" communication network: mails that frequently took six months to reach Europe or Montreal through the HBC service, now took ten days to reach Ottawa through the United States.⁶⁷ What changed now was that the already existing route from Winnipeg to Pembina, North Dakota, was officially in control of the Canadian government

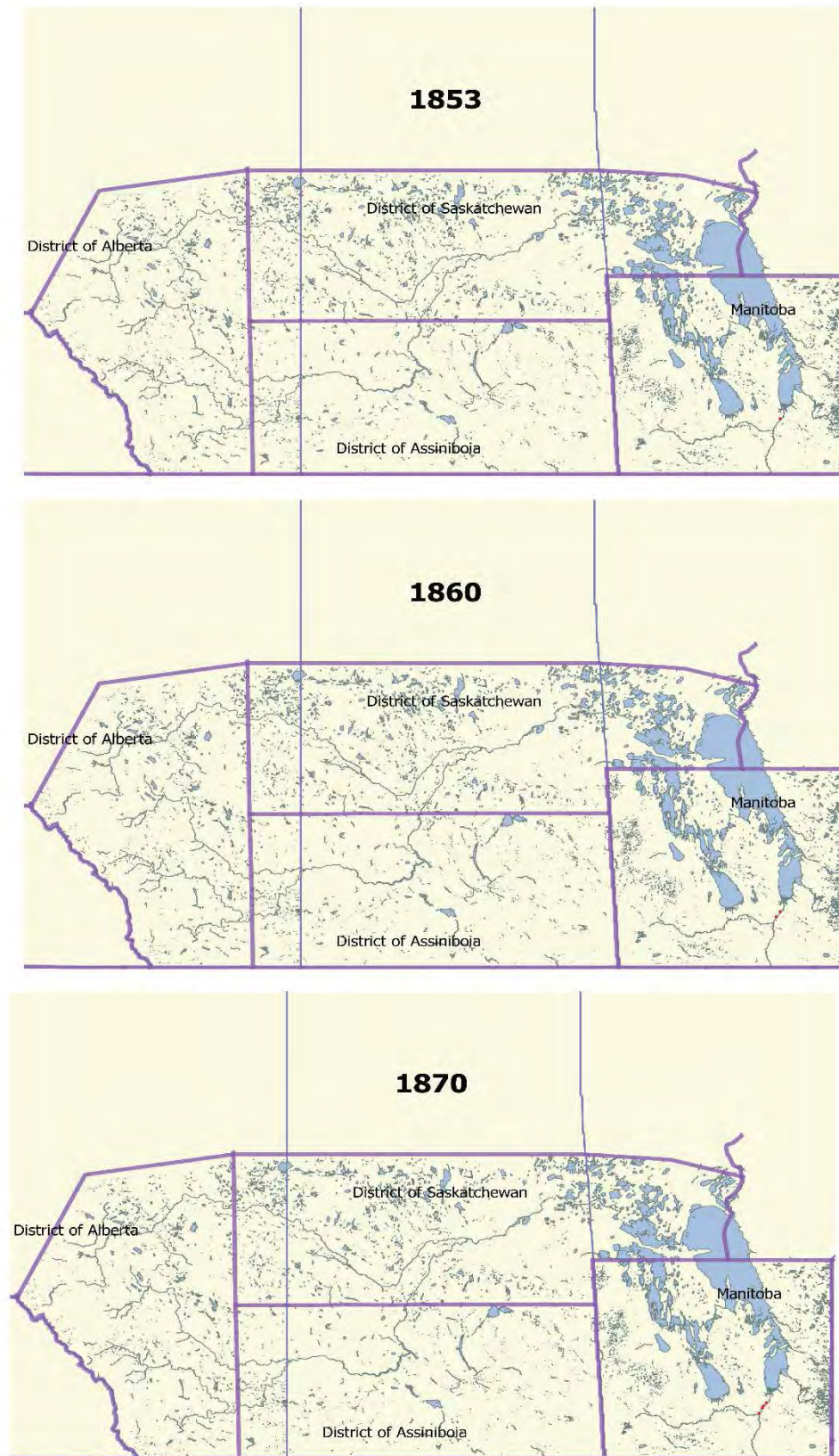
⁶⁴ A complete map series dataset is available at http://gusvelasco.sytes.net/data/PO_map_14.

⁶⁵ The press frequently accounted the troublesome operation to deliver or collect mail from the unofficial post at Pembina. See "The Pembina Mail," *Nor'Wester*, August 28, 1860.

⁶⁶ Peter Thomson, "When Mail Came Only Twice a Year," *Manitoba Pageant* 6, no. 3 (April 1961), <http://www.mhs.mb.ca/docs/pageant/06/mailcametwice.shtml>; Murray Campbell, "The Postal History of Red River, British North America," *MHS Transactions Series*, 3, no. 6 (1949).

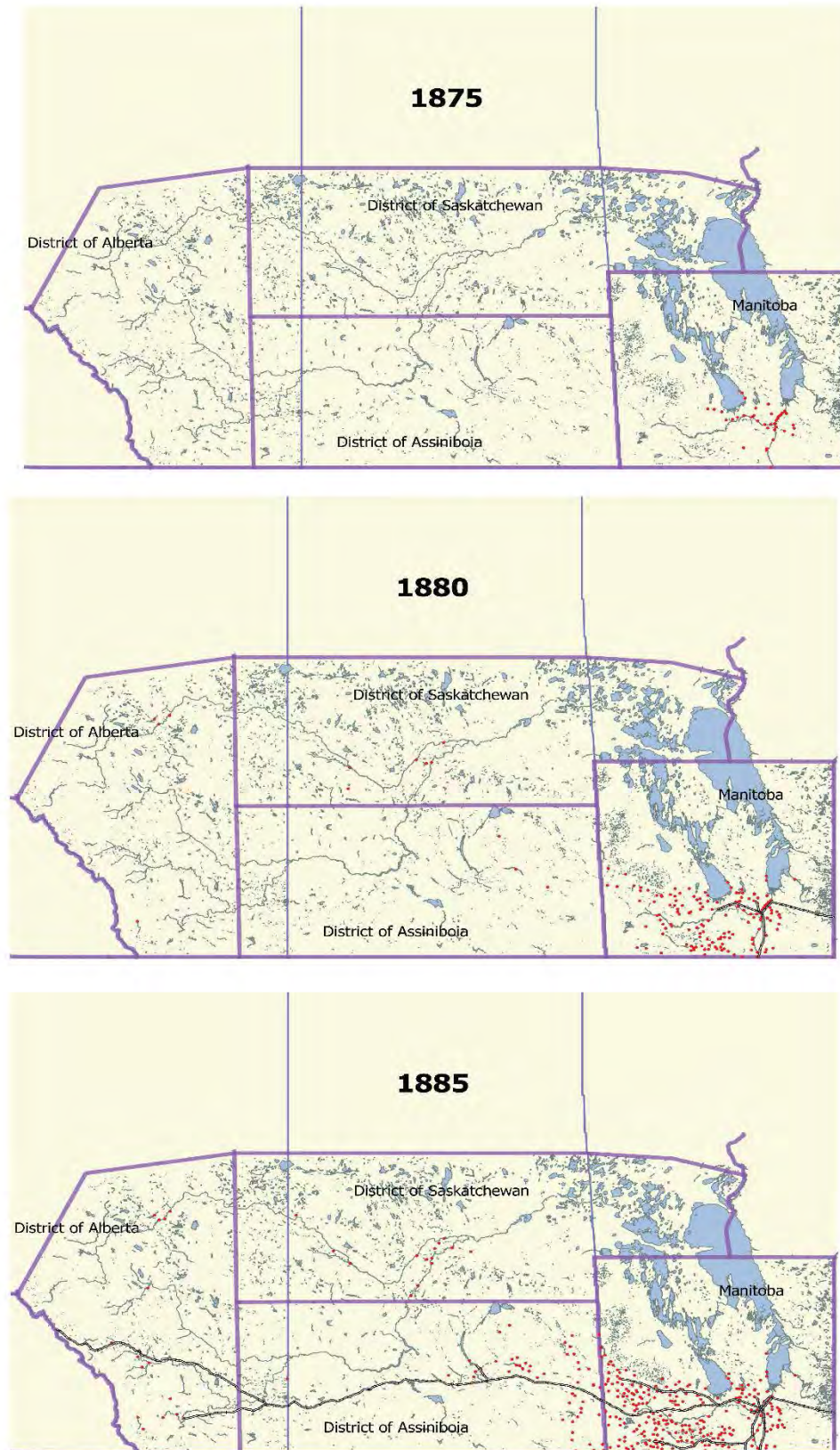
⁶⁷ Report of the Postmaster General in Canada. Parliament, *Sessional Papers of the Dominion of Canada: Volume 2, Fifth Session of the First Parliament, Session 1872* (Ottawa: I.B. Taylor, 1872), 3.

Figure 5-4 Time series map of post offices and railroads.



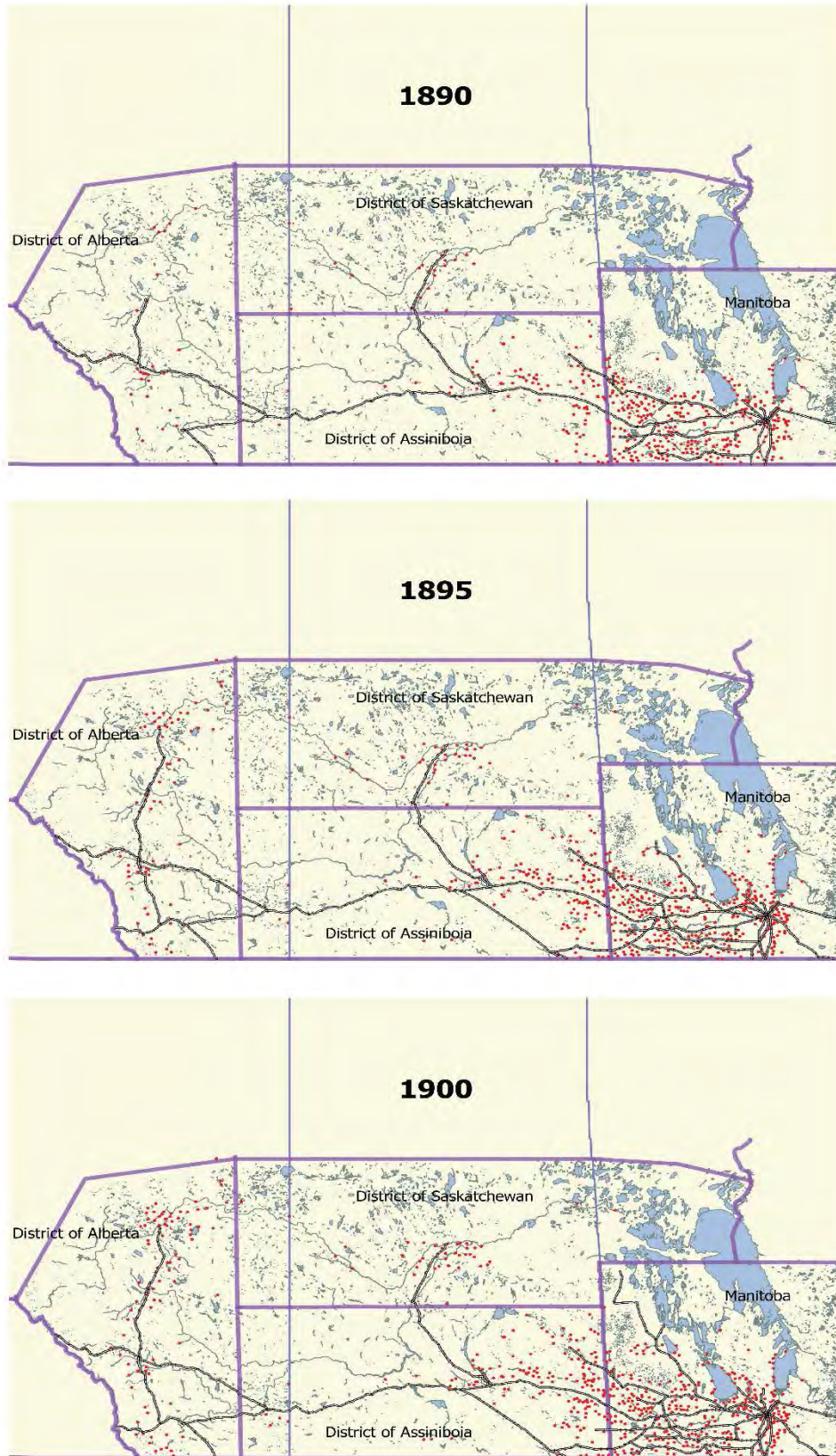
Source: GIS author's design based on collected data. A dynamic exploration of the expansion of both networks: <http://gusvelasco.sytes.net>

Figure 5-5 Time series map of post offices and railroads.



Source: GIS author's design based on collected data. A complete time series maps at http://gusvelasco.sytes.net/data/PO_map_14

Figure 5-6 Time series map of post offices and railroads.



Source: GIS author's design based on collected data. A complete time series maps at http://gusvelasco.sytes.net/data/PO_map_14

through its mail contractors and that letters had a postmark that said Fort Garry, Manitoba.⁶⁸ This was an important advance for the construction of the state as it reinforced the idea and the authority that the Prairies were a Canadian domain. By 1875, post offices opened alongside the Assiniboine River following a predictable pattern, as old settlements had existed in the area for several years. The map also shows a spread into the southern part of the province following the course of the Red River but most importantly, old settlements north of Winnipeg continued growing and as such, the number of post offices in the area increased.

In 1878, the first railroad line connected the town of Selkirk with Winnipeg. The line extended to Pembina into the American border the following year connecting the Settlement with the city of St. Paul in Minnesota and from there to Chicago. The Red River-St. Paul route had existed for several years and was frequently used by free traders and later by the HBC. George Simpson, the HBC governor after the Company merged with its rival North West Company in 1821, encouraged the southern route to maintain the colony's supply of goods, livestock and seeds. The establishment of the first railroad line in the new territory, however, changed the speed of the flow of information between the Red River and Ottawa as a daily postal route accelerated the connection with the federal government. In their business activity, merchants no longer relied on cart transportation or steamers exclusively to receive their supplies, the railroad increased business between the wholesalers in the East and Winnipeg.⁶⁹

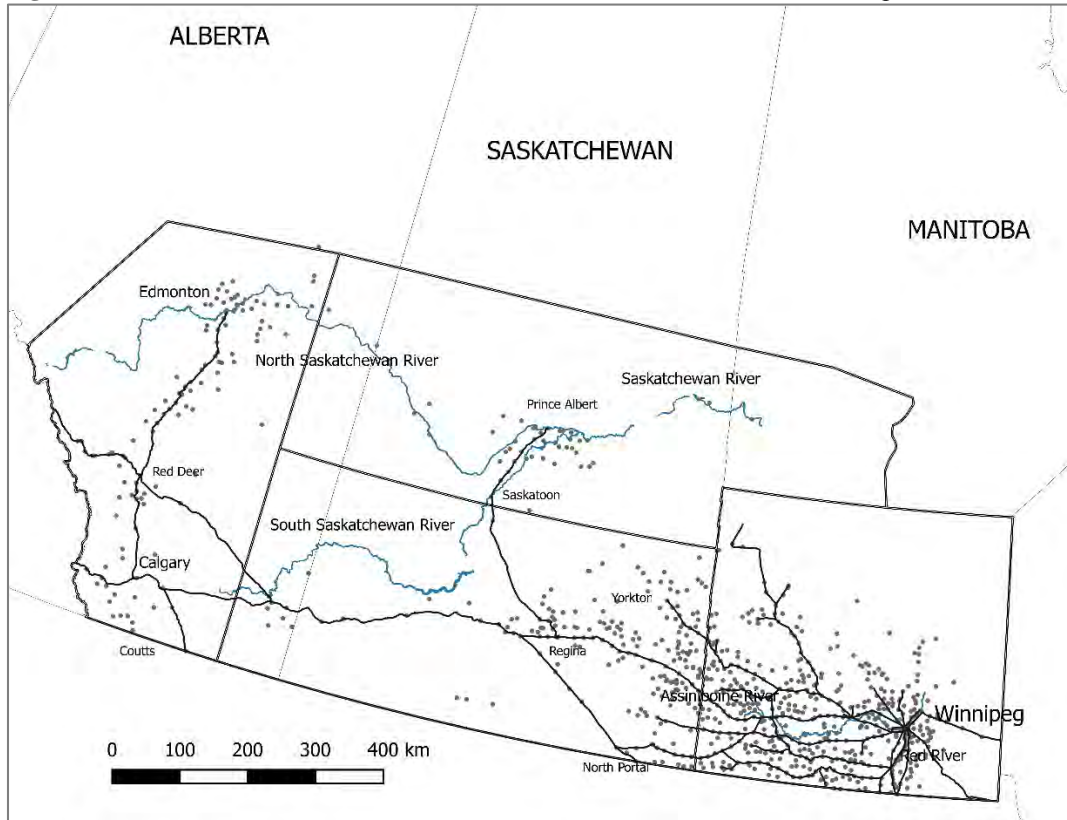
By 1880, the expansion of post offices through southern Manitoba and west of the province suggests that settlers were moving toward the existing and projected railroad network. The movement of the frontier of settlement was sensitive to the publicized advance of the railroad network as it appeared in maps included in pamphlets and other pieces of information aimed at luring potential settlers to move westward. As the graphic shows, the opening of new post offices into the actual province of Saskatchewan followed the projected railroad line. Post offices alongside the North Saskatchewan

⁶⁸ Max Rosenthal, "Manitoba's Postal Beginnings," *Postal History Society of Canada Journal*, no. 37 (March 1984): 32.

⁶⁹ For a detailed account of the St. Paul-Red River (Winnipeg) route see Henry C. Klassen, "The Red River Settlement and the St. Paul Route, 1859-1870" (M. A. Thesis, University of Manitoba, 1963), 6 and Rhoda R. Gilman, Carolyn Gilman, and Deborah L. Miller, *The Red River Trails: Oxcart Routes Between St. Paul and the Selkirk Settlement, 1820-1870* (Minneapolis: Minnesota Historical Society, 1979). Harold Innis described the steamers' operations across the Red River, see Harold A. Innis, *A History of the Canadian Pacific Railway* (Toronto: McClelland and Stewart, 1923), 93.

River close to Prince Albert show a pattern similar to that of Manitoba. Old settlements organized during the fur trade continued to generate public interest illustrated by the arrival of new settlers. The presence of new post offices opened before the arrival of the railroad branch in the Prince Albert area suggests that river transportation continued to offer an alternative means of communication and was used extensively in the region.

Figure 5-7 Western Canada in 1900. Post offices, railroads and the most important locations.



Source: Author's GIS design based on collected data.

In 1883, the railroad reached Calgary and by 1885, the transcontinental railway was a reality connecting the East with Vancouver. The following fifteen years show a slow railroad development in Saskatchewan and Alberta; yet, the track laid the foundation for future development and a number of branch lines connected promissory towns with the Canadian Pacific Railway (CPR) main line. A branch line connected Saskatoon and Prince Albert with the CPR main line that passed through Regina. Alberta's southern area increased its economic importance by connecting a branch line with the American railroad at Coutts. Branch lines in Southern Manitoba gave the impulse and dynamism to new agricultural areas recently settled. By 1900, post offices in Manitoba had spread

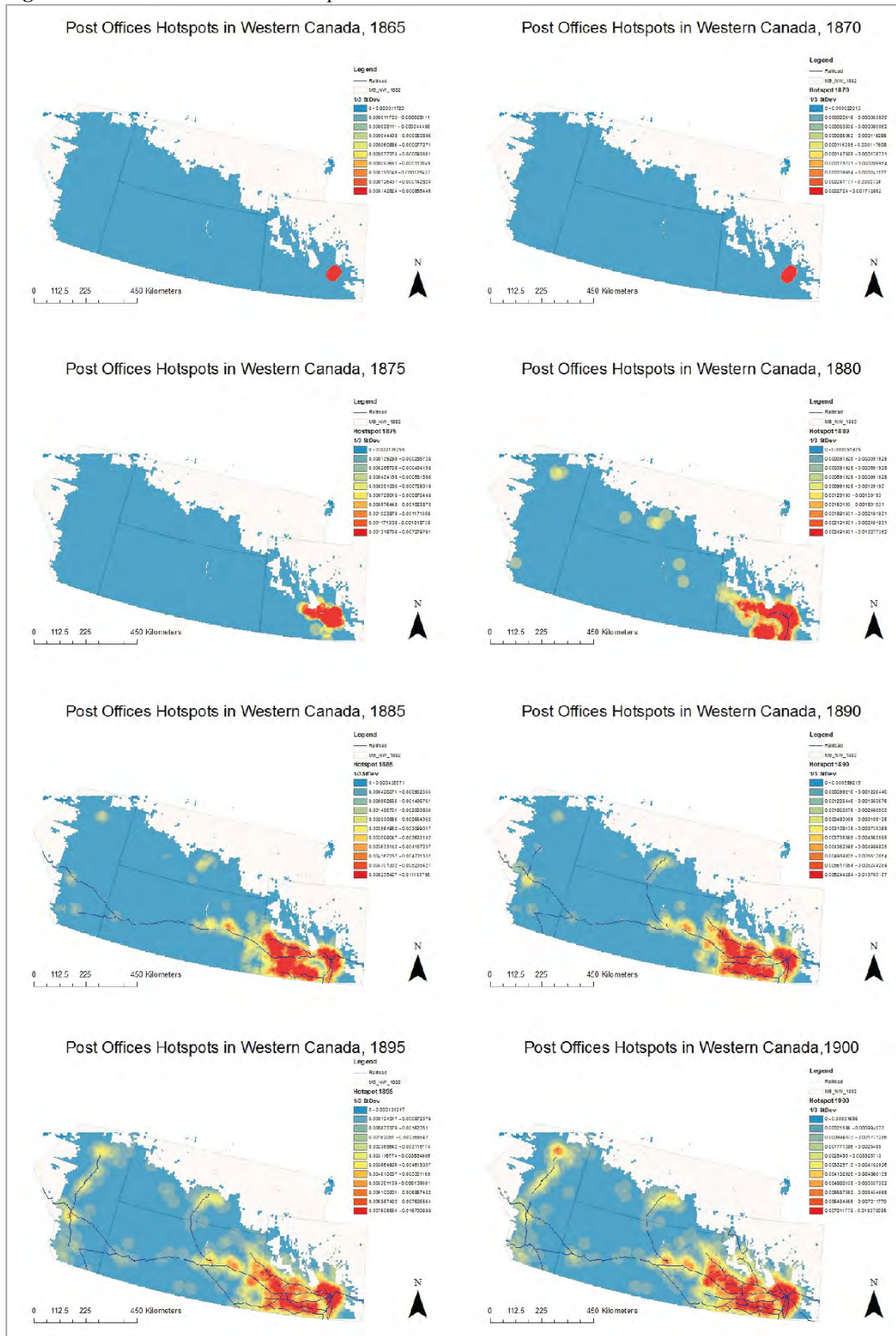
through the southern and western part of the province while in Saskatchewan the location of post offices followed the railroad line (actual and projected) that boosted urban locations such as Regina in the middle of the province, Saskatoon and Prince Albert in the north. In the case of Alberta, post offices mushroomed in the old stagecoach corridor that ran from Calgary to Edmonton, which, eventually, became connected, by train in 1892. A more detailed map in Figure 5-7 locate the most important places in 1900.

A heat map analysis of the location of post offices during the same period highlights the description posited in the above paragraphs (See Figure 5-8). In this case, the graphic is more relevant to show the importance of southern Manitoba during the period. Other places worth mentioning were Edmonton, Regina, Yorkton and to lesser extent Prince Albert. These places, illustrated in the hotspot analysis, became important centres by the end of the century. It is necessary to note that those places were important HBC posts and fur trade centres in the years before Confederation and maintained an important communication network well before the arrival of the railroad.

An important increase in the number of post offices where the railroad line finished its tracks is illustrative of the historical significance of the locations mentioned above. This pattern reflects the settlement dynamic discussed in 4.4 . Settlers reached the terminus railroad station and from there attempted to move farther. In several cases because of lack of resources, settlers ended up establishing themselves near important towns working in other fields until they could save enough to venture to their homestead. For instance, Edmonton Lands Office reported 180 entries in 1895 but increased to 1,600 in the report of 1901, which corresponded to entries from the previous year. Similarly, Prince Albert Lands Office reported 95 entries in 1895 and 512 in 1901.⁷⁰ The location of post offices surrounding the railroad terminus was a strong indication of the economic dynamic of new settlements. The distribution of post offices in the new settled areas shows a pattern that describes the historical moments. It shows the dynamic passage from a fur trade society where the importance of rivers did matter into a

⁷⁰ Figures are from our individual Lands Offices estimates. The database of Lands Offices records is not included in the Appendix but it is available at <http://gusvelasco.sytes.net/data>.

Figure 5-8 Post offices heat map as indication of settlement.



Source: Author's design based on collected data. <http://gusvelasco.sytes.net>

settler society embedded with embryonic signs of modernization in the forms of urbanization and increasing industrialization.⁷¹ The presence of the railroad station as a regional commercial hub became in this form a magnet for newcomers.

5.5 Location, Location, Location

The first question that emerges from the evaluation of the dynamic transformation experienced by Western Canada in the period, as the map series show, may possibly be, is it clear that the location of post offices followed a pattern? This initial question opens the possibility for further inquiries. Once post offices started following the railroads rather than river transportation routes, what was the effect on settlement? Did post offices reflect the importance of the transportation network in the development of new regions? The following sections answer these questions by performing different analyses with the help of GIS spatial statistical tools.

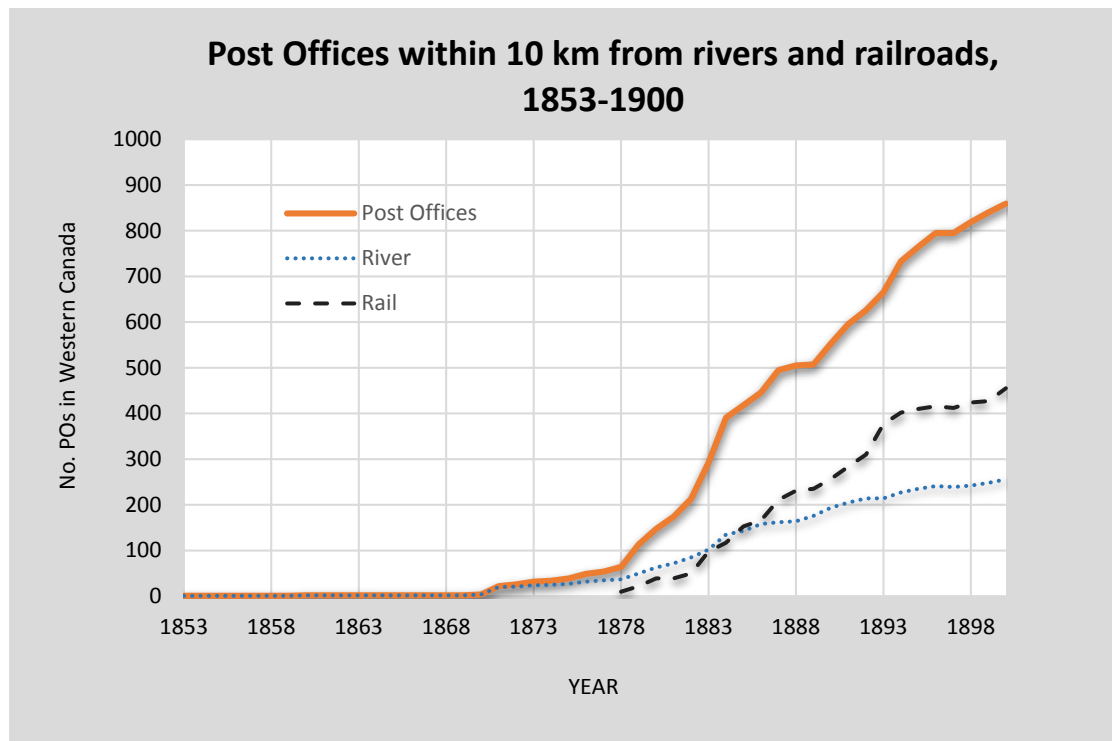
5.5.1 Spatial Analysis: Rivers and Railroad

One way to determine the importance of railroads in the opening of post office can be explained through Figure 5-9. For this exercise, we used the location of post offices, the railroad lines and the location of the principal rivers to determine the importance of means of transportations in the selection of settlement. First, we made a buffer zone of 10 kilometres each side of rivers and the railroad lines on a GIS map and then performed a spatial query to determine how many post offices were inside of the 10 kilometres buffer zone. Figure 5-9 clearly shows the importance of, first rivers and then railroads, in the opening of post offices. If we agree that the location of post offices was a clear indication of settlement, then it is safe to suggest where settlers established themselves. As Figure 5-8 showed, the first post offices opened close to rivers, principally the Assiniboine and Red Rivers. Figure 5-9 shows that the graph line that represents the evolution of post offices alongside rivers slowly increases from 1853 when the first post office opened until 1878. Its growth is more important after that; however, not as important as the sheer increase the total opening of post offices in Western Canada experienced in general. In 1878, the first railroad branch opened in Manitoba and the railroad trend continues to increase and surpasses the number of post offices opened

⁷¹ The definition of modernization comes from Simon Kuznets, 'Modern Economic Growth: Findings and Reflections', in *Population, Capital, and Growth Selected Essays* (London: Heinemann Educational Books Ltd, 1974), 1.

alongside rivers. By 1885 post offices that opened alongside the railroad line increased its importance. What this trend shows is the importance of different means of transportation over time. Until 1885, the number of post offices located along rivers where old settlers had set up earlier suggests the importance of a community that still relied on

Figure 5-9 Spatial query using GIS that shows the expansion of post offices.



Source: See data in Appendix A, Table A-16.

old means of transportation. Rivers were used from spring to early autumn to move goods from point to point while old trade routes marked the path to carts and sled dog transportation in winter.

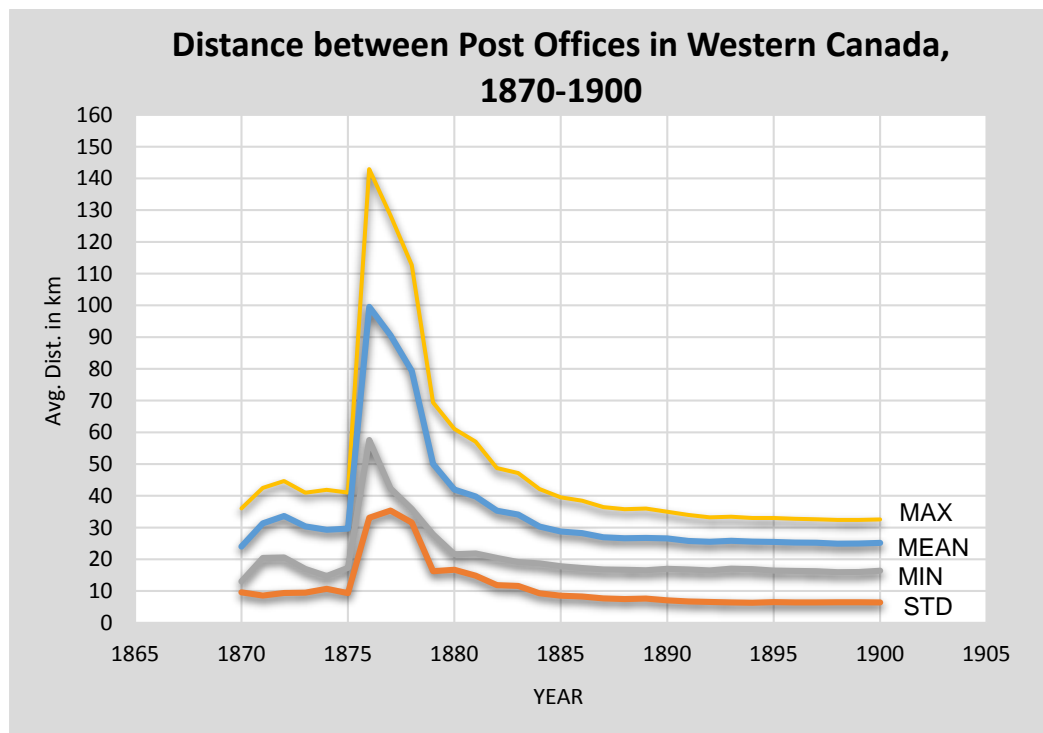
Once the railroad system started its expansion, rivers became less important and it seems that railroad lines displaced the means of transportation traditionally used by the old fur traders. In 1878, more than 50 percent of post offices were located alongside rivers whilst those near the newly constructed railroad line were only 15 percent. In 1885, the expansion of the railroad network gave an important impulse to the opening of new post offices; 35 percent were located alongside rivers and 36 percent were located within 10 km of the railroad. By 1900, these figures experienced a substantial change; 29 percent of post offices, an important decline, were located within 10 km of rivers while those located within 10 km of the rail network comprised 53 percent (See

As Figure 5-4 showed, the distribution of post offices across the region was very unbalanced. While in southwestern Manitoba post offices cluttered the whole area, farther west the situation was different. The concentration of post offices in Saskatchewan and Alberta shows a territory in its making, even after the arrival of the railroad. Except for a few locations, the North West territories were mainly a rather unconnected space despite the economic and political effort the government put in bringing European immigrants.

5.5.2 Spatial Analysis: Post Offices and Neighbours

Figure 5-10 and Figure 5-11 show the average distance between post offices over time. For this exercise, we performed a GIS distance matrix analysis to obtain a basic descriptive statistics and estimate the relationship between post offices. In this case, we chose the distance between five nearest post offices as it would not be of any value to estimate the distance between post offices in Manitoba and Alberta, for instance, as there was no close and immediate communication between them. A distance matrix analysis uses the centroids of each post office and measures the Euclidean distance between each of them. The descriptive statistics takes the average distance of the selected group of post offices year-by-year (See Table A-17 and Table A-18 in Appendix A).

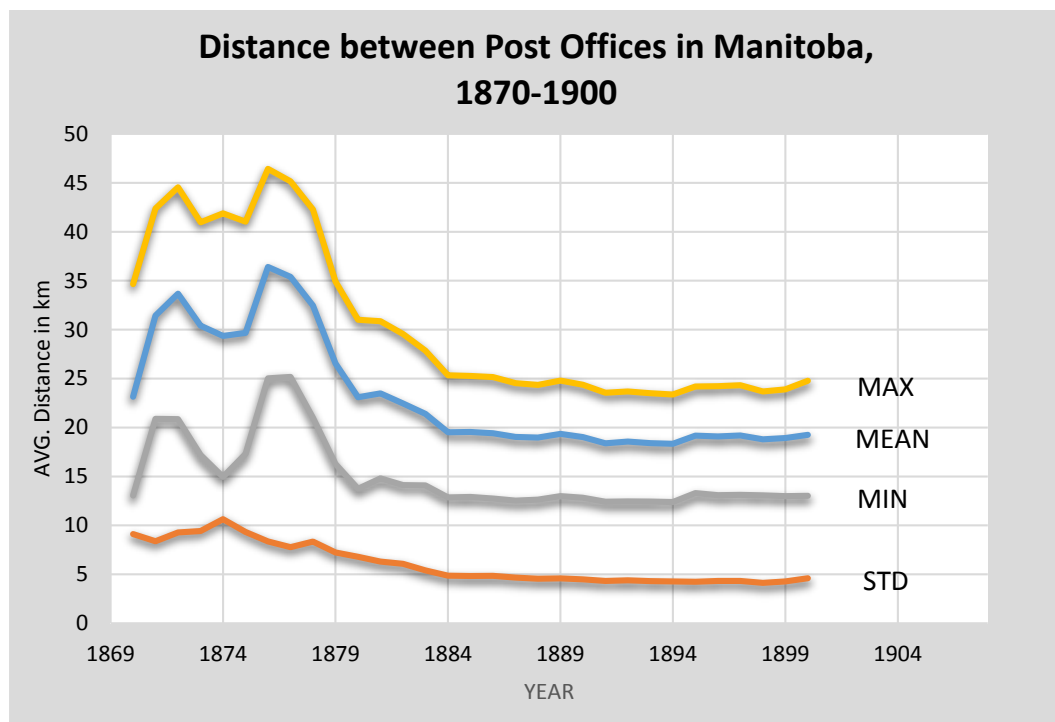
Figure 5-10 Descriptive Statistics from GIS Distance Matrix Analysis.



Source: See Appendix A, Table A-17

The distance matrix analysis suggests in this way the agglomeration or isolation between communities in the making. In Figure 5-10 the period 1870 to 1875 represents only Manitoba, as there were not post offices opened in the NWT at that time. The period 1875 to 1880, on the other hand, shows the dynamism of the region. As the number of post offices increased and extended over a large space, the distance between them increased; the maximum distance in 1876 was 142 km and the minimum 57 km. After 1876, the distance between post offices in Western Canada decreased and by 1885, it stabilized; the average distance until 1900 was about 25 km (Figure 5-10). In Manitoba, a sense of agglomeration was present earlier. As Figure 5-11 shows, the period 1870-1880 was one of great expansion. Post offices opened in isolated areas and later on, once immigrants settled and petitioned the government for more postal services, the distance between them decreased. From a maximum distance of 47 km in 1876, the concentration of post offices and settlers in a smaller area determined an average distance of 19 km between post offices by 1900.

Figure 5-11 Descriptive Statistics from GIS Distance Matrix Analysis.

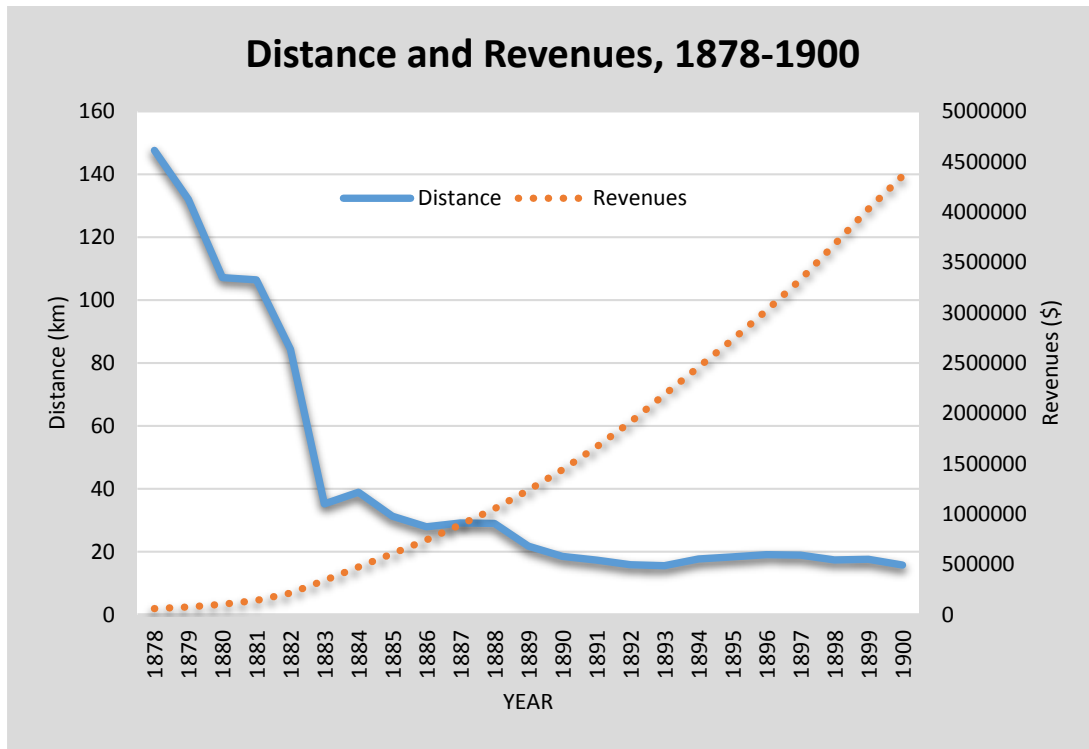


Source: Appendix A, Table A-18.

5.5.3 Spatial Analysis: Post Offices, Postal Revenues and Railroads

Distance between post offices and distance from post offices to the railroad decreased once the frontier of settlement moved westward. The concentration of post

Figure 5-12 Mean distance Post Offices/Railroads and revenues.

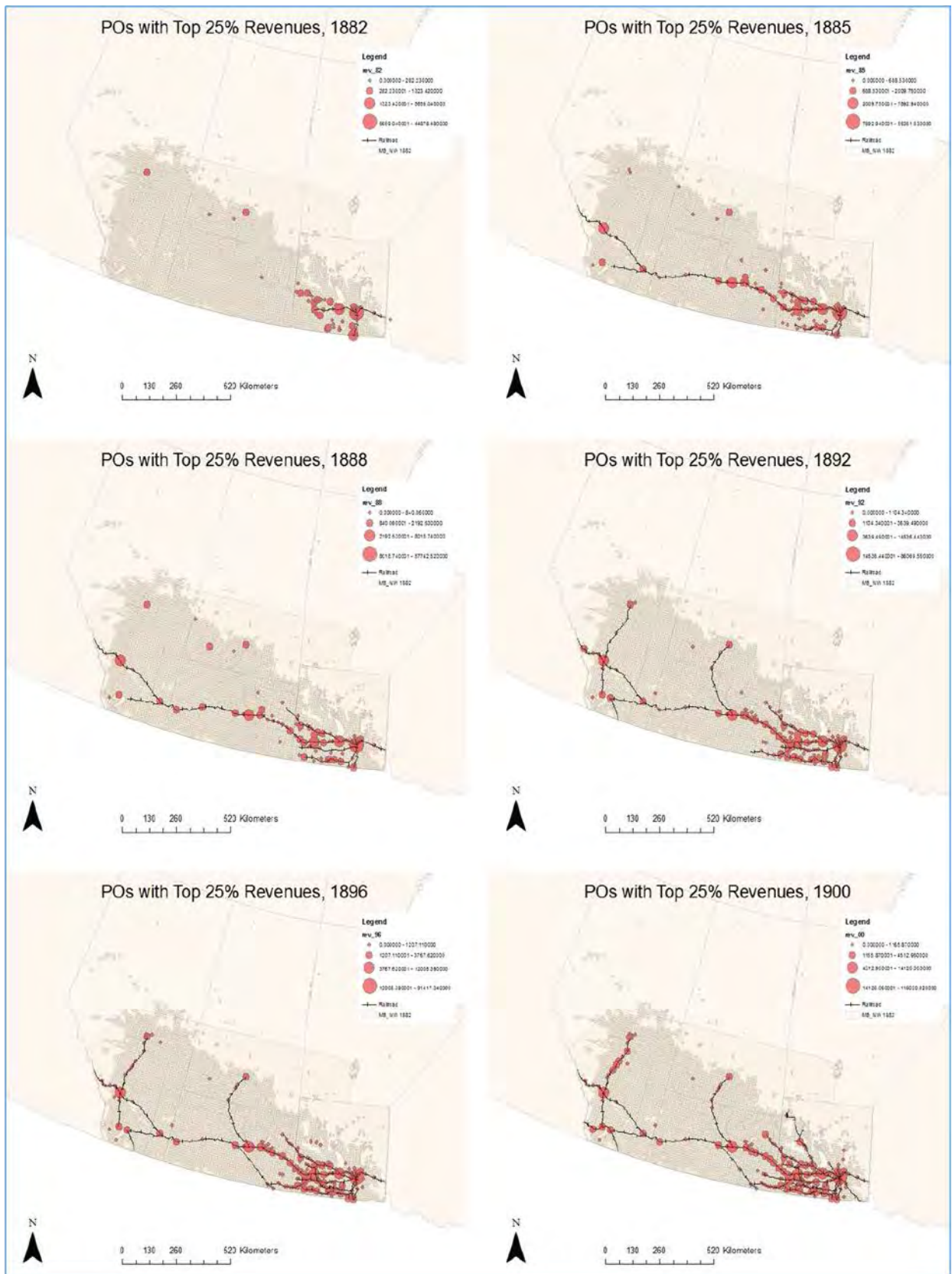


Source: Author's GIS spatial analysis. Data in Appendix A, Table A-22.

offices in certain regions and shorter distances from the post office to the railroad are clear indicators of new urban spaces in the making. Did the railroad influence post offices revenues? Previous observations showed that settlers moved, in some cases, in advance to areas where the extension of the railroad main line or branches were planned.

This section discusses how the presence of the rail station and the post office suggests a sign of settlement, economic activity and urban dynamic. Postal revenues were good indicators of the importance of key urban places alongside the railroad. Higher or lower revenues marked the development (or lack thereof) of places that eventually became important towns and cities. This analysis starts in 1878 when the first railroad connected Pembina-Emerson with Winnipeg until 1900. As we did before, data were loaded into GIS and then we performed a spatial analysis of distance in ArcMap. In this case, we used all the post offices opened (minus those closed) year by year from

Figure 5-13 Top 25 percent Post Offices by total revenues, 1882-1900.



Source: GIS author's design. Sources: See text.

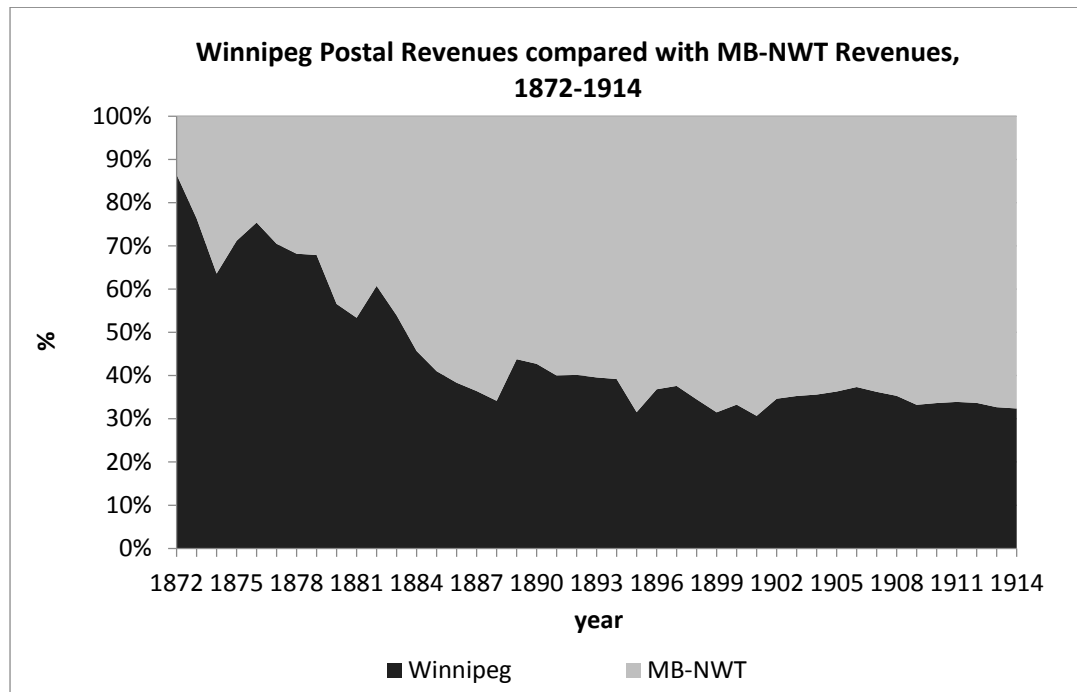
1878 to 1900 and the expansion of the rail network during the same period. A descriptive statistics analysis showed the mean, maximum and minimum distance between post offices and the railroad line. Mean distance and revenues were then computed together (See Table A-22 in Appendix A).

What this data exploration demonstrates is the importance of the railroad in boosting and increasing revenues to those post offices close to the line. As Figure 5-12 shows there was a sudden decrease in the mean distance once the railroad reached Calgary in 1883; coincidentally, postal revenues started to experience a big jump, noticeable after 1888 when the mean distance remained at 20 km until the end of the period. The chart also suggests that the influence of distance to boost post offices revenues finds a limit. Distance had an effect until certain limits. Once the distance stabilized in about 20 km, postal revenues continued increasing. This evaluation suggests that a distance of 20 km from the post office to the railroad was good enough to attract an increasing number of settlers who interacted more frequent with the postal system. The increase in postal revenues from the period 1889-1900 is suggestive of the increase of settlement in the area. Figure 5-13 shows a summary of the results on GIS that highlight the importance of the top 25 percent post offices according to their revenues. The importance of the railroad is perceptible not only by connecting communities but also as the engine of development. During the period 1860-1900 almost 1000 post offices opened in the new areas of settlement; of those, the ones close to the railroad produced the highest revenues. As Figure 5-13 shows, the top 25 percent post offices according to their revenues produced more than 90 percent of revenues for the whole area. The distance of those post offices to the railroad changed over time as new post offices opened and railroads expanded their lines or new branches opened. The mean distance to the railroad was 170 km in 1879, decreased to 10 km in 1890 and to 4.8 km in 1900 (See Table A-22 in the Appendix A).

A final observation from the data is that Winnipeg was the most important post office during the whole period. As Figure 5-14 illustrates, in 1872 Winnipeg generated 85 percent of the region's revenues. The expansion of the frontier of settlement played an important role in the decrease of Winnipeg's share of revenues as new important cities like Brandon, Regina, Saskatoon, Edmonton and Calgary increased substantially their revenues during the period. This is manifest after the railroad reached British Columbia. From 1886 to 1914, Winnipeg obtained an average of 36 percent share of the

region's revenue; however, no other city challenged Winnipeg's influence during the whole period. After Alberta and Saskatchewan became provinces in 1905 and obtained independent institutional administration, cities that had showed certain importance according to post offices revenues expanded their postal services. In 1910, Regina had

Figure 5-14 Winnipeg revenues compared with total revenues.



Source: Postmaster Annual Reports in the *Sessional Papers*, several volumes.

three post offices and Calgary operated six. By 1914, Calgary opened twenty more and Edmonton, which operated one post office, opened seven more.⁷² Postal activity at the turn of the century reflected the development of regions that had been in movement for a long period during the nineteenth century. The centrality of those cities remained for the years to come as the provinces' principal urban agglomerations. Winnipeg, the third Canadian city by population in 1911 remained the most important Western hub until the 1940s.

5.6 Conclusion

The expansion of capitalism in vast areas of the world during the second half of the nineteenth century needed the spatial transformation of scarcely populated areas. The spatial organization of Western Canada after the 1870s provides the elements that

⁷²From the Report of the Postmaster General in the *Sessional Papers*, various volumes.

validate our understanding of the production of space. Early studies of the spread of settlement in Western Canada used decennial census records to describe the evolution of the region as Mackintosh did in the early 1930s. This chapter went further and similarly analyzed the Prairies' settlement with the help of a more complete dataset: the information described in the Annual Reports of the Postmaster General of Canada in combination with the location of post offices and the layout of the historical railroad network. This chapter utilized records that had been underutilized, not only to describe the pattern of settlement but also for the evaluation of Western Canada's economic development in the first era of globalization.

The location of post offices and the layout of the historical railroad system, as this chapter demonstrated, helped to understand with another empirical evidence the movement of the frontier of settlement year by year. If the opening of post offices in new areas marked the presence of the state ex-post-facto of the presence of settlers, the arrival of the railroad changed in some ways that dynamic. Not only did the railroad drive the settlement of new communities close to the rail, but also initiated the period of increasing urbanization. Post offices close to the rail line generated the highest revenues during the period. This latter observation is a clear indication of the presence of a community in its making and the evidence of an important economic activity. The railroad and the different postal routes and post offices integrated the territory into the realm of a new capitalist endeavor. The creation of communities and the formation of a state bureaucracy were unevenly distributed across regions. A time/space framework shows more clearly a society in its making. While Alberta and Saskatchewan started its development late in the nineteenth century, southern Manitoba emerged in this period as the main centre of business operations marking the importance of Winnipeg as Western Canada's economic hub.

Data extracted from different census records produced gaps of significant information and did not provide a detailed impression of the Prairies' dynamic transformation. Putting together data that were not used before to fill the gap years between censuses provide a more nuanced understanding of the region's historical development. The use of GIS enhanced the understanding of the geography of the past by providing a graphical and empirical evidence of a changing period. This chapter combined different sources and methodologies to analyze data of surprising quality and importance.

The location of post offices and the extension of the historical railroad network in Western Canada were two of the chapter's major contribution. Other than historical maps, no other works have reconstructed the historical railroads. This reconstruction was an important contribution to produce a descriptive and empirical analysis of the influence of communications networks in nineteenth century Western Canada based on these original data. The next chapter finalizes the post office analysis by discussing the economic importance of the post to estimate the region's economic activity.

Chapter 6

The Economics of the Post

6.1 Introduction

Confederation symbolized a new institutional organization that brought political cohesion and integrated diverse interests based on a territorial expansion program. Undoubtedly, this new political entity called the Dominion of Canada demanded an increase in public works and the extension and improvement of the communications infrastructure like postal routes, railroads and canals. This spatial transformation required an important capital expenditure from the new federal government as provinces became parts of an expanding state. In this sense, the postal system as one of the main government departments by spatial presence and number of employees provides a better understanding of Western Canada extensive economic growth. The previous chapter analyzed the spatial distribution of post offices across Western Canada. Different analysis delineated a clear spatial distribution. If the location of post offices offers an indication of human activity, it will also show some economic estimates of that activity. The previous chapter gave also a glimpse of that economic activity by providing postal revenues of the post offices under evaluation. This chapter expands the information provided in the previous chapter and analyzes other economic variables that complete the evaluation of a new space under the domain of an expanded nation-state.

This chapter introduces postal data for Canada and Western Canada that were not used before to estimate the region's growth. It is important to note that postal expenditures were a small portion compared to railroads and canals funding, but while major infrastructural developments were certainly a clear indication of the expansion of the modern state, there were also projects that had a beginning and an end. Postal

expenditures, on the other hand, were an ongoing process that showed the dynamic of state expansion year by year. For this reason, the postal performance for the period ending in 1914 helps to elucidate with other sources the timing of state expansion into the Prairies. The evolution of the postal network, Money Orders (MO) system and the estimates derived from the national figures of the Dead Letters Office (DLO) will present evidences of timing, growth and immigrants influence in the development of the region.

The remaining of this chapter will first evaluate national expenditures that give sense to the production of space. Railroad expansion, canal constructions and postal expenditures help to understand how communication and transportation expansion served to the necessities of the new state. Section 6.3 gives a comparative perspective of the evolution of post offices and the importance of the postal network in Canada and Western Canada to estimate some economic variables. It also helps to estimate growth and development by comparing GDP and letters. The use of Dead Letters Office (DLO) data, never used in any postal evaluation, adds another perspective to demonstrate the unsecured flow of money through the postal system. Section 6.4 will analyze the Money Order (MO) system. Briefly mentioned in a few works, the MO system estimates the economic dynamic of regions and it also estimate settlers remittances during the period. These data have not been used before to analyze Western Canada economic importance. Section 6.5 concludes.

6.2 The cost of spatial expansion

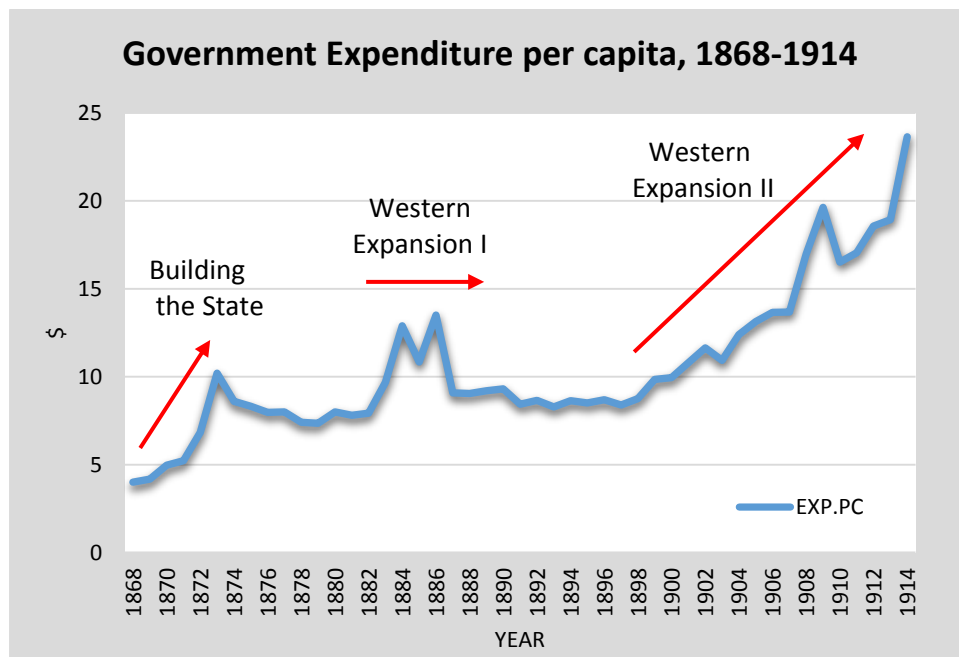
The second half of the nineteenth century and the initial years of the twentieth saw a massive state intervention directed to exercise spatial control in new territories. A new bureaucratic structure managed by increasingly professional cadres took control of the state's main functions during the period. Through an expanding railroad and postal network, this "infrastructural state," as Michael Mann defined it,¹ provided a real and symbolic indicator of the construction of the state in places farther from the centres of influence and control. Post offices, as microstructures of state presence, described the advance of the frontier of settlement and the link between communities in their making and a central administration. Once the region developed, infrastructural works illustrated the presence of the state, provincial and federal. Roads, highways, postal

¹ Michael Mann, *The Sources of Social Power. The Rise of Classes and Nation-States, 1760-1914*, vol. 2 (Massachusetts: Cambridge University Press, 1993), 380.

routes and railroad branches highlighted the presence of this infrastructural state. The importance of this state presence can be measured; first, through the general federal expenditure per capita; second, as sectors' shares and a third approach toward the postal system performance.

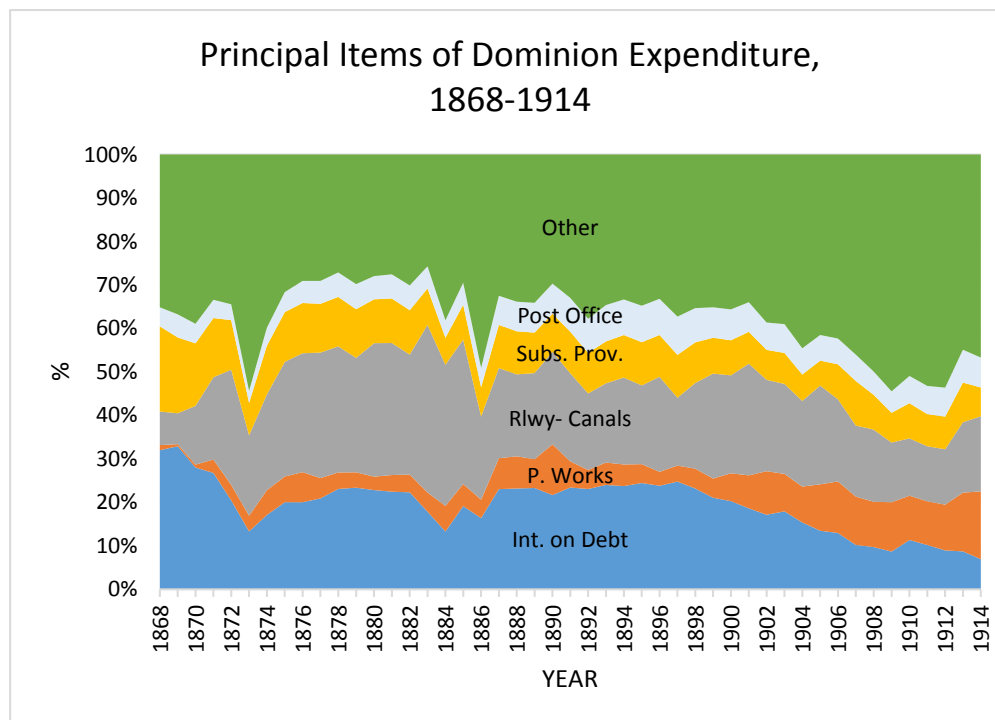
Figure 6-1 shows government expenditure per capita for the period under evaluation. As other charts showed, the trend replicates similar patterns; an important increase in expenditure shortly after Confederation that suggests a new state bureaucratic organization. The federal government created new ministries and departments alongside the organization of a new state. The second trend shows the period of the first Western expansion of the 1880s, which increased public works and substantially increased expenditure on railroads construction and canals and lastly, the period of the second Western expansion and mass settlement, which coincided with what analysts

Figure 6-1 Government per capita Expenditure, 1868-1914.



Source: Canada. Dominion Bureau of Statistics. General Statistics Branch, *The Canada Year Book 1926* (Ottawa: F. A. Ackland, 1927), 763-765. The decline in 1907 was because the Fiscal Year changed from 30 June to 31 March; hence, only 9 months were computed.

Figure 6-2 Principal Items of Dominion Expenditure, 1868-1914.



Source: Canada. Dominion Bureau of Statistics. General Statistics Branch, *The Canada Year Book 1926* (Ottawa: F. A. Ackland, 1927), 763-765.

called the “wheat boom”. A detailed account of government expenditure in Figure 6-2 shows how the government allocated funding to different sectors. Noticeable were the expenditure on railways and canals and subsidy to the provinces in the period of the first Western expansion. At the turn of the century, however, railway construction received less funding but public works increased importantly.

Although the construction of new roads, bridges and schools was a provincial task and schools’ maintenance and social services were municipal obligations drawn upon property taxes, other government buildings were funded by the Department of Public Works.² The allocation of money to subsidize the provinces remained almost the same for the whole period. After the 1880s, post offices buildings were built following a government type of architectural design. Post offices became central points in towns and cities and the architectural design highlighted the importance of the location and acted as a symbol of prosperity and development.³ Another important expenditure was

² M. C. Urquhart, “Public Investment in Canada,” *The Canadian Journal of Economics and Political Science / Revue Canadienne d’Economie et de Science Politique* 11, no. 4 (November 1, 1945): 538, doi:10.2307/137543.

³ Chantal Amyot and John Willis, *Country Post: Rural Postal Service in Canada, 1880 to 1945*, Mercury Series 1 (Gatineau, Quebec: Canadian Postal Museum, 2003), 60–61.

the amount the government paid in debt interest, especially during the nineteenth century. Two things coincided, the necessity of the government to finance its territorial expansion and public works and the availability of British capital to flow to new settled areas. Although the percent of interest paid decreased after 1900, the reason was not that the country received less overseas investment but that other federal expenditures increased significantly. From 1865 to 1900, Canada issued almost £125 million of government securities in the London market at an average of £3.56 million a year. From 1900 to 1914, on the other hand, it reached £286 million at an average of £19 million a year; of those, £81 million alone went to fund the railroad expansion. In general, about 75 percent of British investments went to finance the increase in public works expenditures.⁴ Under “Other Expenditure” the government allocated an important amount; however, it did not disclose how and where it spent those funds. The importance of those investments and expenditures were illustrated above; however, they cannot describe the spatial transformation experienced over the period other than by including the railroad expansion. A better understanding of those transformations can be estimated from the postal system performance.

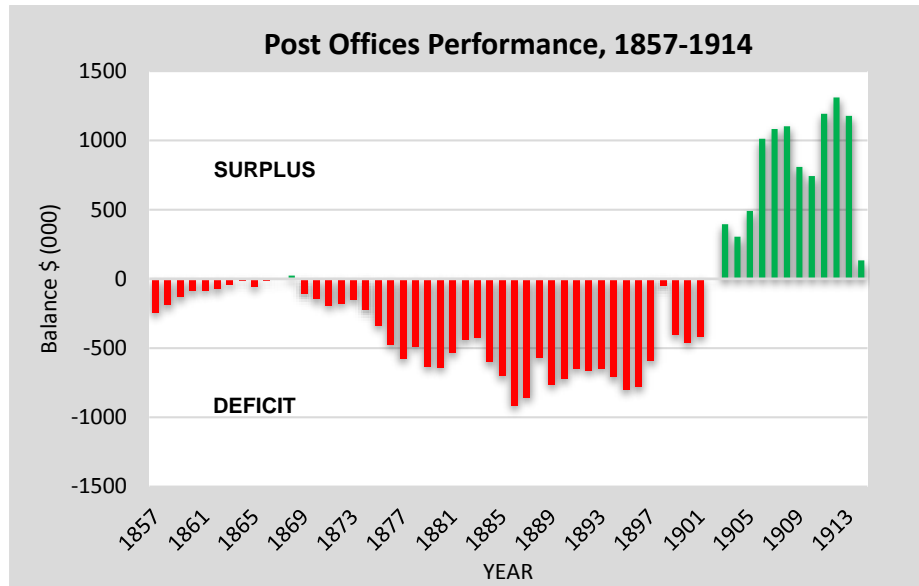
6.2.1 Financing the Post

The real importance of postal expenditure within the Federal budget was certainly small compared with the allocation to other sectors; however, its importance resided in the post’s double function: as a public service and as quasi-agent of the state. The real dimension of the economic enterprise of building the state is undoubtedly apparent from the postal system’s performance from 1857 to 1914 as Figure 6-3 shows. Except for an unusual surplus shortly after Confederation, the rest of the period the postal system produced deficit. The Post Office Department had to provide the necessary funding for the salaries of postmasters and other officers involved in the everyday maintenance of the system. As more post offices opened, more salaries for postmasters and payments for contractors in charge of the postal distribution between post offices needed. Although, the post offices infrastructure like land and building construction and maintenance were under the orbit of the Department of Public Works, the postal

⁴ Matthew Simon, “New British Investment in Canada, 1865-1914,” *The Canadian Journal of Economics / Revue Canadienne d’Economie* 3, no. 2 (May 1, 1970): 241–243, doi:10.2307/133675.

system distributed government correspondence without charge for about \$6 million a year, which undoubtedly increased its deficit.⁵ The deficit follows the trend of the

Figure 6-3 Surplus and deficit in the Canadian postal system, 1857-1914



Source: Report of the Postmaster General of Canada in Canada. Parliament, *Annual Departmental Reports, 1925-26*, vol. IV (Ottawa: F. A. Ackland, 1927), 11.

period of state building and territorial expansion. An initial increase in postal deficit after the 1850s reflected the change experienced when the Colonies obtained their own administration and hence new post offices opened in the Provinces. After Confederation, the deficit illustrates the cost of spatial control. The importance of this period was not profits but state presence, dissemination of information and territorial expansion. In words of a Member of Parliament in 1884, “Post Offices are not established for the purpose of providing a revenue, but for the convenience of the people.”⁶

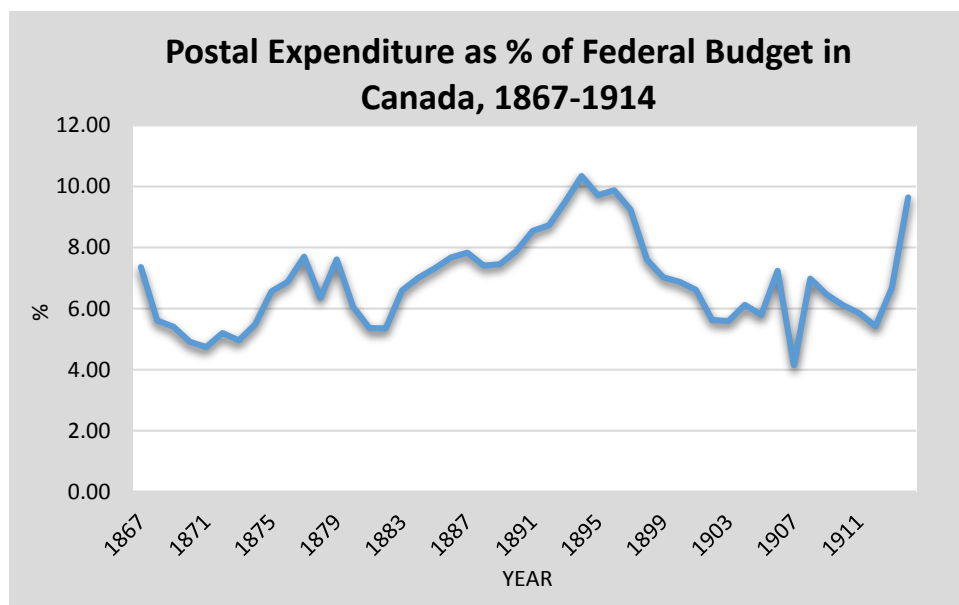
As Figure 6-4 illustrates, the portion of the Federal budget destined to cover the cost of the operation of the postal network was very important. It is clear how the share of the Federal budget used to complement post offices revenues replicates the same trend revealed in other analyses. In 1867, seven percent of the budget was directed to the operation of the postal system reaching more than ten percent by the end of the

⁵ Brian S. Osborne and Robert M. Pike, “From ‘A Cornerstone of Canada’s Social Structure’ to ‘Financial Self-Sufficiency’: The Transformation of the Canadian Postal Service, 1852-1987,” *Canadian Journal of Communication* 13, no. 1 (January 1, 1987): 4, <http://www.cjc-online.ca/index.php/journal/article/view/438>.

⁶ Quoted in *Ibid.*

nineteenth century. The period illustrates the era of what this dissertation has called First Western Expansion, which ended with the land crash of 1883 in Manitoba. The second increase corresponds with the opening up of the North West Territories and the arrival of the railroad to the West, which reached its highest peak by 1895 when the wheat boom changed the economic dynamic of Western Canada and Canada. At the turn of the century the postal system, as it was mentioned early, became self-sufficient until the First War.

Figure 6-4 Postal Expenditure.



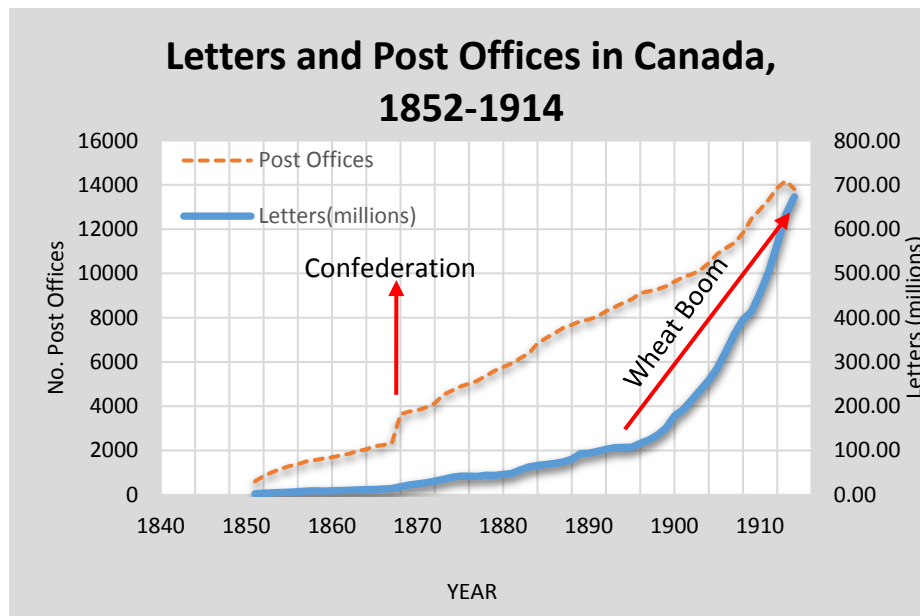
Source: Federal Budget from *Historical Statistics of Canada*, Series H1-18. Federal government, budgetary revenue, by major source, 1867 to 1975, http://www.statcan.gc.ca/pub/11-516-x/section/h/H1_18-eng.csv. Postal expenditure from Report of the Postmaster General of Canada in Canada. Parliament, *Annual Departmental Reports, 1925-26*, vol. IV (Ottawa: F. A. Ackland, 1927), 11. The decline in 1907-8 was because the government changed the ending of the Fiscal Year from 30 June to 31 March, so it computed only nine months.

6.3 A Postal Revolution

In June 1900, Postmaster General William Mulock addressed a passionate speech to an expectant House of Common to defend the reduction of the postage stamp rate from three to two cents. The policy in operation since 1899 was heavily criticized by the opposition because, they argued, it would increase the enormous deficit the Department was carrying out from previous years. The reduction of the postage rate, as Mulock lively defended, might have produced the desired effect. Postal rates reduction,

the increase in the number of post offices across the country, especially in the Prairies, and an increase in the number of immigrants definitely increased the number of letters

Figure 6-5 Letters and Post Offices in Canada, 1850-1914.



Source: Report of the Postmaster General of Canada in the *Sessional Papers*, various volumes.

sent (Figure 6-5). The Post Office Department thus started to experience a positive balance after fifty years of running on deficit (Figure 6-3). The Post became in Mulock’s words, an “institution of the masses.”⁷ From 1900 and until the First War erupted, the Department increased its revenues and became self-sustained. The following section will analyze the importance of the postal data to estimate economic growth.

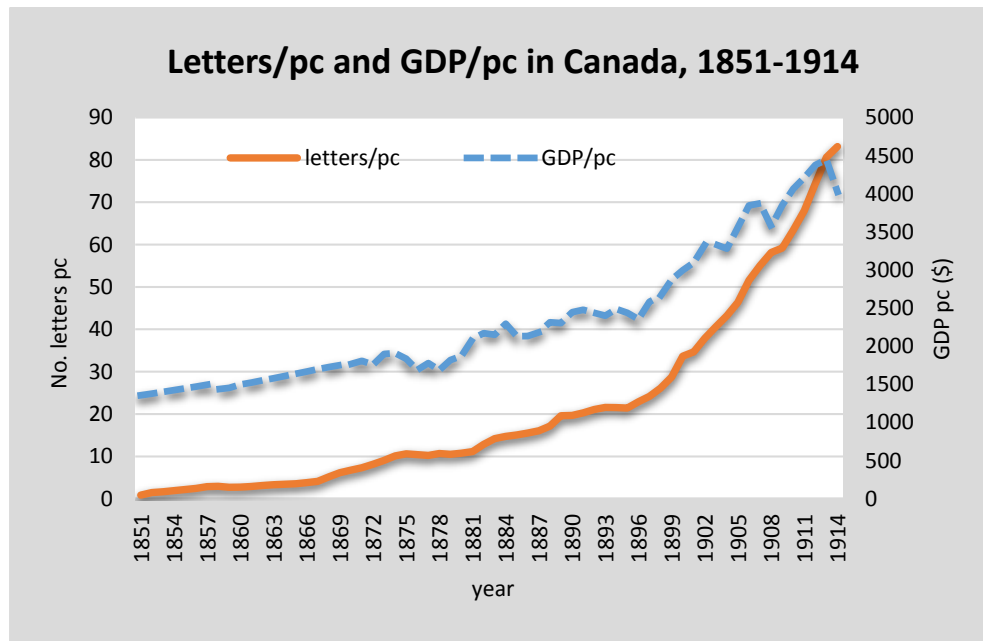
6.3.1 Post Offices and economic growth

The growth of the postal system in Canada illustrates the importance of means of communications but it can also estimate economic growth based on another dataset. Analyzing developing countries, Charles Kenny notes that it is possible to estimate economic growth through the volume of letters.⁸ Kenny uses the so-called Jipp

⁷ William Mulock, *The Administration of the Post Office Department* (Ottawa: [n.p.], 1900), Loc. 510, Kindle Edition.

⁸ Charles Kenny, “Reforming the Posts: Abandoning the Monopoly-Supported Postal Universal Service Obligation in Developing Countries,” Policy Research Working Paper 3627 (Washington, D.C.: World Bank, 2005), 1. Similarly, David F. Good, “The Economic Lag of Central and Eastern Europe: Income Estimates for the Habsburg Successor States, 1870–1910,” *The Journal of Economic History* 54, no. 04 (1994): 869–91, doi:10.1017/S0022050700015527. Good’s paper adopted Craft’s early estimates for Europe that also used the number of letters as one of the variables. See N. F. R Crafts, “Gross National

Figure 6-6 Letters and GDP per capita in Canada, 1851-1914.



Source: Annual Reports of the Postmaster General of Canada in Sessional Papers , several Volumes, 1867-1915; Maddison, *The World Economy*, 184, 194.⁹

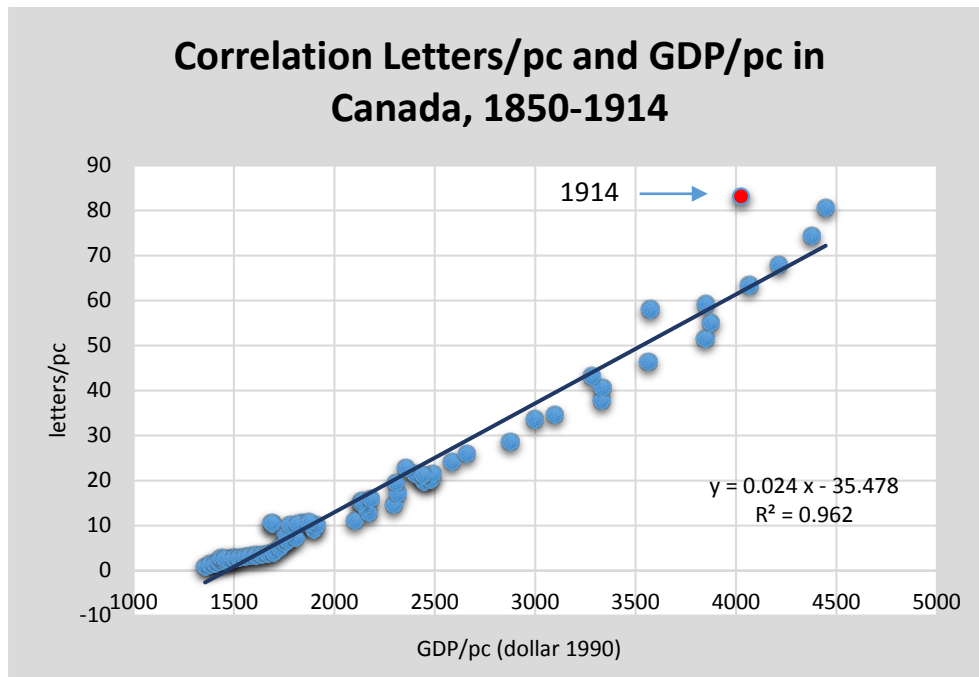
curve to evaluate the correlation between the numbers of letters per capita posted annually with GDP per capita. Jipp’s original study estimated the concentration of telephone lines and GDP per capita.¹⁰ Kenny acknowledges the difference between telephone communications and letters as Jipp estimated concentration of lines not number of calls. The idea of linking the number of letters posted per capita with a country’s growth in the nineteenth century, however, is an indicator of first, the flow of information, and second, it estimates certain level of development as an increase in letter writing suggests an increase in the levels of literacy. If one takes nineteenth century Canada as a new developing country, it finds a very strong correlation between the number of letters per capita and the value of GDP per capita ($R^2=0.96$ See Figure 6-6 and Figure 6-7). This is also consistent with the world postal revolution that was taking place during the second half of the nineteenth century. For Europe, Albert Carreras and

Product in Europe 1870–1910: Some New Estimates,” *Explorations in Economic History* 20, no. 4 (October 1983): 387–401, doi:10.1016/0014-4983(83)90026-8.

⁹ Angus Maddison, *The World Economy: A Millennial Perspective*, vol. 1–2 (Paris: Development Centre of the Organisation for Economic Co-operation and Development, 2001), 184, 194.

¹⁰ A. Jipp, “Wealth of Nations and Telephone Density,” *Telecommunications Journal*, July 1963, 199–201.

Figure 6-7 Correlation letters per capita and GDP per capita in Canada, 1850-1914.



Source: Annual Reports of the Postmaster General of Canada in Sessional Papers, several Volumes, 1867-1915 and Maddison.

Camilla Josephson estimated that the number of letters grew at 5.1 percent annually in thirteen European countries and that figure, they claim, was an illustration of market integration and growth.¹¹

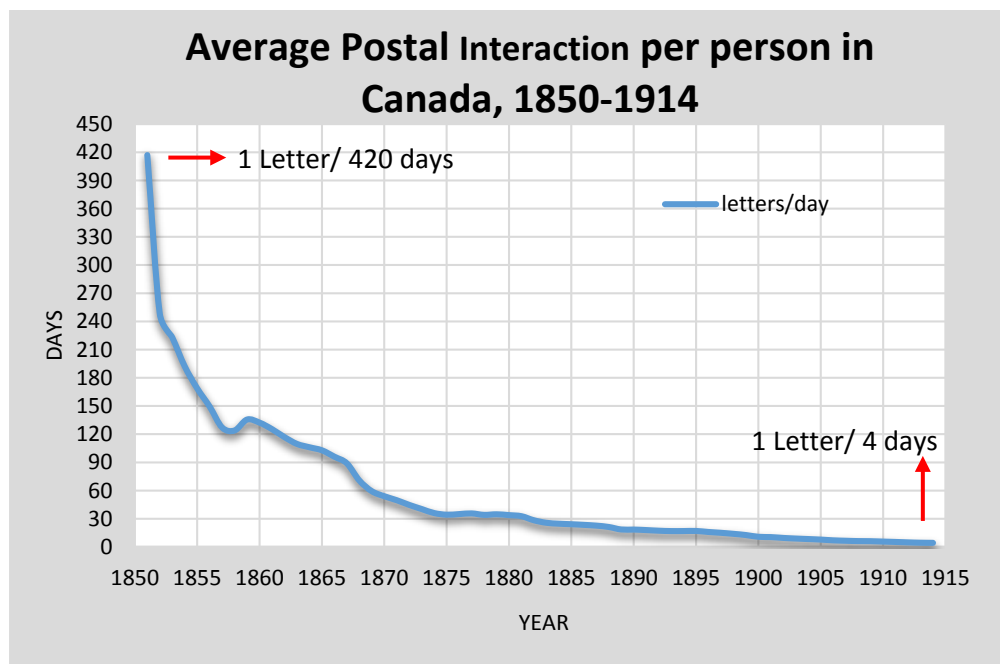
Another form to understand the postal revolution is to analyze the frequency that people interacted with the postal system sending or receiving mail. As Figure 6-8 shows, in 1851 in Canada people sent or received mail on average every 420 days. By Confederation, it was reduced to 100 days and by 1914, people sent or received post every four days. Several factors might explain this important transformation. First, the number of post offices that by the end of the century had spread over the territory; second, population increase via immigration and natural growth; third, the extension of postal routes following the railroad lines; fourth, the popularity of the mail as a mean of communication “for the masses”, and as Kenny observes, the increase of GDP per capita.¹²

¹¹ Albert Carreras and Camilla Josephson, “Aggregate Growth, 1870–1914: growing at the Production Frontier,” in *The Cambridge Economic History of Modern Europe: Volume 2, 1870 to the Present*, vol. 2 (Cambridge, UK: Cambridge University Press, 2010), 56.

¹² Kenny, *Reforming the Posts: Abandoning the Monopoly-Supported Postal Universal Service Obligation in Developing Countries*, 1.

The timing and the transportation revolution that was taken place in Canada explains the expansion of the postal interaction per capita illustrated in the deep decline from 1851 to 1857 (Figure 6-8). It is important to remember that the Crown had already granted the administration of the postal service to the Provinces of Canada (Ontario and Quebec) in 1851.¹³ It is also important to mention that the Provinces had started an important railroad expansion. As Table 6-1 shows, in four years the time of delivery mail from Quebec to other places changed strongly from days to hours. People that interacted with the mail every thirteen months started to send or receive mail every four months. The increasing number of coach roads opened in the period helped to link distant

Figure 6-8 Mail Frequency in Canada.



Source: Annual Reports of the Postmaster General of Canada in *Sessional Papers*, several Volumes, 1867-1915, *Canada Year Book* and *Historical Statistics of Canada*. (Data in Appendix A, Table A-20).

¹³ Great Britain, *An Act for Enabling Colonial Legislatures to Establish Inland Posts* (Montreal: S. Derbyshire & G. Desbarats, 1849). Legislation passed in Britain in 1849 but the Provinces obtained actual control in 1851. Canada. Post Office Department, *Canadian Postal Guide*, ed. John Dewé, Kindle Edition (Ottawa: Lovell and Gibson, 1863), Kindle Location 162, <http://www.gutenberg.org/ebooks/23852>. See also “A Chronology of Canadian Postal History - 1841-1867,” *Canadian Museum of History*, accessed August 28, 2014, <http://www.historymuseum.ca/cmhc/exhibitions/cpm/chrono/chs1841e.shtml>.

Table 6-1 Time to Deliver Mail

From	To	1853	1857
		Days	Hours
Quebec	Windsor	10.5	49
"	London	9	45
"	Hamilton	8	42
"	Niagara	8	50
"	Guelph	9	51
"	Toronto	7	40
"	Cobourg	6	36
"	Belleville	5	34
"	Kingston	4	31
"	Brockville	3	29
"	Ottawa	3	24

Source: Canada. Post Office Department, *Canadian Postal Guide*, ed. John Dewé, Kindle Edition (Ottawa: Lovell and Gibson, 1863), Kindle Locations 181-182, <http://www.gutenberg.org/ebooks/23852>.

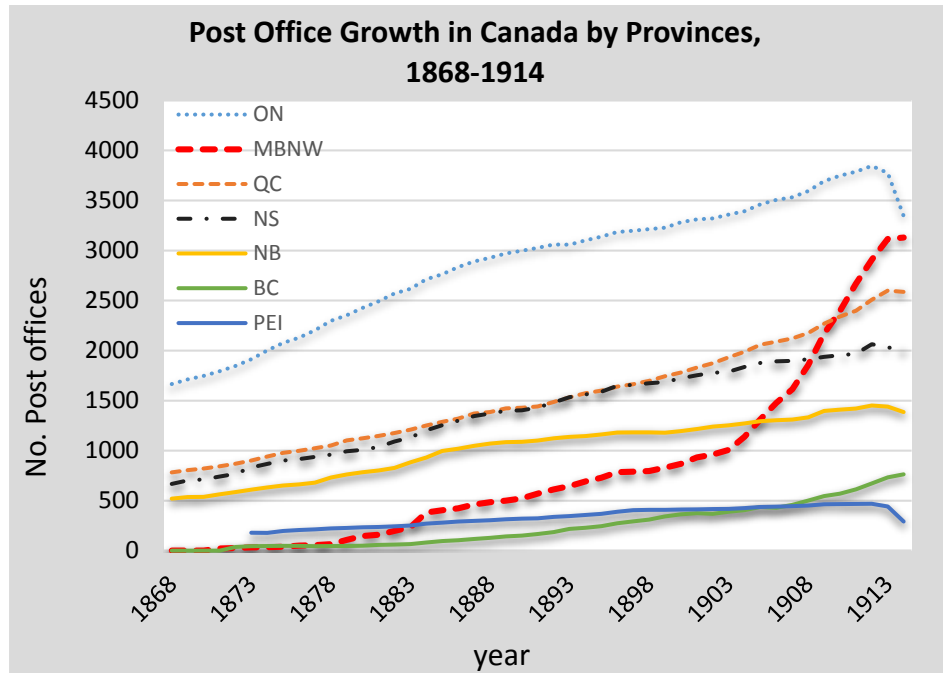
communities with the railroad station. The period from 1857 until Confederation witnessed a smooth, yet important, decline in the time of delivery. After 1850, the construction of railroads in Quebec and Ontario accelerated the time of mail delivery as more stations connected the railroad with rural areas. In 1853, five hundred miles of railroads were added in Quebec and Ontario. In 1857, the extension reached almost 1,500 miles and by Confederation, 2,300 miles.¹⁴ As more railroad stations opened, the connection between distant places with the core increased. The time of mail delivery in the Provinces of Canada was directly connected with the spread of the railroad network.

Another possible observation is to incorporate to the latter evaluation, the increase in GDP per capita that illustrates the improvement of the condition of life of the population through, among other factors, literacy and urbanization. The popularity of the post and the extension of the network over a large territory were the essential tools of state administration over space. Figure 6-9 and Figure 6-10 show the dimension of the expansion of the postal network by provinces. As the main province in the Dominion, Ontario provided the biggest number of post offices opened in the period, but Ontario had a long tradition of postal services even before Confederation. Quebec and

¹⁴ Railway Statistics of the Dominion of Canada in Canada. Parliament, *Sessional Papers Volume 19-Part I, Fifth Session of the Twelfth Parliament, Session 1915* (Ottawa: J. de L. Taché, printer to the King, 1915), viii.

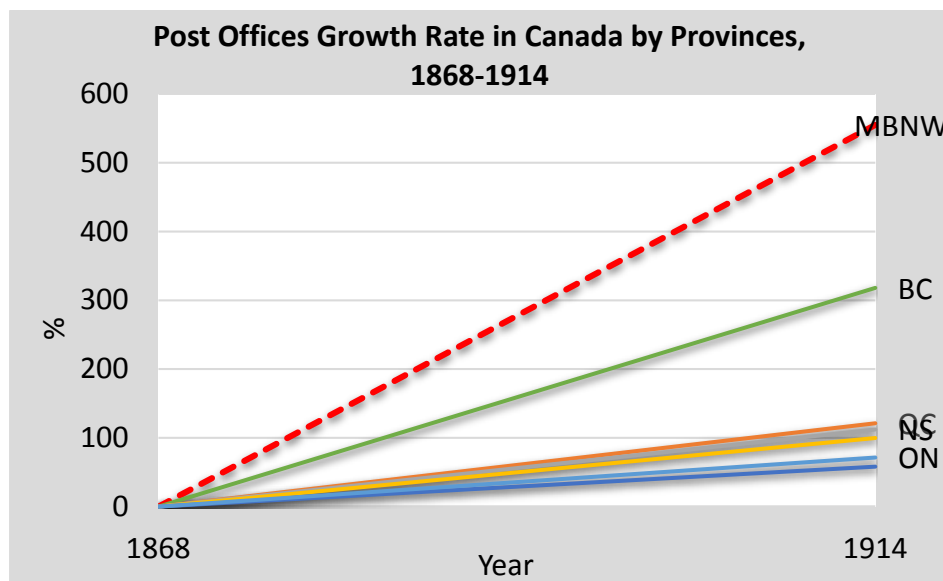
Nova Scotia had also an important share of post offices opened during the period. If one analyzes the growth rate of the postal system instead of the number of post offices

Figure 6-9 Post Offices Growth in Canada by Provinces, 1867-1914.



Source: Data extracted from the Report of the Postmaster General of Canada in *Sessional Papers*, 1867-1915.

Figure 6-10 Post Offices Growth Rate in Canada by Provinces, 1867-1914.



Source: Data extracted from the Report of the Postmaster General of Canada in *Sessional Papers*, 1867-1915.

opened, the result is indicative of the importance of state building and territorial expansion after Confederation. While Ontario's post offices grew about 70 percent from 1867 to 1914, Manitoba and the North West Territories grew about 550 percent and British Columbia 300 percent for the same period. The period after 1900 also shows a remarkable increase in the number of post offices in Western Canada. From about 1000 post offices in 1900 to 3000 by 1914. This increase was fuelled by the rapid flow of migrants and immigrants into Alberta and Saskatchewan as section 4.4 explained. Manitoba, on the other hand, experienced a smooth growth that continued after the turn of the century. As previous discussions explained, Manitoba had already depleted the availability of "free" homesteads before the end of the century as it was demonstrated in the homestead discussion in previous chapters. The rest of the provinces, except British Columbia, show a modest growth in the number of post offices opened.

What these figures illustrate are the importance of the post office as a main institution for both settlers and government. Settlers maintained an increasingly important medium of communication and finance through the network that included money order and postal saving offices and the state addresses its own needs by providing a system that reinforced spatial authority and organization. In this form, state administered post offices encouraged a faster communications networks and thus opened the conditions for a bigger market for news and goods.¹⁵ The postal system arranged the economic space and integrated distant markets with the centre. The operation of the postal service allowed people not only to write letters but also to transfer money or other values including a variety of objects as the Dead Letters Office revealed in its periodical inspections.

6.3.2 The Dead Letters Office

One of the things that raised curiosity over the years, although for different reasons, was what did people send over the post. That fascination for such a rather secretive exchange of information between individuals was reinforced by the inviolability of the mail highlighted in several governments' Postal Acts. In the case of the United States, the Act of 1792 protected newspapers from government control or interference and also the opening of letters.¹⁶ Similarly, in the case of Canada, the Postal Act described all

¹⁵ Richard R. John, *Spreading the News: The American Postal System from Franklin to Morse* (Cambridge, Mass: Harvard University Press, 1995), 35–37.

¹⁶ *Ibid.*, 42.

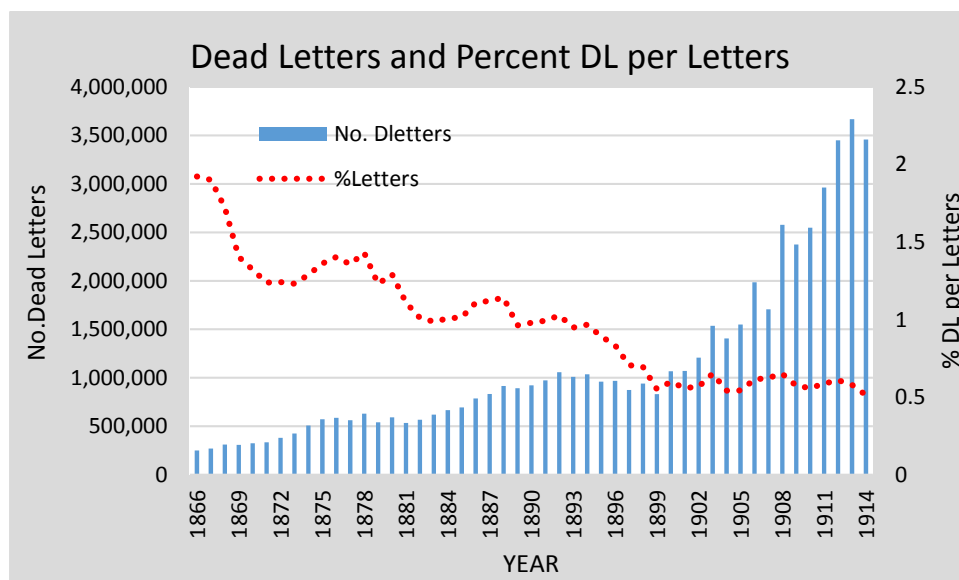
the penalties for opening or stealing mail. In several cases, the penalty was severe, up to five years in prison.¹⁷ However, all the secrecy finished very often in the scrutinizing hands of the Dead Letters Office (DLO) employees. Following the British postal regulations, Canada enacted the Post Office Act in 1867. Concerning the fate of undelivered letters, the Act stipulated that if the correspondence could not be forwarded for any reason, it would be delivered to the DLO. Letters were frequently undelivered because of unpaid or insufficient postage or wrong or unrecognized addresses. The Post Office Department also opened suspicious letters that could contain contraband or forbidden items. Once in the DLO, special officers opened the letters in order to obtain details, like sender or recipient's address or any other information that could be used to deliver them or to return to the senders. If officers obtained the sender's address, they returned the letter and charged the remained postage; they also charged an additional five cents fee in case the letter was sent with insufficient postage. In case the letter did not contain any information about recipient or sender and contained money or other values, the Post Office Department appropriated the amount as Postal Revenue.¹⁸

The records of the DLO offer an exceptional glimpse of what did people post over the years. Surprisingly, nothing has been written about the information provided by the DLO in Canada during the period. The office, however, produced detailed reports in the Postmaster Annual Reports. Important to this chapter are the different financial instruments found in the regular inspections of undelivered letters. Alongside an important number of letters containing cash, postal officers reported cheques, money orders, drafts, letters of credit and bills of exchange. Although letters containing cash were higher in numbers, there were not, nonetheless, those with the higher amounts in real value. The average amount per letter was \$5 in cash, \$150 in cheques, Bills of Exchange had an average of more than \$300 and Drafts \$250. These values are indicative of the type of business carried out through the postal system. While cash was representative of common people sending money to family, reflected as well by the highest

¹⁷ Canada. Parliament, *The Post Office Act, 1867, and the General Regulations Founded Thereon* (Ottawa: G. E. Desbarats, 1868), 21–29.

¹⁸ *Ibid.*, 14–15.

Figure 6-11 Dead Letters and percent of Dead Letters per Total Letters.



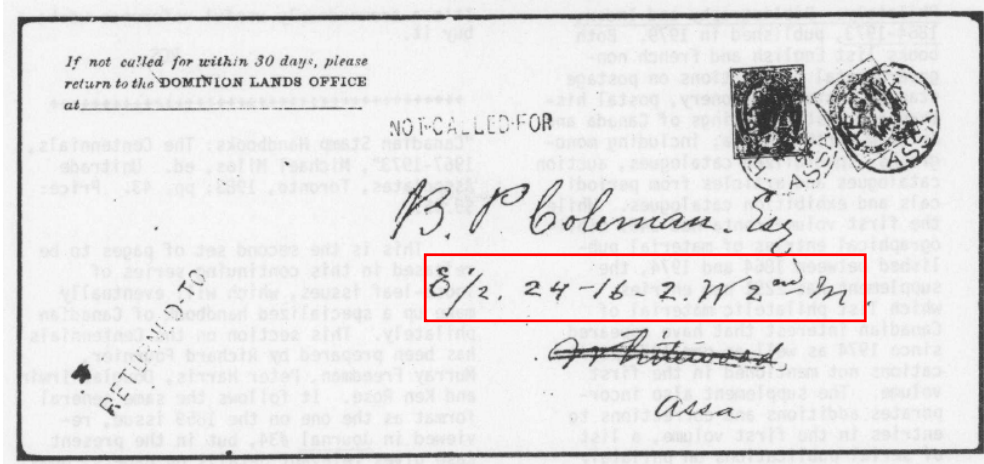
Source: Reports of the Postmaster General in the *Sessional Papers*, 1867-1915, various volumes.

numbers recorded, other financial instruments suggest an important business movement that relied on the postal system because there was no other system to transfer money for economic transactions. The DLO reports included postal money orders among the items but money orders were already reported in the Postmaster's annual reports and they will be discussed in the following section.

The important observation about the DLO is that it provides a random sample of the general mail delivered over the years. Dead letters comprised about two percent of the total number of letters posted during the DLO initial years of operation and decreased to about 0.5 percent by the turn of the century, a percent maintained until 1914, the year this analysis ends (Figure 6-11). This important decrease in the number of dead letters is suggestive of the dynamic of territorial expansion over the period. Senders very often did not know the present location of the recipient and guessed the address or misspelled the location's name, a common characteristic of new places recently settled. Figure 6-12 shows an undelivered letter that was sent to a recipient that might have lived in a rural area but which the sender did not have enough information or the recipient might have moved from the homestead as they frequently did during the period as section 4.4 showed. Once settlers remained in the area longer, new communities

emerged and post offices locations increased, the number of letters reaching destination also increased.

Figure 6-12 Undelivered letter showing Township address.



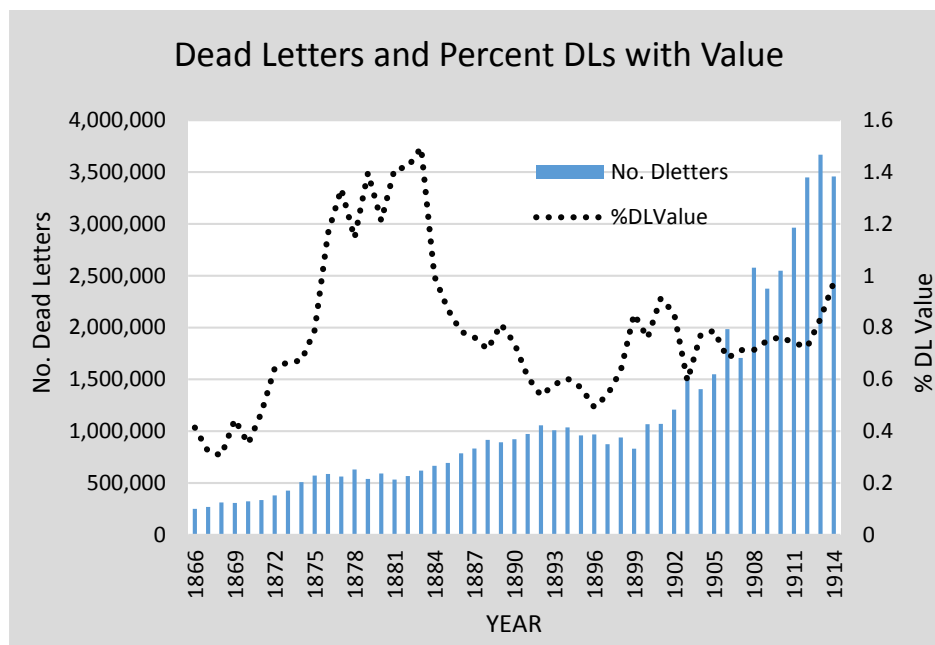
Source: B. C. Plain, "The Prairie Grid System: Its Application in Postal History," *Postal History Society of Canada Journal* 35 (September 1983), 35.

Another observation is that the post became increasingly important for the delivery of different kind of items. The number of letters and parcels containing items of different value increased over time. While for the initial years of operation, the DLO did not report important number of objects other than letters and parcels, for the later part of the nineteenth century, those numbers increased substantially. The contents inside of the Dead Letters were a clear indication of the importance of the postal network as a multi-purpose service: it delivered information in the form of letters, pamphlets, books, newspapers and other printed matter and in addition, it transported money and different kinds of objects. The DLO report of 1911, for instance, listed 53,000 different items of certain value, not necessarily of money value, passing through the postal network that had not reached destination. A random selection of them, for example, were accordions, cigar holders, apples, aprons, baby clothes, bait, balls, bells, belts, bottles, buffalo horns, candles, cakes, chains, coal, cinnamon, plants, furs, guns, gramophones, honey, insects, oil, samples, seeds, shoes, watches, whiskey.¹⁹ The description of the items delivered over the years could give a glimpse of Canadian consumption behaviours.

¹⁹ Annual Report of the Postmaster General in Canada. Parliament, *Sessional Papers Volume 15, Third Session of the Eleventh Parliament, Session 1911* (Ottawa: C. H. Parmelee, 1911), Appendix I.

The DLO records also show that in addition of transporting letters, the postal system was used unofficially as a means of moving unsecured money or values across the country. The number of financial instruments reported adds another way of measuring capital mobility in times of state formation and territorial expansion where bank branches were not already fully established. This is particularly evident in Figure 6-13. After Confederation, the percent of dead letters containing value increased importantly

Figure 6-13 Dead Letters and percent of Dead letters containing Value.



Source: Reports of the Postmaster General in the Sessional Papers, 1867-1915, various volumes.

from 0.4 percent to almost 1.5 percent, sustained for almost all the period of the first Western expansion that lasted until mid-1880s when the railroad reached the west coast. This period showed a great dynamic in territorial expansion and people's mobility. The lack of banks in the new territories opened for settlement led people to use other means to transfer money and make business transactions.

Of course, as this dissertation discussed for other data, postal data quality is also a reason of scrutiny, particularly the total number of letters posted. To estimate the number of letters posted during the year, officers surveyed determined post office during a week of operations and then they extrapolated the figures for the whole year for

all the post offices in operation.²⁰ Assuming this method as a guesstimate, the figures are important indeed. For the period 1866-1898, the postal system delivered letters that contained an annual average of \$31 million in cash and financial instruments. From 1898 to 1907 it increased to \$87 million and by 1914, it reached \$350 million.²¹ Even though the money order system was in operation since 1855 in Ontario and since 1873 in Manitoba and by 1914, the banking system had already spread across every Prairie town, people still relied on a state-run institution for unofficially transferring unsecured funds.

6.4 The Money Order System

The previous section gave a glimpse of an unofficial, yet extensive, form of transferring money through the postal system. In 1855, the Provinces of Canada adopted the Money Order (MO) system in operation in Great Britain since the 1850s.²² After Confederation, Manitoba opened its first MO office in 1873 and the Winnipeg office remained the only one in operation for a number of years. In 1878, Portage La Prairie started the service and by 1883, ten MO offices opened alongside the extension of the CPR to the west. The aim of the MO system was to encourage people to send money in a way that could be traced and in this form avoid the stealing of money posted in regular letters as it was commonly reported in the Postmaster Annual Reports. The purpose was also to increase revenues by charging the sender a commission to send money through a registered system; although, the system had somehow certain limitations as the maximum amount allowed was \$100. A sender filled a postal form at the local post office and paid a small commission according to the amount delivered. For amounts of \$10 or less, the commission was 5 cents and up to 50 cents for sums up to \$100.²³

²⁰ Ian R Lee, "The Canadian Postal System: Origins, Growth and Decay of the State Postal Function, 1765-1981" (Ph.D. Dissertation, Carleton University, 1989), 125.

²¹ This is an estimated computed with available data. Data in Appendix, Table A-25.

²² Amyot and Willis, *Country Post*, 136.

²³ John Dewé, *Canadian Postal Guide: Containing Calendars for 1867 and 1868* (Montreal, Que: John Lovell, 1867), 41.

Few studies analyze the postal money order system in Canada and elsewhere.²⁴ Those studies highlight the importance of the system enhancing rural life by connecting distant locations and integrating them to the national and international market. Especially after the introduction of the mail catalogue, people could order goods to central locations and receive them through the postal parcel service. Brian Osborne and Robert Pike argue that the MO system forced the closing of general stores in some areas, which, ironically, several of them hosted the local post office, because customers preferred to buy through the mail order catalogue rather than the local store.²⁵ The argument is difficult to prove but it suggests the importance of the postal system to modify patterns of commerce.²⁶ At the end of the nineteenth century, Canada's Eaton company catalogue alongside Sears in the United States were two of the most important commercial organizations that expanded their business through the extensive use of MO system and the parcel delivery system.²⁷

The other important function of the MO system was the movement of money via migrants' remittances. Settlers in the West sent money to their families in the East or to Europe frequently. Although other financial institutions sent money overseas during the period like banks, insurance companies or news agencies, the MO system was widely used by common settlers.²⁸ Remittances from all the countries of the Anglo-world to the United Kingdom, for instance, amounted for about 5.6 percent of its GDP in 1913.²⁹ Magee and Thompson estimate that the amount of money orders received in

²⁴ In the case of Canada, Amyot and Willis give a brief account of the system; similarly, in Osborne and Pike's. In both cases, their works do not go further than a descriptive account of the system. In the case of the United States, only a couple of conference papers briefly analyze the money order system. See Tom Velk and Terence Hines, "The United States Post Office Domestic Postal Money Order System In The 19th Century: A Nascent Banking System," Departmental Working Paper 2009-11 (Montreal: McGill University, Department of Economics, 2009), <http://ideas.repec.org/p/mcl/mclwop/2009-11.html>.

²⁵ Osborne and Pike, "From 'A Cornerstone of Canada's Social Structure' to 'Financial Self-Sufficiency,'" 26; Amyot and Willis, *Country Post*, 169–170.

²⁶ As an aside, Amazon and others did not discover anything new; it changed the speed of delivery.

²⁷ Amyot and Willis, *Country Post*, 146–168; "Sears History - 1890s," March 21, 2012, <http://www.searsarchives.com/history/history1890s.htm>; Library and Archives Canada, "Canadian Mail Order Catalogues," March 11, 2013, <http://www.bac-lac.gc.ca/eng/discover/postal-heritage-philately/canadian-mail-order-catalogues/Pages/canadian-mail-order-catalogues.aspx>.

²⁸ Gary B. Magee and Andrew S. Thompson, "The Global and Local: Explaining Migrant Remittance Flows in the English-Speaking World, 1880–1914," *The Journal of Economic History* 66, no. 01 (2006): 179, doi:10.1017/S0022050706000076.

²⁹ *Ibid.*

Britain correspond to migrants' remittances. From the data they analyzed, however, it is difficult to estimate if there were migrants' remittances or mail orders purchases those received in Britain. In Canada, as mentioned before, the maximum money order amount allowed was \$100, which suggests that there were for small purchases, as the ones ordered through mail catalogues or else, there were migrants' remittances. Unfortunately, no money order archival records are available in Canada to follow the money orders destination. Nevertheless, the Post Office Department published meticulous annual reports about general statistics of the MO system. Drawn upon those records, this section will explore the money order system in Western Canada and Canada.

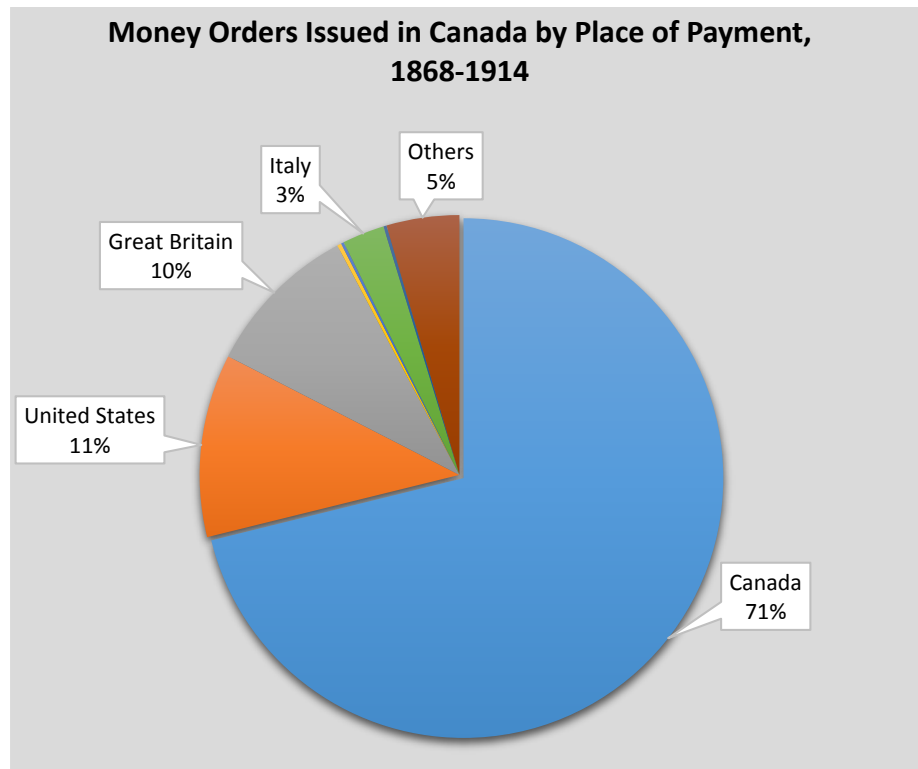
6.4.1 Money Orders and Remittances

The MO system allowed individuals to send money to other persons elsewhere through the postal network.³⁰ From 1868 to 1914, more than \$1,000 million worth of money orders were issued in Canada. Of those, 71 percent were payable within Canada, 11 percent in the United States, 10 percent in Great Britain, 3 percent in Italy and 5 percent payable in other countries (Figure 6-14). In sum, about 30 percent of money orders were sent outside Canada, possibly, immigrants' remittances to their families. Although, a more detailed representation will show in particular the flow of money to the main countries. Details in Figure 6-15 illustrate a number of possible explanations to these trends. First, it suggests the importance of different waves of immigrants to Canada; second, it shows the importance of periodization as this dissertation showed in different chapters regarding Canada's development and third, it measures through the MO system the flow of money. The reason to show only four countries to this evaluation resides in the fact that there were the most important destination of MO at the turn of the century.

Data for Germany starts by mid-1880s. Despite an initial boost in 1887, money orders issued in Canada and issued in Germany similarly followed a smooth trend until the turn of the century when money orders issued in Canada and paid in Germany increased substantially and skyrocketed in 1910. While the previous periods were difficult to estimate if money orders were the result of remittances, as money flowing in and out of Canada did not experience a great change, the 1910 jump suggests an important flow of money from German migrants to their families.

³⁰ Certainly not all the countries implemented the PMO system at the same time, so the timing of the implementation of the service reflects somehow the timing of the PMO exchange between countries.

Figure 6-14 Money Orders Issued in Canada by Place of Payment, 1868-1914.

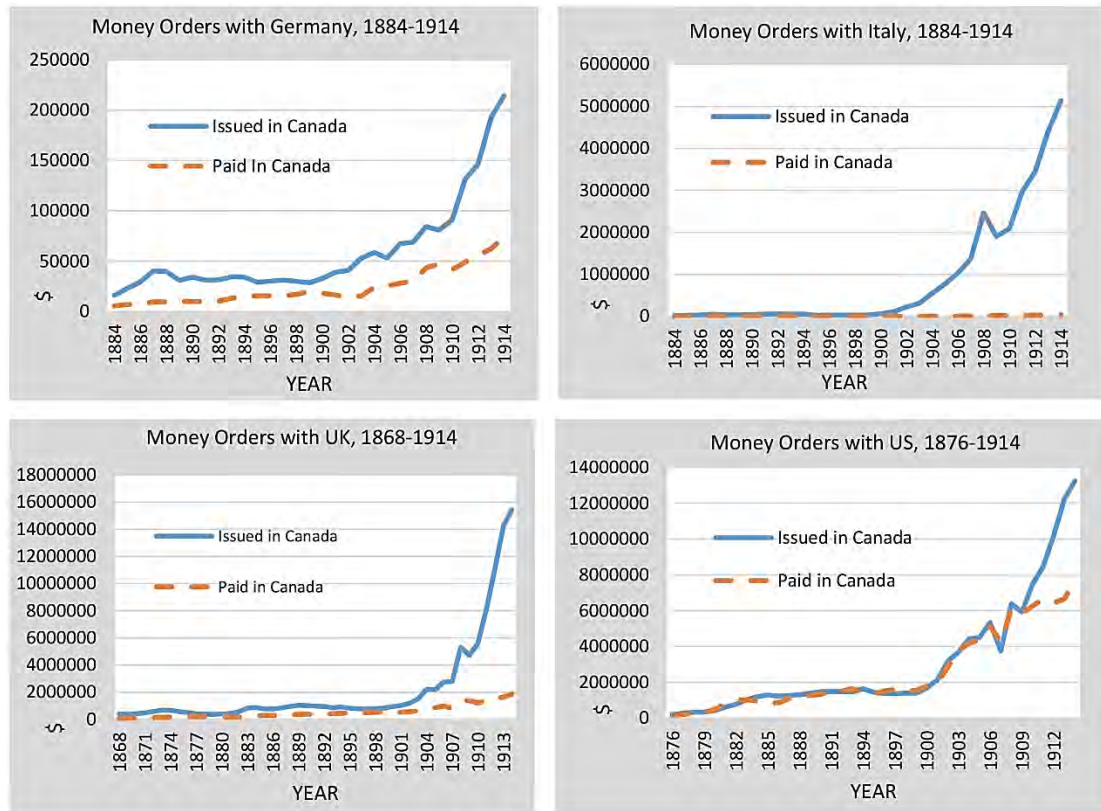


Source: Annual Reports of the Postmaster General in the *Sessional Papers*, various volumes.

Money orders activity to and from Italy was negligible until 1900. Before 1900, Italian migrants were considered “undesirable aliens” at that time and the government put all its effort to reject them.³¹ At the turn of the century, the situation changed slightly in light of the difficult the government had to attract British and other Northern European immigrants. In this case, the graphic shows clearly that turn through the outflow of Italian migrants’ money to their country. Money orders issued in Italy and paid in Canada were almost non-existent for the whole period. Both countries did not report money orders movement before 1884.

³¹ Valerie Knowles, *Strangers at Our Gates: Canadian Immigration and Immigration Policy, 1540-1997*, vol. Rev. (Toronto: Dundurn Press, 1997), 69. An immigration officer in the port of Saint John reported, that he had “forbid landing on the ground that they were pauper immigrants,” sending them back to Italy as soon as the ship was ready. “Telegram Antalum to Pedley.” (Immigration Branch C-4792 # 153189, Archives of Manitoba, 1901). In 1901, regarding Italian immigrants in Manitoba, the Superintendent of Immigration sent a letter to the Minister of the Interior, “I fear this class of immigrants will not do our country any good.” “Obed Smith to Smart” (C-4792 – 16692927, Archives of Manitoba, August 1901).

Figure 6-15 Money Orders with Other Countries, 1868-1914.

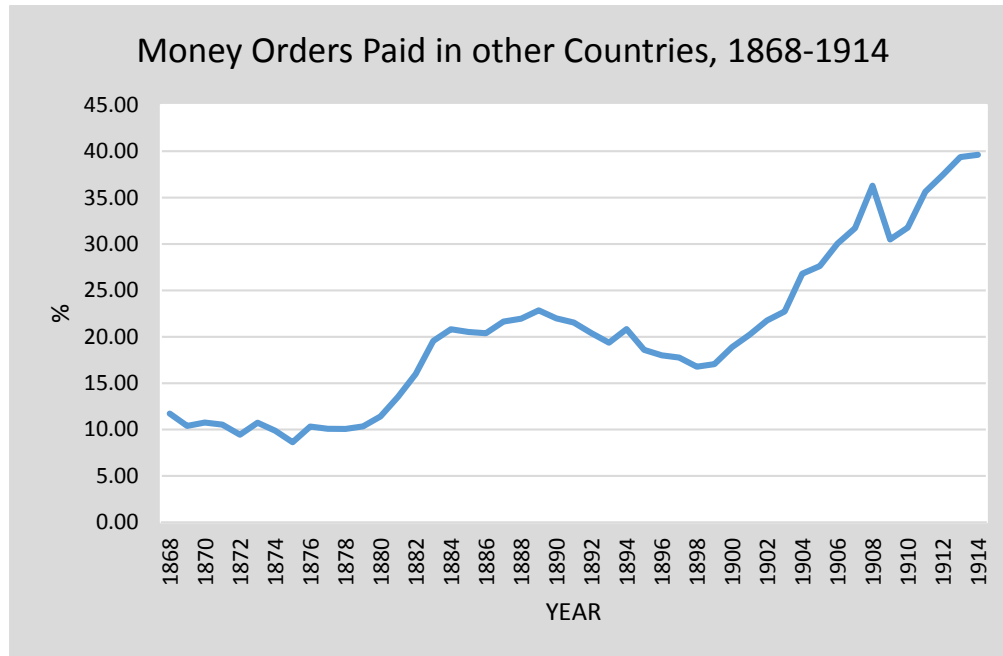


Source: Annual Reports of the Postmaster General in the *Sessional Papers*, various volumes. (Year 1907 reported only nine months because changed the Fiscal Year).

Money orders from and to Great Britain was balanced until 1900. The balance shows that money orders issued in Great Britain and paid in Canada were almost the same than the other way around. An important shift happened after 1908 when the flow of money to Great Britain rocketed. In the case of the United States, the balance until 1908 shows that the amount in dollars of money orders issued in Canada and paid in the United States and money orders issued in the United States and cashed in Canada remained similar. However, from 1909 until 1914 the balance shows an outflow of money from Canada to the United States of about \$20 million worth of money orders, \$8 million alone in 1914. Different was the case of Great Britain, which received more than \$13 million of surplus at the end of the nineteenth century, but increased to almost \$76 million by 1914. In both cases, the great outflow of money from Canada at the turn of the century suggests that immigrants were sending money to their families. A time series chart discloses with more detail this trend year by year (Figure 6-16). While from 1868 to 1880 a 10 percent average of money orders were sent outside of Canada, from 1880 to 1884 money orders sent outside of Canada increased significantly. This period

coincides with the first peak of immigration and the expansion of the frontier of settlement in Manitoba and the North West Territories. The second wave of immigration, settlement and development was evident after 1896-98. The destination of money orders, principally overseas, was an indication of the dynamic of settlement and immigration in the period under evaluation.

Figure 6-16 Money Orders Paid in other Countries, 1868-1914.



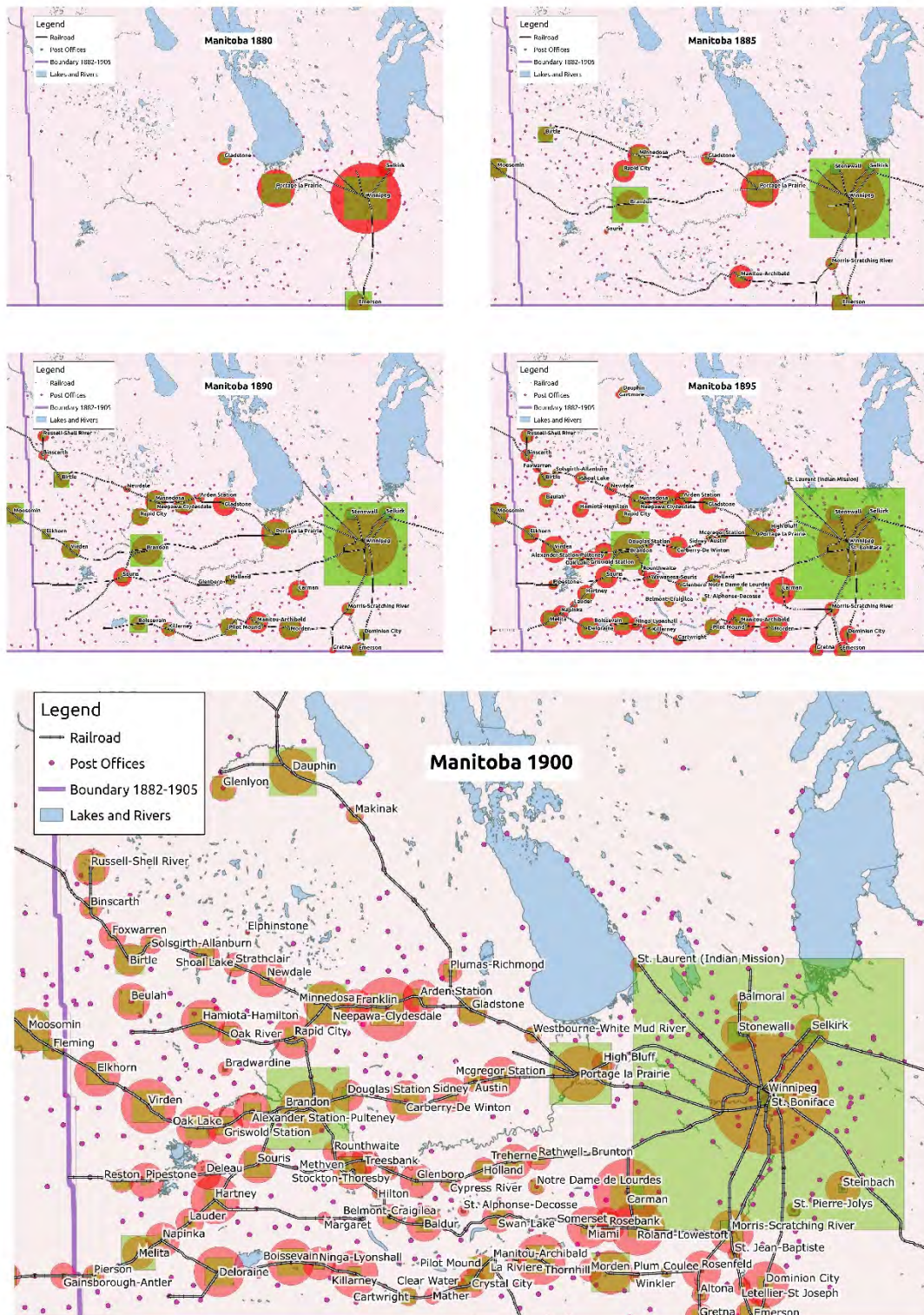
Source: Annual Reports of the Postmaster General in the *Sessional Papers*, various volumes. (Year 1907 reported only nine months because the Fiscal Year changed).

6.4.2 Money Orders in Western Canada

While data presented in the above section give a glimpse of the importance of the MO system in Canada and Western Canada, they do not show in detail the flow of money within the region. Figure 6-17 and Figure 6-18 illustrate this dynamic period through the flow of money orders.³² The maps show the importance of southern Manitoba in the period and the growth of certain towns and cities that became later important locations. In 1880, few post offices were accounting offices but the map reflects the historical moment. The land boom that started with the sale of city lots in Winnipeg soon spread to the countryside and that event suggests the outflow of money orders

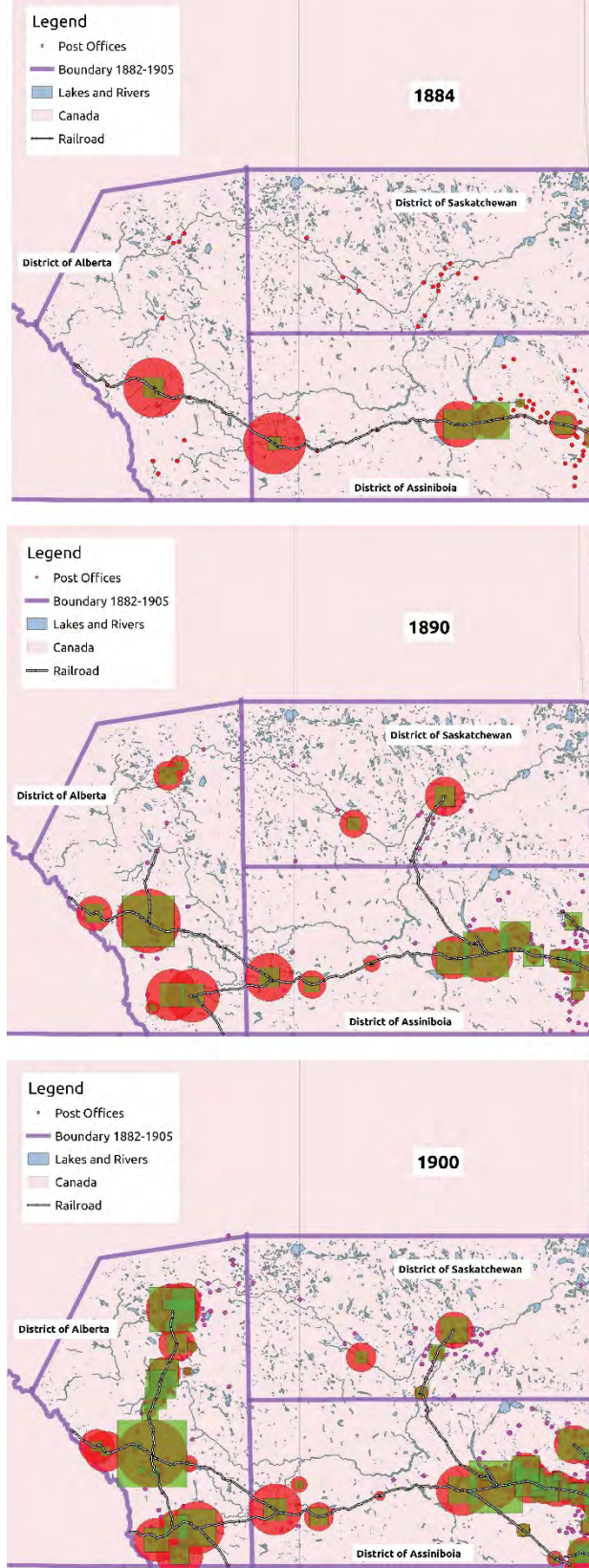
³² A complete time series maps available online at <http://gusvelasco.sytes.net/data/MO>

Figure 6-17 Money Orders in Southern Manitoba, 1880-1900



Source: Author's GIS design based on collected data. Green squares=Money orders received; Red circles=Money Orders sent.

Figure 6-18 Money Orders in the NWT, 1884-1900



Source: Authors GIS design based on collected data.

from Winnipeg to close locations like Portage La Prairie and Brandon. Noticeable was the case of Emerson, in the border with the United States. The town received more money orders than those it paid. Until the CPR was completed, Emerson was the main port of entrance to Western Canada through the United States and immigrants and potential settlers used the town as an *entrepôt* before venturing north. Once the CPR was completed, Emerson lost its importance as an entry town, reflected in the maps through the volume of postal operations. The following maps show a region in transition and the consolidation of Winnipeg as a regional hub illustrated by the change from being MO sender to being MO receiver. A closer observation in the 1900 map illustrates the formation of other hub locations in the organization of space in southern Manitoba. Brandon and Portage alongside Winnipeg became the major recipients of MO in the period while the rest of post offices were MO senders.

In the case of the North West Territories, the flow of money orders also illustrates a space in motion (Figure 6-18). Post offices in present Saskatchewan located along the railroad line became recipients of money orders once the region started to consolidate its importance. By 1900, Regina became a receiver of MO while on the north, Prince Albert became an important sender. Similarly, the old stagecoach corridor that runs between Calgary and Edmonton acquired relevance once the railroad branch line connected both places. Calgary became a recipient of MO while Edmonton almost received the same amount than it sent. The flow of MO to and from certain locations show the consolidation of urban centres that became the main districts in the years to come. While Winnipeg, as the previous chapter showed, consolidated itself as the main city, other places acquired relevance in the period, illustrated by both, the movement of MO and the amount of postal revenues reported.

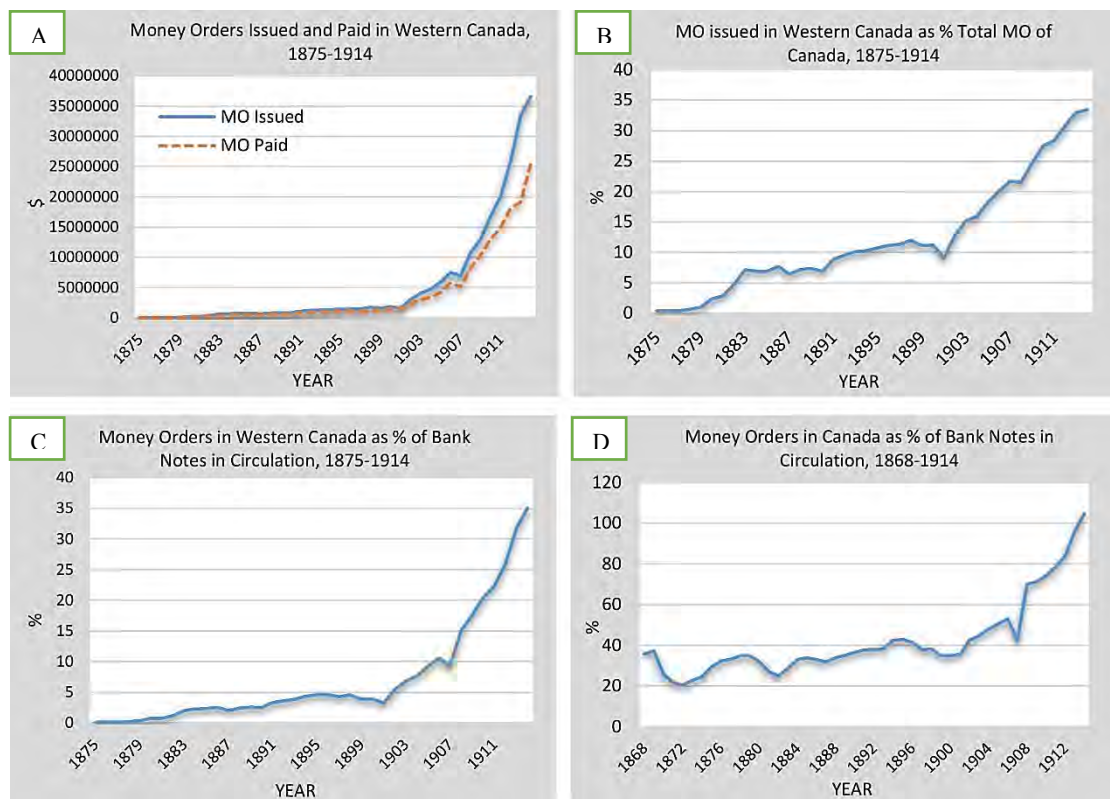
6.4.3 Money Orders and Money in Circulation

The previous section highlighted the importance of the MO system to show with another perspective the outflow of money. If money orders provided some indications of the flow of money and the dynamic of the regional economy at a given moment, it is worth to analyze them according to the circulation of money in the national economy. In this case comparing the evolution of money orders transactions with the national figures and then with the circulation of money.

Figure 6-19 shows four different time series that highlight the importance of the MO system during the period. The first figure (A) plots money orders issued and paid

in Western Canada. Similar to the trends present in other evaluations, Canada was another country at the turn of the century. From 1875, the year of the first report on money orders in Western Canada, until 1900, the amount of money orders issued and paid followed similar trends with a balance in favour of money flowing out of the region. In fact, the difference was not too large, about \$5 million; the biggest jump was apparent from 1885 to 1900 (See Table A-27 in Appendix A). In terms of money circulation, it

Figure 6-19 Money Orders and Bank Notes, 1875-1914.



Sources: Annual Reports of the Postmaster General in the *Sessional Papers*, various volumes (Year 1907 reported only nine months because the Fiscal Year changed) and Canada. Dominion Bureau of Statistics. General Statistics Branch, *The Canada Year Book 1915* (Ottawa: J. de L. Taché, printer to the King, 1916), 577.

represented a rather modest movement, about \$20 million of money orders issued and about \$15 million of money orders paid. The period after 1900, however, overshadowed all other performances for both money orders issued and paid; more than \$190 million of money orders issued and almost \$140 million paid in the region. The graph demonstrates the relevance of the money order system that settlers used extensively as a retail bank.

As a percent of the total money orders issued in Canada, the figures that represent Western Canada reveals the timing of settlement. As chart B shows, MO followed a pattern strengthened by a supply side. Post offices were mainly demand driven; settlers petitioned for post offices. In the case of MO offices, the government transformed certain post offices into accounting offices that offered financial services like money orders, postal saving accounts and postal notes. Those MO offices were mainly located in the more important urban centres. The incorporation of accounting offices was very slow during the nineteenth century and illustrates the lower number of urban centres or districts with more than 2,000 persons. In fact, the Census of 1901 reported 42 towns or census districts with more than 2,000 persons in Manitoba and only two in the North West Territories.³³ Winnipeg became accounting office in 1874 and it remained the only office in operations for a long time. At the turn of the century out of 900 post offices, only 173 were accounting offices in Western Canada. This was noticeable from the amounts negotiated during the period. In 1883, money order operations represented 7 percent of the total amount of money orders issued in Canada. It increased to 11 percent by 1900 but it jumped to 33 percent of the total money orders issued in 1914. That was impressive in terms of Western Canada's share and suggested undoubtedly the importance of the region in the national economy. Western Canada issued money orders for more than \$200 million during the period 1874-1914. The important number of post offices that became accounting offices during the period was responsible in this increase in money orders. Manitoba had 296 accounting offices, Saskatchewan 423 and Alberta 316. In fourteen years, the number of post offices that became accounting offices increased almost 600 percent.³⁴

Similar patterns illustrate the amount of money orders issued in Western Canada compared with bank notes in circulation in Canada, as chart C shows. It is important to analyze MO along the circulation of bank notes, as money orders were bought with cash at the post office. The banking system was almost non-existent in several parts of the Prairies until 1900 and the post became the only source to send and receive money. This was due to the flexibility of the post office to provide for financial services in

³³ Canada. Parliament, *Fourth Census of Canada of 1901*, vol. I (Ottawa: S. E. Dawson, 1903), 27–31, 131–149.

³⁴ Report of the Deputy Postmaster in Canada. Parliament, *Sessional Papers Volume 18, Fifth Session of the Twelfth Parliament, Session 1915* (Ottawa: J. de L. Taché, printer to the King, 1915), 92–116.

places where no other private enterprise did so. Before branches of chartered banks opened, the post had long been established across Western Canada as an important financial agent. If one analyzes the amount of money orders compared with bank notes in circulation during the nineteenth century, the result shows that Western Canada was a modest economy. People in the Prairies demanded only 5 percent of the total money in circulation in Canada to buy and send MO; or even less if one takes into account the decline at the end of the century.³⁵ From 1900 to 1914, however, the trend replicates similar predictable increase as it happened with other variables. Western Canada cash economy measured by the amount of MO issued represented 35% of the bank notes in circulation in Canada.

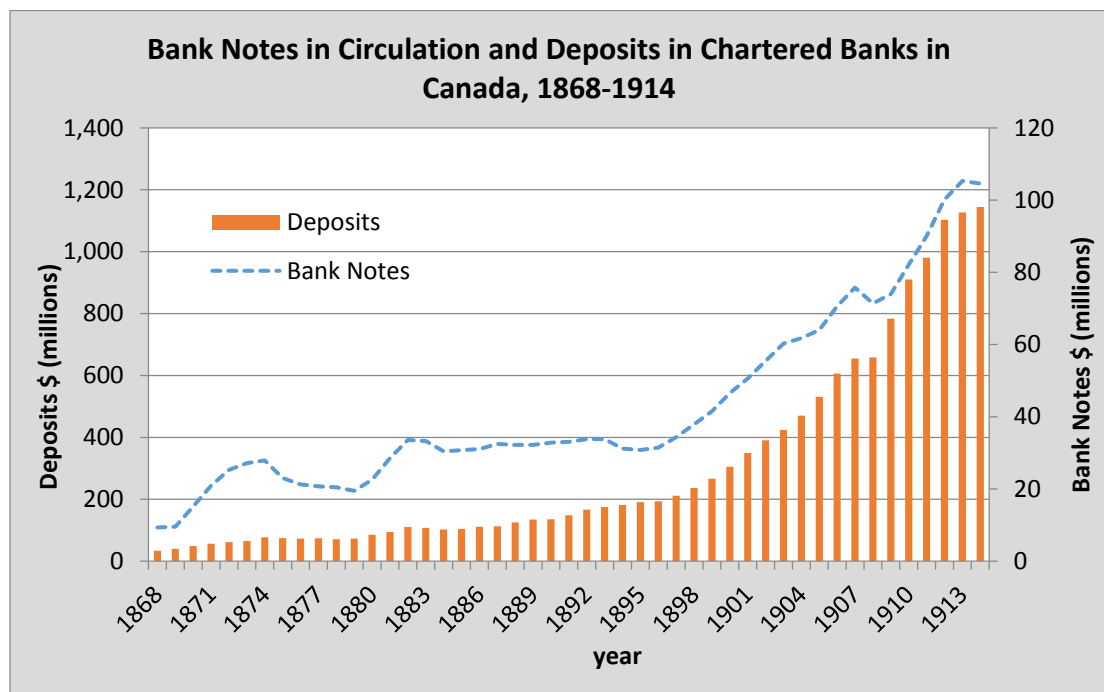
The amount of money orders issued in Canada over the period followed an upward trend, jumping extraordinarily at the turn of the century. If one compares the total amount of MO issued in Canada with the total amount of bank notes in circulation, the trend suggests that the supply of money suffered several setbacks during the period as exhibit D illustrates. Chartered banks were allowed to issue bank notes of more than \$5 but could not put money in circulation in excess of the unimpaired capital they held.³⁶ From 1868 to 1900, bank notes in circulation increased an average of six percent annually. At the turn of the century, the average increase was seven percent annually until 1914. The important change came with the amount of deposits held in chartered banks; from an average increase of seven percent annually until 1900, it jumped to 10 percent at the turn of the century. After 1900, as Figure 6-20 shows, the amount chartered banks held in deposits increased following the trends of the so-called wheat boom. A more mature economy that reflected the influence of the banking system in the economy was noticeable. Banks increased the amount of deposits and hence, capital accumulation during the period 1900-1914 increased substantially. This shift in the availability of domestic capital might have also reduced the amount of Canada's external debt as Fig-

³⁵ This small decline deserves a brief explanation. In 1898, the government introduced the postal note (PN). Similar to the PMO, the PN allowed people to send small amounts of money, as low as \$0.20 and up to \$5, paying a much lower commission; \$1 cent for the smaller amount and 3 cents for the maximum amount allowed. Canada. Department of Agriculture, *The Statistical Year Book for Canada for the Year 1900* (Ottawa: Government Printing Bureau, 1901), 471.

³⁶ Canada. Department of Agriculture, *The Statistical Year-Book of Canada for 1891* (Ottawa: Brown Chamberlin, 1891), 475; James Powell, *A History of the Canadian Dollar* (Ottawa: Bank of Canada, 2005), 28.

ure 6-2 showed. Until 1900, Canada spent almost 20 percent of its government expenditure in debt interest; by 1914, that amount had been reduced to five percent. The highest rate of saving after 1900 illustrated by the increase in chartered banks deposit suggests, according to M. C. Urquhart, an increase in economic growth associated to a more developed country.³⁷

Figure 6-20 Bank Notes in Circulation and Deposits in Chartered Banks in Canada, 1868-1914



Source: Canada. Dominion Bureau of Statistics. General Statistics Branch, *The Canada Year Book 1915* (Ottawa: J. de L. Taché, printer to the King, 1916), 577.

The MO system gave a glimpse of the cash economy through the movement of money within and outside the country. It showed the significant difference before and after the turn of the century. Although three quarters of MO were cashed in Canada, an important amount of MO flew the country as immigrants' remittances to their families. Eastern migration into the Prairies during the period was very important, as so were

³⁷ M. C. Urquhart, "New Estimates of Gross National Product, Canada, 1870-1926: Some Implications for Canadian Development," in *Long-Term Factors in American Economic Growth* (Chicago: University of Chicago Press, 1986), 42, <http://www.nber.org/chapters/c9678.pdf>.

immigrant settlers from the United States and Europe. In addition to long distance shopping, the amount of MO cashed within Canada might probably represent migrants' remittances to their families in the East.

6.5 Conclusion

The study of the Canadian postal records has attracted a small number of scholars interested in the evolution of one of the main state institutions during the first era of globalization. This chapter presented important data that were not used previously to analyze Canada's development. These data are also important to derive certain preliminary conclusions about Western Canada growth and development. The postal system required a small, but nevertheless important, federal help to secure its everyday operation. In times of state building and expansion, the postal network produced certainly great deficit, especially during the boom periods associated with Western Canada growth, that reinforce the idea of spatial control over a large territory. The use of postal data within the broad numbers of the national budget is of great utility to give context to the investigation of the creation and expansion of the Canadian modern state. This chapter provided information in two levels; first, national estimates of post offices operations, volume of letters, dead letters and money orders linked with bank notes in circulation and GDP and secondly, at regional levels with data from Manitoba and the North West Territories and other estimates derived from the national figures.

A first approximation drawn upon these postal data was to ask, what was the importance of Western Canada compared to the national growth? The chapter provides some strong indications that reflected the historical moments of state formation and expansion. While for the period 1850s-1900 Western Canada shows a modest contribution in almost all the variables, by the turn of the century it showed a different dynamic demonstrated by regional figures. The findings are not surprising, though. Other studies have also demonstrated the dynamic of regional integration to the national market at the turn of the century; however, data presented in this chapter provided a clearer outlook of the previous period with estimated data year by year.

The increase of postal facilities in Western Canada in the second half of the nineteenth century marked the government interest in the allocation of public services in the new region. The growth rate of post offices in the Prairies overshadowed those of central Canada and the Maritimes. Postal revenues and the amount of money orders originated in those post offices did not reflect that important growth; the opening of

post offices during this period was aimed at reinforcing state presence. Post office performance until 1900 demonstrated that trends; the system as a whole produced important deficit. At the turn of the century, however, all the indicators showed a different situation. The flow of money from the West, illustrated through a gross estimate derived from DLO and from the MO figures, represented the changing geography of a new, integrated country. The postal revolution helps to understand with new data a period of state formation and organization in Western Canada that had been overlooked on previous studies and thus had provided little information at the regional level. This chapter has expanded the scope of previous investigations by analyzing different regional and national data to obtain a richer picture of the period and the region. Studies that focused on Western Canada regional development mostly estimated the region development using the censuses aggregated data. This chapter contributes with another set of data that helps to illustrate the location of urban economic activity through the movement of money within the region.

Chapter 7

Conclusion

This dissertation discussed the specific process of land allocation and settlement in Western Canada in the first era of globalization. In this period, Canada completed an important spatial and infrastructural transformation and delineated new territorial boundaries. From mid-nineteenth century, the country embraced a political program of state expansion that followed similar trends experienced by other countries of recent settlement like Australia, Argentina, the United States and New Zealand, among others. Comparative evaluations of long run performance of areas of recent settlement have emphasized the role played by natural resources exploitation, settlement and property rights institutions—especially land ownership—as promoter of growth and development. In this sense, this dissertation argued that the expansion of the frontier of settlement and the construction and consolidation of the Canadian nation-state were twin projects associated with the incorporation of the country to the world market as producer of primary products for export. In this regard, the dissertation follows Innis' scope.

This study sought to answer two general questions. One question focused on how important was the initial process of land distribution in areas of recent settlement to influence those regions' later development. The second question asked whether the distribution of land in Western Canada was a particular case or it followed the trends

discussed by NIE students,¹ particularly the distribution of small tracts of land to settlers. By answering these general questions, this dissertation has contributed to four different yet related historical fields: the study of institutions in the New World, comparative studies of areas of recent settlement, the historiography of nineteenth century Canada and the particular case of Western Canada historical development.

7.1 Institutions in Comparative Perspective

The analyses of natural resources exploitation, extensive growth—through the incorporation of more land into agricultural production—and the quality of institutions produced a large body of studies. This thesis located some of these discussions into a broader narrative. Chapter 2 presented three different, yet contiguous discussions. First, it discussed Innis' theory or approach of economic growth and dependence based on staple production for the international market. Second, it discussed natural resources exploitation, particularly wheat in Canada and Argentina and third it made an introductory critical evaluation of NIE's theories on institutions and factor endowments. These latter studies discussed the different institutional arrangements experienced in the New World since the times of the first European settlements. These discussions bring back the idea of the Great Narratives that asked, for instance, why do countries grow or why do countries decline?

The connection between Innis' seminal work and NIE's approaches is the importance of space defined in broad terms as land or geography to Innis or factor endowments to some scholars of institutions. In both cases, land determined the character of institutions in the new world. In Innis, it determined the exploitation of natural resources, fur, timber, minerals and wheat and the further regional development through the railroad as the principal state institution, yet the CPR was a private company benefited with large government subsidies. For NIE, instead, it is the possession and use of land that defined the quality or character of institutions. In this case, for NIE students, one of the main institutions was the formulation of property rights to the land that allowed the consignment of tracts of land to individuals. In Innis' approach, it appears similar pessimistic views than those of the Latin American structuralist school, namely natural resources exploitation or staples hinders development via further industrializa-

¹ The focus is principally on North, Engerman and Sokoloff and Acemoglu, Johnson and Robinson discussed in Chapter 2 and in different sections.

tion and creates dependence from the industrialized core. Institutions that formed during the period of state formation and natural resources exploitation served in this form the interest of staple producers and to those activities related to them, for instance banking, real estate and transportation. There is not a clear identification of the group or class who benefited with this organization of the hinterland for staple production. In Innis', the class component is missing. R. T. Naylor goes beyond and identifies them as the "mercantilist class".

In Engerman and Sokoloff's the term class neither appears; it is the elite the one who obtains less or more power. In the investigation on institutions, they argue that the quality of the soil, the geographical location and population density were main factors in the formation of institutions and the distribution of power. In places where crops were produced in large estates with high population density like in plantations, the formation of political institutions benefited the landed elite. This unequal distribution of land allowed autocratic elites to gain political control and enforce policies to keep them in power through bad policies that ultimately generated more inequality and hence less economic growth. On the other hand, in places with temperate climate and low population density, especially from European descendants, like in the plains and prairies of North America, the cultivation of crops in small farms created the conditions for the emergence of a class of successful agriculturalist. The division of land in small plots based on good land policies attracted a class of European immigrants that promoted democracy and good institutions and hence, economic growth.

The process of land appropriation and re-distribution was more complex than what NIE literature claims. Chapter 4 analyzed how the appropriation of public land in areas of recent settlement and the later transformation into private property for capitalist exploitation produced different outcomes but it used similar methodology. Through treaties and negotiations, the state displaced indigenous peoples from their common-use land and located them in Indian Reserves during the process. Neo-classical studies attempted to recast equilibrium models to explain the distribution and alienation of state public lands to private owners. In their studies, as this thesis argued, the dispute of power disappears; moreover, participants in the distribution of land became actors, agents or players, but never members of the power elite. In this rather frictionless environment, the state and private potential owners were agents that attempted to avoid transaction costs; the alienation of land was, in this case, a mere economic operation.

Missing in this discussion, as this thesis observes, is the explanation of state formation and political gains. The state, we claim, was not a mere economic agent, but the emergent institution of the ruling class chasing the idea of state building. This dissertation critically evaluated sources and methodologies posited by NIE's theorist in several sections. In Chapter 2, particularly in Solberg's evaluation, it discussed the risk of general hypotheses and broad generalizations that do not help to obtain precise information of particular areas of the New World. This thesis argues that the problem with these broad narratives is that they bring about weak responses that became unconvincing when results are confronted with other historical evidences. By comparing diverse countries and unique geographies overlooking historical evidences, researchers lose track of particularities that very often fall outside of a preconceived set of hypothesis or general assumptions.

New Economic History (NEH) and New Institutional Economic (NIE) theorists rely on these broad generalizations and compare growth and development in diverse parts of the Americas based on these assumptions. Chapter 2 and Chapter 3 discussed in several parts these generalizations. The comparative methodology that institutionalists follow very often disregard time period and regional historical development. There is no problem to study dissimilar societies in order to compare and contrast their historical evolution when these societies are presumed to have had similar origins, namely European settlements in the Americas. In this case, as Marc Bloch observes, the hypotheses that the researchers arrive might be more precise, "rigorous and critical," or as John Fogarty argues, "comparisons should be well informed."² Path dependence or factor endowments determinism lead to a linear explanation of long run development. Consequently, regional particularities and historical transformations that occurred in determined countries as a consequence of the expansion of global capitalism are missing. It is necessary to perform a careful evaluation of time and space in order to get a better understanding of regional particularities.

This thesis gave several answers to those generalizations by providing another historical interpretation and other sources to compare and contrast the period under

² See Marc Bloch, "Towards a Comparative History of European Societies," in *Enterprise and Secular Change*, trans. Jelle C. Riemersma, The American Economic Association Series (London: George Allen and Unwin, 1953), 498; John P. Fogarty, "The Comparative Method and the Nineteenth Century Regions of Recent Settlement," *Historical Studies* 19, no. 76 (1981): 413, doi:10.1080/10314618108595647.

evaluation. It challenged Solberg's analysis in several fronts with sources and analytical interpretations. The purpose to confront Solberg's conclusions was not only to provide new sources but also to challenge NIE's hypothesis about the quality of institutions in Canada during the nineteenth century. Our interpretation refines the discussion on institutions by marking the inconsistencies in NIE's assumptions. They thoroughly evaluate Latin American elites but they fail to provide a similar analysis of the Canadian and American elites in the appropriation of land. This thesis observed that Canadian corporations, principally the CPR, HBC and the diverse land companies became great beneficiaries of Canada's land policies. This was particularly evident in the description on property rights formations in the New World discussed in Chapter 4. The survey on property right on the land showed a different understanding of land policies, timing and institutional development. In NIE approaches, the discussion on "good" land policies focuses mainly on the short period after the formulation of the American Homestead Act of 1862 and the Canadian Dominion Lands Policy of 1872. Our survey also covered Australia and Argentina and from different periods. The distribution of land during the period of settler capitalism shows a diverse methodology that arose according to certain political conditions and distribution of power and it started before the different Homestead Acts. The period is dynamic and as such, it must be analyzed. The division of land in small plots, this thesis argues, did not per se become more equalitarian as the literature assumes and the spatial analyses produced in Chapter 4 confirm our argument. Homesteaders failed frequently and abandoned their land very often. The causes of failure were diverse, but immigrants of modest economic means were vulnerable to the fluctuations of weather conditions, technological knowledge and market perspectives even though they paid only a small fee to obtain their lands.

7.2 Contribution to the Historiography of Canada

This dissertation analyzed the specific period in which large extensions of land in Canada were incorporated into agricultural production. Particular geographical areas of the world shared similar characteristics that increased the productivity importance in similar periods, the second half of the nineteenth century. Chapter 3 gave a historical context of Canada's development by comparing and contrasting the country's achievements with other countries of recent settlement. Unsurprisingly, immigration and economic growth followed similar patterns in the New World. These patterns were the responses of global swings, unevenly experienced in all the countries evaluated in the

chapter. By answering Solberg's observations regarding Canada's immigration policies, Chapter 3 revisited the experience of Canada's migration and immigration, especially, the important flow of migration to the United States. If Canada had better immigration policies than Argentina, it was not certainly evident in the period. About one million Canadians were living south of the border in 1910, while European immigration lagged behind expectations until the turn of the century. If immigration policies were more effective than in other places, as Solberg and others after him claimed, such success would have been more evident earlier.

The evaluation of immigration and migration in the historiography of Canada produced a large body of scholarly works from a variety of perspectives. This dissertation revisits early evaluations and confirms the results posited in different studies particularly those mentioned in section 3.4. There was an important migration from Canada to the United States during the period and Western Canada also experienced great mobility as the spatial analysis in Chapter 4 illustrated. This thesis observes that the analysis of migration to the United States through the Great Lakes, perhaps the main route, was mentioned and evaluated in several works; however, few studies analyzed the flow of persons through the large boundary between Canada and the United States in the shared border of Western Canada.³ This dissertation provides updated data from the United States censuses extracted from digital files.⁴ These data, principally, from American states that shared their border with Canada show that the direction of Canadian migrants from the eastern provinces continued to view the American West as a desirable destination.

Another important contribution to the historiography of Canada and Western Canada is this thesis' evaluation of land appropriation and distribution in the Prairies. We collected updated information on homesteads entries and cancellations and performed a GIS simulation of settlements and failures based on the updated dataset extracted from individual land offices distributed across Western Canada. The exercise

³ Particularly Widdis has made a comprehensive and quantitative analysis of the flow of Anglo-Canadians and Americans through the border North-Dakota/Manitoba. See Chapters 6 and 7 in Randy William Widdis, *With Scarcely a Ripple: Anglo-Canadian Migration into the United States and Western Canada, 1880-1920* (Montreal: McGill-Queen's Press - MQUP, 1998). Widdis' figures, however, need a revision as it was mentioned in a previous chapter. This point is important because it changes the conclusions he arrived.

⁴ Michael R. Haines, "Historical, Demographic, Economic, and Social Data: The United States, 1790-2002" (Inter-university Consortium for Political and Social Research (ICPSR) [distributor], 2010), <http://dx.doi.org/10.3886/ICPSR02896.v3>.

showed in time and space not only the regional distribution of homesteads but also their failures. Neo-classical studies of Western Canada settlement utilized regression or equilibrium models to study the rate of settlement in the region. Those studies treated Western Canada as a unique region. The problem was that settlers followed an uneven pattern of spatial location and regressions cannot explain why settlers attempted to establish themselves in one region or area and not in others. By using a HGIS approach, Chapter 4 provided a clearer understanding of the pattern of settlement, settlers' land preferences and homesteads failures during the period.

The second main contribution to the historiography of Canada and Western Canada has been the incorporation of post offices locations to estimate the settlement of new migrants/immigrants and the organization of small communities. Chapter 5 used for the first time Western Canada postal records to estimate settlers' mobility for the period 1870-1900. In addition, this chapter reconstructed the historical railroad network with information extracted from contemporary maps and government textual information. Previous studies on Western Canada settlement used decennial census records to study the region. In moments of important settlers' mobility and territorial expansion, census records cannot capture the dynamic of frontier expansion. The location of post offices, geo-referenced in this chapter, provided a spatial reference for future investigations. In addition, the reconstruction of the railroad network connected with the location of post offices provided an original toolset to study the evolution of the region and its spatial transformation. The location of post offices close to rivers and later to the railroad line marked the transformation of the region from a fur trade formation into another economy linked to the international market through the production of wheat and other grains. The postal annual revenues estimated from the Annual Reports of the Postmaster General provided a more detailed account of the evolution of Western Canada during the period. Post offices close to the railroad line produced 75 percent of postal revenues over the period. The influence of the railroad to promote the formation of rural communities was evident from the time series maps produced in this chapter.

To complete the discussion on post offices, Chapter 6 included sources that were not used before. This chapter provided estimated figures from Western Canada derived from the national postal records. The inclusion of Dead Letters Office records gave a new perspective about the use of the postal network as a means to deliver cash and other financial instruments within and outside the country. Money Orders records also

showed the dynamic of money transactions across the territory and estimated the movement of immigrants' remittances to their families back home. A time series graph of money orders for a group of countries illustrated the timing of immigration of certain nationalities through the destination of MO issued in Canada and paid in the United States and overseas. The importance of this chapter resided in the new data included in the different evaluations that marked the timing of Western Canada importance and estimated contribution to the national economy through different variables. First as the share of the national expenditures and secondly through estimated figures of money orders and bank notes in circulation drawn upon national estimates. In summary, these quantitative analyses confirmed the periodization of Canada and Western Canada development with another dataset. The post offices information provided new evidences to study the regional development.

Overall, this dissertation contributed in different levels:

1. It revisited Mackintosh' geographical analyses of Western Canada of the 1930s providing another analytical toolset.
2. It incorporated GIS analysis to revive the historical geographical development of the region.
3. It discussed the process of land appropriation and property rights formation in a group of countries that started their territorial expansion in the same period.
4. It revised traditional statistics on homesteads entries and cancellations commonly used in the analysis of Western Canada settlement
5. It reconstructed the historical railroad and postal networks and made digital information available online for future research.
6. It refined the discussion on the political economy and state formation in Canada.

7.3 Data and Data Quality: Shortcomings and Some Reflections

This dissertation has used different datasets of diverse accuracy. Some data provide gross estimates about macroeconomic variables like Maddison's GDP estimates. Other data, regional in scope, provide information with more details; for instance, census and immigration figures or homesteads data evaluated in Chapter 4. In different sections, this thesis has discussed the accuracy and quality of those data. Nineteenth century time series reproduced in this dissertation or extracted from nineteenth century

publications, mainly the extract of the censuses or the diverse Year Books must be analyzed with caution. Census data, as several studies revealed, very often underenumerated population by a margin that oscillated from eight to 20 percent according to different sources mentioned earlier. Population mobility during the period was also very intense as migrants and immigrants moved away frequently in searching of better conditions and economic opportunities. The scope of this mobility is uncertain as our analysis on settlers' mobility in chapters 4 and 5 showed. Were some Canadians counted as Americans in the censuses south of the border, as Widdis observed in 3.4.3? This observation is necessary to define and assess Maddison's figures widely used in several works, included this one. If immigration figures are uncertain because authorities did not precisely report return migrants and port controls were inexistent in several parts of the Western frontier, how one can compute with certainty population growth? If population were not properly enumerated and immigrants were not properly counted, how certain are GDP figures for Canada and for other countries? For instance, Canadian population figures in Maddison are slightly higher than those in Urquhart and Buckley's *Historical Statistics of Canada*, where Maddison, in fact, extracted his figures!⁵ These are examples of inconsistencies with different sources that treat same type of data.

In the case of post offices data and the reconstruction of the railroad network, our main data contribution, the figures are as good as it was possible to perform quality control. As described in Chapter 5, the task of georeferencing post offices with no township notation was arduous. Similarly, the digitizing and georeferencing the railroad network from of nineteenth century maps was constrained by diverse degrees of technological availability. As mentioned previously, textual records and maps description not always coincided and this author had the last word in the precision of the railroad extension date of arrival to certain destinations. Our contribution to Western Canada historical studies with the incorporation of other sources of analysis like post offices data and the railroad network were very important, as no other study had devised this methodology. The novelty of the data opened new avenues of investigation and one of the motivations was to estimate population growth and density in Western Canada with these data. The intention was remarkable but the results showed that post offices data

⁵ M. C. (Malcolm Charles) Urquhart and Kenneth Buckley, eds., *Historical Statistics of Canada* (Toronto: Cambridge University Press, The MacMillan Company of Canada Ltd., 1965), 14. Angus Maddison, *The World Economy: A Millennial Perspective*, vol. 1–2 (Paris: Development Centre of the Organisation for Economic Co-operation and Development, 2001), 459–460.

were not a good source to perform such analysis.⁶ A sample analysis of the Census of Manitoba of 1887 shows that the municipalities with the higher number of post offices were not the ones with the bigger population neither were the ones with the highest postal revenues.

7.4 Opening the Path for Future Research

This investigation has incorporated data that were unutilized in previous research like the postal data. For reasons of space, time and resources, it finished the investigation on postal records in 1900. The date is important indeed. As Chapter 6 showed, that year the postal system finished to produce deficit. That trend suggested that the post ended its task as an agent of nation building spreading offices across the expanded territory of Western Canada. By 1914, almost 2,000 post offices opened in the region. Our future research expect to georeference and incorporate those records to enhance this investigation. Similarly, the investigation on postal routes was set aside as the task would be impossible to complete by an individual researcher, but with enough funding, it would be possible to complete the work. Postal routes determine the flow of information, the direction of settlement and the importance of communities in the making through the number of trips. In similar terms, this research finished the reconstruction of the railroad network in 1914 but it only included the extension of the network with accuracy in 1906 and in 1914, for the other years after 1901 was not possible to obtain enough information neither in textual records nor in maps.

In sum, the postal system continues to provide an important source of information in quantity and quality. The Reports of the Postmaster General of Canada in the Sessional Papers increased in number of pages over the years. The information of almost 3,000 post offices that opened during the period 1850-1914 will produce a more detailed information of different economic variables. It will also contribute to a more complete quantitative evaluation that will provide a more detailed assessment of the region's historical economic geography.

⁶ The analysis is not included in the text but the observations are available online at http://gusvelasco.sytes.net/data/PO_density_87

Appendix A

Data: Immigration, Population, GDP, Homesteads, Post Offices, Railroads

Table A-1 Population in Manitoba by Place of Birth

Place Birth	1870	1881	1886	1891	1901
Manitoba	11,298	16,853	34,124	50,648	99,806
Great Britain	432	8,161	19,835	28,014	33,517
Ontario	118	13,952	34,121	46,620	67,566
Quebec	111	4,085	5,976	7,555	8,492
Rest Canada	60	1,435	2,749	3,194	4,995
US	166	1,510	2,322	3,063	6,922
Russia	0	5,645	5,724	6,220	8,854
Others Foreign	43	13,756	3,789	7,192	25,060
Total population	12,228	65,954	108,640	152,506	255,212
Foreign	5.24%	44%	29%	29%	29%
Canada	2.36%	30%	40%	38%	32%

Source: Census of Canada, 1871-1881-1891-1901 and Census of Manitoba, 1870 and 1886-87

Table A-2 Population in the North West Territories by Place of Birth.

Place Birth	1881	1886	1891	1901
NWT	51,785	25,169	59,530	72,717
Great Britain	296	7,245	12,821	19,856
Ontario	517	8,823	13,594	30,243
Quebec	101	1,340	1,815	5,504
Rest Canada	28	924	1,612	14,133
US	116	1,007	1,961	20,598
Manitoba	1,450	3,144	3,572	6,006
Others Foreign	2,153	710	4,062	42,592
Total population	56,446	48,362	98,967	211,649
Foreign	5%	19%	19%	39%
Canada	4%	29%	21%	26%

Source: Source: Census of Canada, 1881-1891-1901 and Census of the North West Territories 1885

Table A-3 Population in Ontario by Place of Birth.

Place Birth	1871	1881	1891	1901
Ontario	1,131,334	1,435,647	1,640,131	1,784,760
Great Britain	369,070	351,298	327,036	239,873
Manitoba	267	220	1,171	2,349
Quebec	40,476	50,407	58,772	61,776

Rest Canada	7,585	7,193	10,396	9,902
US	43,406	45,454	42,702	44,175
Others Foreign	28,713	36,703	34,113	40,112
Total population	1,620,851	1,926,922	2,114,321	2,182,947

Foreign	27%	22%	19%	15%
Canada	3%	3%	3%	3%

Source: Census of Canada, 1871-1881-1891-1901

Table A-4 Population in Quebec by Place of Birth.

Place Birth	1871	1881	1891	1901
Quebec	1,104,401	1,269,075	1,387,206	1,535,007
Great Britain	59,459	50,525	53,353	42,600
Ontario	7,018	10,379	15,541	20,313
Manitoba	131	33	170	291
Rest Canada	2,615	2,671	5,332	4,579
US	14,174	19,415	18,524	28,405
Others Foreign	3,718	6,929	8,409	17,703
Total population	1,191,516	1,359,027	1,488,535	1,648,898

Foreign	6.5%	5.65%	5.4%	5.4%
Canada	0.82%	0.96%	1.41%	1.52%

Source: Census of Canada, 1871-1881-1891-1901

Table A-5 American Born Population Living in Canada, 1901-1911.

	CAN	AB	BC	MB	NB	NS	ON	PEI	QC	SK	YK-NWT
1901	127,899	11,119	17,164	6,922	5,477	4,394	44,175	764	28,405	2,758	6,721
1911	303,680	81,357	37,548	16,326	5,766	4,802	55,674	829	29,842	69,628	1,908

Source: Canada. Census and Statistics Office. *Fifth Census of Canada 1911*. Vol. II. Ottawa: C. H. Parmelee, 1913, 495.

Table A-6 Canadians Living in the United States. Selected States, 1860-1910

	1860	1870	1880	1890	1900	1910
S. Dakota					7,044	11,984
N. Dakota	879	1,235	10,678	23,045	28,166	42,194
Michigan	87,487	89,590	148,866	181,416	184,398	342,314
Minnesota	13,751	16,698	29,631	43,580	47,578	81,836
Illinois	29,919	32,550	34,043	39,525	50,525	90,466
Wisconsin	22,767	25,666	28,965	33,163	33,951	49,842
Iowa	16,421	17,907	21,097	17,465	15,687	23,192
Nebraska	2,338	2,635	8,622	12,105	9,049	14,542
Montana	1,057	1,943	2,481	9,040	13,826	27,002
Indiana	4,498	4,765	5,569	4,954	5,934	11,568
Wyoming	292	329	542	1,314	1,248	2,838
TOTAL US	414,912	493,464	717,157	980,838	1,183,225	2,392,140

Source: Haines, Michael R., and Inter-university Consortium for Political and Social Research. "Historical, Demographic, Economic, and Social Data: The United States, 1790-2002." Inter-university Consortium for Political and Social Research (ICPSR) [distributor], 2010. <http://dx.doi.org/10.3886/ICPSR02896.v3>.

Table A-7 Immigration to Canada, 1852-1915

YEAR	IMM	YEAR	IMM	YEAR	IMM	YEAR	IMM
1852	29,307	1868	12,765	1884	103,824	1900	41,681
1853	29,464	1869	18,630	1885	79,169	1901	55,747
1854	37,263	1870	24,706	1886	69,152	1902	89,102
1855	25,296	1871	27,773	1887	84,526	1903	138,660
1856	22,544	1872	36,578	1888	88,766	1904	131,252
1857	33,854	1873	50,050	1889	91,600	1905	141,465
1858	12,339	1874	39,373	1890	75,067	1906	211,653
1859	6,300	1875	27,382	1891	82,165	1907	272,409
1860	6,276	1876	25,633	1892	30,996	1908	143,326
1861	13,589	1877	27,082	1893	29,633	1909	173,694
1862	18,294	1878	29,807	1894	20,829	1910	286,839
1863	21,000	1879	40,492	1895	18,790	1911	331,288
1864	24,779	1880	38,505	1896	16,835	1912	375,756
1865	18,958	1881	47,991	1897	21,716	1913	400,870
1866	11,427	1882	112,458	1898	31,900	1914	150,484
1867	10,666	1883	133,624	1899	44,543	1915	36,665

Source: Historical Statistics of Canada, Series A350. Immigrant arrivals in Canada, 1852 to 1977. http://www5.statcan.gc.ca/access_acces/archive.action?l=eng&loc=A350-eng.csv

Table A-8 Net Immigration to Canada, 1870-1924

YEAR	N_IMM	YEAR	N_IMM	YEAR	N_IMM	YEAR	N_IMM	YEAR	N_IMM
1870	3	1881	0	1892	-5	1903	64	1914	110
1871	4	1882	-6	1893	-9	1904	69	1915	-102
1872	9	1883	-9	1894	-10	1905	119	1916	-98
1873	4	1884	-7	1895	-13	1906	118	1917	-58
1874	-2	1885	-9	1896	-20	1907	147	1918	26
1875	-10	1886	-15	1897	-9	1908	72	1919	93
1876	-12	1887	-9	1898	-13	1909	63	1920	99
1877	-7	1888	-7	1899	5	1910	83	1921	18
1878	-7	1889	-12	1900	12	1911	75	1922	-44
1879	-3	1890	-2	1901	-6	1912	80	1923	-21
1880	4	1891	-11	1902	43	1913	100	1924	-2

Source: Firestone, O. J. *Canada's Economic Development, 1867-1953: With Special Reference to Changes in the Country's National Product and National Wealth*. London: Bowes & Bowes, 1958, 240.

Table A-9 Total Arrivals to Argentina, 1857-1901

YEAR	IMM	YEAR	IMM	YEAR	IMM
1857	4,951	1872	37,037	1887	120,842
1858	4,658	1873	76,332	1888	155,632
1859	4,735	1874	68,277	1889	260,909
1860	5,656	1875	42,066	1890	110,594
1861	6,301	1876	30,965	1891	52,097
1862	6,716	1877	36,325	1892	73,294
1863	10,408	1878	42,958	1893	84,420
1864	11,682	1879	55,155	1894	80,671
1865	11,767	1880	41,651	1895	80,988

1866	13,696	1881	47,484	1896	135,205
1867	17,046	1882	51,503	1897	105,143
1868	29,234	1883	63,243	1898	95,190
1869	37,934	1884	77,805	1899	111,083
1870	39,967	1885	108,722	1900	105,902
1871	20,933	1886	93,116	1901	125,951

Source: Argentina. Ministry of Agriculture. Immigration Department, *The Immigration Offices and Statistics from 1857 to 1903* (Buenos Aires: Argentine Weather Bureau, 1914), 24–25

Table A-10 Net Immigration to Argentina, 1870-1914

YEAR	IMM	YEAR	IMM	YEAR	IMM
1870	15,900	1885	67,200	1900	52,600
1871	6,500	1886	50,800	1901	47,900
1872	11,700	1887	84,800	1902	13,800
1873	17,400	1888	114,400	1903	35,800
1874	31,600	1889	185,000	1904	94,600
1875	6,400	1890	24,400	1905	137,200
1876	1,700	1891	-21,800	1906	191,800
1877	2,900	1892	38,300	1907	123,400
1878	7,500	1893	48,100	1908	186,100
1879	15,300	1894	41,600	1909	146,800
1880	900	1895	49,900	1910	211,200
1881	13,400	1896	97,600	1911	109,500
1882	35,700	1897	51,700	1912	213,200
1883	37,200	1898	51,000	1913	201,400
1884	37,500	1899	51,000	1914	-4,700

Source: Alfredo Enrique Lattes, *La Población de Argentina*, vol. 1 (Buenos Aires: República Argentina, Ministerio de Economía, Secretaría de Estado de Programación y Coordinación Económica, Instituto Nacional de Estadística y Censos, 1975).

Table A-11 Immigration to New Zealand, 1860-1913

YEAR	IMM	YEAR	IMM	YEAR	IMM
1860	6,064	1878	10,502	1896	1,472
1861	16,222	1879	18,723	1897	2,752
1862	20,991	1880	7,231	1898	2,696
1863	35,120	1881	1,616	1899	1,887
1864	8,527	1882	3,489	1900	1,831
1865	12,309	1883	10,029	1901	6,522
1866	7,599	1884	9,321	1902	7,992
1867	4,859	1885	4,504	1903	11,275
1868	860	1886	1,064	1904	10,355
1869	3,641	1887	977	1905	9,302
1870	3,577	1888	-9,175	1906	12,848
1871	4,786	1889	214	1907	5,730
1872	4,973	1890	-1,782	1908	14,261
1873	8,811	1891	-3,198	1909	4,719
1874	38,106	1892	4,958	1910	3,408
1875	25,270	1893	10,412	1911	4,200

1876	11,955	1894	2,253	1912	8,927
1877	6,376	1895	895	1913	14,219

Source: Statistics New Zealand, “New Zealand’s International Migration Statistics: 1860–1921,” *International Travel and Migration Articles* (Wellington, N.Z.: Statistics New Zealand, 2010) and Statistics New Zealand, “Long-Term Data Series,” *Long-Term Data Series*, accessed April 21, 2015, http://www.stats.govt.nz/browse_for_stats/economic_indicators/NationalAccounts/long-term-data-series/population.aspx.

Table A-12 Immigration to Australia 1860-1913

YEAR	IMM	YEAR	IMM	YEAR	IMM
1860	23,949	1878	21,602	1896	6,545
1861	-5,958	1879	25,300	1897	6,995
1862	8,299	1880	23,774	1898	-507
1863	22,321	1881	28,528	1899	-1,736
1864	31,550	1882	37,856	1900	-8,810
1865	30,259	1883	69,865	1901	2,959
1866	23,945	1884	51,067	1902	-4,293
1867	7,552	1885	36,724	1903	-9,876
1868	17,962	1886	38,702	1904	-2,983
1869	15,044	1887	33,822	1905	-2,600
1870	15,916	1888	38,927	1906	-5,049
1871	11,682	1889	22,606	1907	5,195
1872	3,037	1890	24,644	1908	5,437
1873	11,368	1891	26,873	1909	21,783
1874	17,121	1892	-3,122	1910	29,912
1875	18,454	1893	-7,379	1911	74,379
1876	25,082	1894	3,163	1912	91,892
1877	34,384	1895	2,857	1913	63,277

Source: Australian Bureau of Statistics, “Australian Historical Population Statistics, 2006,” August 2008, <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3105.0.65.00>

Table A-13 Immigrants Arrivals in the United States, 1850-1913

YEAR	IMM	YEAR	IMM	YEAR	IMM	YEAR	IMM
1850	370,000	1866	319,000	1882	789,000	1898	229,000
1851	380,000	1867	316,000	1883	603,000	1899	312,000
1852	371,000	1868	134,000	1884	518,000	1900	449,000
1853	368,000	1869	353,000	1885	395,000	1901	488,000
1854	427,000	1870	387,000	1886	334,000	1902	649,000
1855	200,000	1871	321,000	1887	490,000	1903	857,000
1856	200,000	1872	405,000	1888	546,000	1904	813,000
1857	251,000	1873	460,000	1889	444,000	1905	1,026,000
1858	123,000	1874	313,000	1890	455,000	1906	1,100,000
1859	121,000	1875	227,000	1891	560,000	1907	1,285,000
1860	153,000	1876	170,000	1892	580,000	1908	783,000
1861	92,000	1877	142,000	1893	440,000	1909	751,000
1862	92,000	1878	188,000	1894	285,000	1910	1,041,000
1863	176,000	1879	178,000	1895	259,000	1911	878,000

1864	193,000	1880	457,000	1896	343,000	1912	838,000
1865	248,000	1881	669,000	1897	230,000	1913	198,000

Source: United States. *Bureau of the Census. Historical Statistics of the United States: 1789-1945, a Supplement to the Statistical Abstract of the United States.* Washington, D.C.: Government Press, 1949, 26, 33-34;

Table A-14 Homesteads Entries and Cancellations, Patents and Area

YEAR	Hstd. Agg. Data		Hstd. Land Offices		No. Patents	Acres incorp.	Hstd. Survey
	No.en-tries	No.Can-celled	No.en-tries	No. Can-celled			
1873	283				420	4792242	29952
1874	1376	890	1376	890	577	4287864	26799
1875	499	305	499	305	464	865000	5406
1876	347	153	347	153	318	420507	2628
1877	845	462	845	462	2437	231691	1448
1878	1788	1384	1788	1384	2357	306936	1918
1879	4068	2060	4068	2060	2663	1130482	7066
1880	2074	681	2074	681	1084	4472000	27950
1881	2753	641	2748	311	1885	8147000	50919
1882	7383	3525	7383	1356	2197	10186000	63663
1883	6063	1892	6063	1104	4341	27234000	170213
1884	3753	1183	3394	1334	3896	6435000	40219
1885	1858	625	1480	1296	3533	391000	2444
1886	2657	862	1980	1033	4570	1379010	8619
1887	2036	490	1668	631	4599	613710	3836
1888	2655	743	2360	888	3275	1131840	7074
1889	4416	1933	3972	1237	3282	516968	3231
1890	2955	950	2683	986	3273	817075	5107
1891	3523	1235	3174	930	2449	76586	479
1892	4840	1983	4741	1055	2995	1393200	8708
1893	4067	1525	3948	1253	2936	2928640	18304
1894	3209	1214	3209	1214	2966	300240	1877
1895	2394	922	2064	1174	2118	406240	2539
1896	1857	541	1764	1068	2665	506560	3166
1897	2384	972	1185	440	2972	428640	2679
1898	4848	817	3435	1195	3037	859840	5374
1899	6689	1125	6040	1554	3904	1622720	10142
1900	7426	414	7327	2099	1970	735480	4597
1901	8167	31	8081	2305	6461	1603680	10023
1902	14673	3296	14597	2906	8768	2553120	15957
1903	31383	5208	31306	4831	7349	6173449	38584
1904	26073	8702	26038	8954	6890	12709600	79435
1905	30819	11296	30735	10545	8798	10671520	66697
1906	41869	11637	41795	13965	12370	4973920	31087
1907	21647	14110	21800	11132	10596	3819700	23873
1908	30424	15668	30233	17583	18690	6123040	38269
1909	39081	14677	38785	14767	22431	7412870	46330

1910	41568	16832	42984	17244	22854	7423200	46395
1911	44479	22122	44375	22616	21754	5683200	35520
1912	39151	18608	36605	19673	19354	5146080	32163
1913	33690	16988	33316	18225	24965	5155520	32222
1914	31829	9656	29828	19135	31053	5193280	32458

Source: Canada. Parliament. *Sessional Papers*. Annual Report of the Department of the Interior. Various Volumes, 1870-1915. Hstd. Agg. Data=Homestead aggregated data: Cancellations from 1902-1914 extracted from M. C. Urquhart and Kenneth Buckley, eds., *Historical Statistics of Canada* (Toronto: Cambridge University Press, The MacMillan Company of Canada Ltd., 1965), 320. Hstd. Land Offices: Our data from individual Land Offices.

Table A-15 No. Post Offices in Western Canada, 1850-1914

YEAR	MB	SK	AB	Total PO
1850	1	0	0	1
1851	0	0	0	1
1852	0	0	0	1
1853	1	0	0	2
1854	0	0	0	2
1855	0	0	0	2
1856	0	0	0	2
1857	0	0	0	2
1858	0	0	0	2
1859	0	0	0	2
1860	1	0	0	3
1861	0	0	0	3
1862	0	0	0	3
1863	0	0	0	3
1864	0	0	0	3
1865	0	0	0	3
1866	0	0	0	3
1867	0	0	0	3
1868	0	0	0	3
1869	0	0	0	3
1870	2	0	0	5
1871	18	0	0	23
1872	6	0	0	29
1873	7	0	0	36
1874	3	0	0	39
1875	5	0	0	44
1876	7	0	1	52
1877	5	2	1	60
1878	13	0	1	74
1879	49	2	0	125
1880	33	2	1	161
1881	24	0	0	185
1882	44	9	0	238
1883	26	15	3	282
1884	89	55	10	436
1885	13	6	2	457

1886	17	10	5	489
1887	26	14	6	535
1888	13	13	2	563
1889	7	6	3	579
1890	32	12	6	629
1891	24	18	6	677
1892	14	14	15	720
1893	18	12	15	765
1894	18	11	13	807
1895	18	23	9	857
1896	19	13	6	895
1897	8	8	3	914
1898	14	6	2	936
1899	30	8	7	981
1900	0	0	2	983
1901	3	0	1	929
1902	3	42	20	994
1903	3	42	22	1061
1904	3	31	44	1139
1905	3	117	35	1293
1906	3	79	86	1460
1907	12	62	61	1595
1908	18	132	91	1836
1909	36	154	122	2148
1910	13	122	95	2378
1911	21	114	133	2646
1912	16	132	91	2885
1913	36	113	98	3132
1914	26	0	134	3102

Source: Annual Reports of the Postmaster General of Canada in Sessional Papers of the Dominion of Canada. Various Volumes, 1867-1915. Data for 1902-1905 are estimated from individual provinces from the aggregated figures reported under Western Canada.

Table A-16 Number of Post offices located 10 km from rivers and railroad lines

YEAR	PO_RIV	PO_RLD	PO_WC	PO_CAN
1851	0	0	0	601
1852	0	0	0	840
1853	1	0	1	1016
1854	1	0	1	1166
1855	1	0	1	1293
1856	1	0	1	1375
1857	1	0	1	1506
1858	1	0	1	1566
1859	1	0	1	1638
1860	2	0	2	1698
1861	2	0	2	1775
1862	2	0	2	1858
1863	2	0	2	1974
1864	2	0	2	2055
1865	2	0	2	2197

1866	2	0	2	2243
1867	2	0	2	2333
1868	2	0	2	3638
1869	2	0	2	3756
1870	4	0	4	3820
1871	20	0	22	3943
1872	21	0	26	4135
1873	24	0	32	4518
1874	25	0	34	4706
1875	27	0	39	4892
1876	32	0	49	5015
1877	35	0	54	5161
1878	37	10	64	5378
1879	50	22	113	5606
1880	63	39	147	5773
1881	72	39	174	5935
1882	85	50	213	6171
1883	102	98	292	6395
1884	135	117	391	6837
1885	143	153	418	7084
1886	158	166	446	7295
1887	162	211	495	7534
1888	164	231	505	7671
1889	176	235	507	7838
1890	194	257	553	7913
1891	205	284	596	8061
1892	214	310	626	8288
1893	214	377	665	8477
1894	227	402	733	8664
1895	235	410	765	8832
1896	241	416	795	9103
1897	239	412	795	9191
1898	242	424	819	9282
1899	248	427	840	9420
1900	256	455	859	9627

Source: GIS spatial query based on collected data. References:
PO_RIV= post offices within 10 km of the course of rivers.
PO_RLD= post offices within both sides of the railroad network.
PO_WC= post offices in Western Canada up to the year 1900.
PO_CAN= post offices in Canada up to the year 1900.

Table A-17 Distance in km between Post Offices in W. Canada

YEAR	MEAN	STDDEV	MIN	MAX
1870	24.03	9.62	13.01	36.02
1871	31.32	8.59	20.44	42.51
1872	33.66	9.4	20.58	44.67
1873	30.39	9.51	16.96	40.99
1874	29.33	10.72	14.74	41.9
1875	29.67	9.32	17.31	41.03
1876	99.52	33.1	57.57	142.95
1877	90.57	35.38	42.3	128.34
1878	79.3	31.57	35.85	112.72
1879	50.03	16.27	27.84	69.4
1880	41.96	16.68	21.6	61.1
1881	39.81	14.86	21.86	57.07
1882	35.31	11.86	20.42	48.77
1883	34.09	11.62	19.1	47.2
1884	30.34	9.31	18.7	42.16
1885	28.73	8.54	17.83	39.54
1886	28.26	8.3	17.27	38.45
1887	26.94	7.68	16.8	36.43
1888	26.64	7.46	16.7	35.77
1889	26.76	7.64	16.53	35.99
1890	26.58	7.08	17	34.98
1891	25.8	6.71	16.83	33.98
1892	25.53	6.57	16.49	33.22
1893	25.85	6.43	17.06	33.44
1894	25.59	6.33	16.91	33.03
1895	25.49	6.51	16.45	33.04
1896	25.3	6.41	16.35	32.77
1897	25.25	6.4	16.23	32.62
1898	24.91	6.45	15.96	32.42
1899	24.96	6.45	16.02	32.42
1900	25.2	6.4	16.4	32.58

Source: GIS Matrix Analysis

Table A-18 Distance in km between Post Offices in Manitoba

YEAR	MEAN	STDDEV	MIN	MAX
1870	23.14	9.11	13.05	34.65
1871	31.43	8.38	20.89	42.38
1872	33.67	9.27	20.86	44.55
1873	30.41	9.42	17.2	40.97
1874	29.35	10.64	14.96	41.88
1875	29.67	9.32	17.31	41.03
1876	36.4	8.36	25.03	46.43
1877	35.39	7.78	25.17	45.16
1878	32.47	8.34	21	42.27
1879	26.54	7.24	16.28	34.92
1880	23.1	6.8	13.75	31.01
1881	23.49	6.31	14.8	30.86
1882	22.46	6.08	14.11	29.56
1883	21.4	5.4	14.08	27.85
1884	19.51	4.87	12.86	25.33
1885	19.54	4.83	12.91	25.27
1886	19.42	4.84	12.75	25.15
1887	19.04	4.67	12.53	24.54
1888	18.97	4.55	12.63	24.35
1889	19.35	4.58	12.99	24.8
1890	19.02	4.48	12.82	24.37
1891	18.39	4.33	12.42	23.55
1892	18.57	4.39	12.45	23.68
1893	18.4	4.31	12.43	23.51
1894	18.33	4.27	12.39	23.37
1895	19.17	4.24	13.3	24.19
1896	19.09	4.33	13.08	24.22
1897	19.19	4.33	13.12	24.32
1898	18.79	4.13	13.07	23.68
1899	18.92	4.27	12.99	23.9
1900	19.25	4.6	13.02	24.78

Source: GIS Matrix Analysis

Table A-19 Post Offices Performance, 1868-1926

YEAR	REVENUE	EXPENDITURE	DEFICIT	FED.BUDGET	Expend. % Budget
1857	531147.56	770502.9	239.35534		
1858	616327.69	805080.69	188.753		
1859	654327.69	784368.47	130.04078		
1860	744049.28	830720.15	86.67087		
1861	769744.13	850688.49	80.94436		
1862	814642.63	888445.44	73.80281		
1863	853794.03	890830.46	37.03643		
1864	937197.84	949101.64	11.9038		
1865	949747.46	1004724.37	54.97691		
1866	990715.69	1000328.68	9.61299		
1867	1027085.54	1030087.54	3.002	1400000	7.357768143
1868	808857.84	785298.55	-23.55929	1400000	5.609275357
1869	758182.03	864954.55	106.77252	1600000	5.405965938
1870	788904.78	933398.67	144.49389	1900000	4.912624579
1871	803637.17	994876	191.23883	2100000	4.737504762
1872	916418.34	1092519.03	176.10069	2100000	5.202471571
1873	1093516.07	1240135.95	146.61988	2500000	4.9605438
1874	1151269.83	1370542.41	219.27258	2500000	5.48216964
1875	1172381.38	1509113.29	336.73191	2300000	6.56136213
1876	1106736.74	1581608.72	474.87198	2300000	6.876559652
1877	1120224.26	1694708.18	574.48392	2200000	7.703219
1878	1224912.17	1715255.36	490.34319	2700000	6.35279763
1879	1117364.5	1750267.17	632.90267	2300000	7.609857261
1880	1179677.89	1818271.05	638.59316	3000000	6.0609035
1881	1344969.85	1876657.96	531.68811	3500000	5.361879886
1882	1543309.21	1980567.25	437.25804	3700000	5.352884459
1883	1753079.22	2176089.09	423.00987	3300000	6.594209364
1884	1712318.85	2312965.27	600.64642	3300000	7.008985667
1885	1790494.9	2488315.36	697.82046	3400000	7.318574588
1886	1852155	2763186.41	911.03141	3600000	7.675517806
1887	1964062.17	2818907.22	854.84505	3600000	7.830297833
1888	2322728.68	2889728.59	566.99991	3900000	7.409560487
1889	2220503.66	2982321.48	761.81782	4000000	7.4558037
1890	2357388.95	3074469.91	717.08096	3900000	7.883256179
1891	2515823.44	3161675.72	645.85228	3700000	8.545069514
1892	2652745.79	3316120.03	663.37424	3800000	8.726631658
1893	2773507.71	3421203.17	647.69546	3600000	9.503342139
1894	2809341.06	3517261.31	707.92025	3400000	10.34488621
1895	2792789.64	3593647.47	800.85783	3700000	9.71256073
1896	2971652.93	3752805.12	781.15219	3800000	9.875802947
1897	3202938.42	3789478.34	586.53992	4100000	9.242630098
1898	3527809.69	3575411.99	47.6023	4700000	7.607259553
1899	3182930.92	3581848.71	398.91779	5100000	7.023232765
1900	3183984.17	3645646.04	461.66187	5300000	6.878577434
1901	3421192.19	3837376.18	416.18399	5800000	6.616165828
1902	3888126.1	3883016.96	-5.10914	6900000	5.627560812
1903	4366127.75	3970859.64	-395.2681	7100000	5.592760056
1904	4652324.74	4347540.84	-304.7839	7100000	6.123296958
1905	5125372.67	4634527.78	-490.8449	8000000	5.793159725
1906	5933342.53	4921577.22	-1011.765	6800000	7.237613559
1907	5061858.93	3979557.34	-1082.302	9600000	4.145372229

1908	7107756.38	6005929.74	-1101.827	86000000	6.983639233
1909	7401623.93	6592386.4	-809.2375	102000000	6.463123922
1910	7958547.72	7215337.47	-743.2103	118000000	6.114692771
1911	9146952.47	7954222.79	-1192.73	136000000	5.848693228
1912	10482255.39	9172035.47	-1310.22	169000000	5.427239923
1913	12060476.43	10882804.57	-1177.672	163000000	6.676567221
1914	12956216.42	12822058.44	-134.158	133000000	9.640645444
1915	13046649.57	15961191.47	2914.5419	172000000	9.279762483
1916	18858409.93	16009138.77	-2849.271	233000000	6.870875009
1917	20902384.46	16300578.65	-4601.806	261000000	6.245432433
1918	21345394.48	18046557.9	-3298.837	313000000	5.76567345
1919	21602712.65	19273583.94	-2329.129	350000000	5.506738269
1920	24449916.97	20774385.2	-3675.532	437000000	4.75386389
1921	26331118.97	24661262.26	-1669.857	395000000	6.243357534
1922	26554538.24	28121425.07	1566.8868	410000000	6.858884163
1923	29262232.78	27794501.89	-1467.731	408000000	6.812377914
1924	29100491.92	28305936.57	-794.5554	353000000	8.018678915
1925	28581992.87	29873802.4	1291.8095	383000000	7.799948407
1926	31024464.22	30499685.74	-524.7785	401000000	7.605906668

Source: Federal Budget from Historical Statistics of Canada, Series H1-18. Federal government, budgetary revenue, by major source, 1867 to 1975, http://www.statcan.gc.ca/pub/11-516-x/sectionh/H1_18-eng.csv. Postal expenditure from Canada. Parliament. Annual Departmental Reports, *Annual Report of the Postmaster General for the Year Ended March 31, 1926*, vol. IV (Ottawa: F. A. Ackland, 1926), 11 and *Canada Yearbook of 1868*.

Table A-20 Post Offices Statistics and GDP, 1851-1914

YEAR	NoPO	PO/year	POP	PO/p	GDP(mill)	Letters(mill)	GDP/pc	letters/pc	Days/letter
1851	601	601	2,436,000	4,053	3,304	2.13	1,356.32	0.88	417.05
1852	840	239	2,516,388	2,996	3,469	3.70	1,378.64	1.47	248.24
1853	1016	176	2,599,429	2,558	3,643	4.26	1,401.33	1.64	222.98
1854	1166	150	2,685,210	2,303	3,825	5.10	1,424.39	1.90	192.18
1855	1293	127	2,773,822	2,145	4,016	6.00	1,447.83	2.16	168.74
1856	1375	82	2,865,358	2,084	4,217	7.00	1,471.66	2.44	149.41
1857	1506	131	2,959,915	1,965	4,428	8.50	1,495.88	2.87	127.10
1858	1566	60	3,057,592	1,952	4,391	9.00	1,436.13	2.94	124.00
1859	1638	72	3,158,493	1,928	4,592	8.50	1,453.95	2.69	135.63
1860	1698	60	3,262,723	1,922	4,887	9.00	1,497.83	2.76	132.32
1861	1775	77	3,229,000	1,819	4,918	9.40	1,523.10	2.91	125.38
1862	1858	83	3,266,779	1,758	5,070	10.20	1,552.01	3.12	116.90
1863	1974	116	3,305,001	1,674	5,223	11.00	1,580.35	3.33	109.67
1864	2055	81	3,343,669	1,627	5,381	11.50	1,609.23	3.44	106.13
1865	2197	142	3,382,790	1,540	5,543	12.00	1,638.63	3.55	102.89
1866	2243	46	3,422,369	1,526	5,710	13.00	1,668.58	3.80	96.09
1867	2333	90	3,463,000	1,484	5,883	14.20	1,698.78	4.10	89.01
1868	3638	1305	3,511,000	965	6,060	18.10	1,726.14	5.16	70.80
1869	3756	118	3,565,000	949	6,243	21.92	1,751.32	6.15	59.36
1870	3820	64	3,625,000	949	6,407	24.50	1,767.45	6.76	54.01
1871	3943	123	3,689,000	936	6,669	27.05	1,807.80	7.33	49.78
1872	4135	192	3,754,000	908	6,599	30.60	1,757.89	8.15	44.78
1873	4518	383	3,826,000	847	7,263	34.58	1,898.20	9.04	40.39
1874	4706	188	3,895,000	828	7,437	39.39	1,909.40	10.11	36.10
1875	4892	186	3,954,000	808	7,263	42.00	1,836.75	10.62	34.36
1876	5015	123	4,009,000	799	6,774	41.80	1,689.62	10.43	35.01
1877	5161	146	4,064,000	787	7,228	41.51	1,778.45	10.21	35.74
1878	5378	217	4,120,000	766	6,948	44.00	1,686.48	10.68	34.18
1879	5606	228	4,185,000	747	7,612	43.90	1,818.80	10.49	34.80
1880	5773	167	4,255,000	737	7,961	45.80	1,870.94	10.76	33.91
1881	5935	162	4,325,000	729	9,078	48.17	2,099.00	11.14	32.77
1882	6171	236	4,375,000	709	9,497	56.20	2,170.78	12.85	28.41
1883	6395	224	4,430,000	693	9,532	62.80	2,151.71	14.18	25.75
1884	6837	442	4,487,000	656	10,300	66.10	2,295.57	14.73	24.78
1885	7084	247	4,537,000	640	9,672	68.40	2,131.75	15.08	24.21
1886	7295	211	4,580,000	628	9,776	71.00	2,134.60	15.50	23.55
1887	7534	239	4,626,000	614	10,091	74.30	2,181.31	16.06	22.73
1888	7671	137	4,678,000	610	10,824	80.20	2,313.80	17.14	21.29
1889	7838	167	4,729,000	603	10,894	92.67	2,303.61	19.60	18.63
1890	7913	75	4,779,000	604	11,697	94.10	2,447.55	19.69	18.54
1891	8061	148	4,833,000	600	11,976	97.98	2,478.00	20.27	18.01
1892	8288	227	4,883,000	589	11,906	102.85	2,438.33	21.06	17.33
1893	8477	189	4,931,000	582	11,837	106.29	2,400.43	21.56	16.93
1894	8664	187	4,979,000	575	12,395	107.15	2,489.49	21.52	16.96
1895	8832	168	5,026,000	569	12,256	107.57	2,438.42	21.40	17.05
1896	9103	271	5,074,000	557	11,941	116.03	2,353.42	22.87	15.96
1897	9191	88	5,122,000	557	13,233	123.83	2,583.59	24.18	15.10
1898	9282	91	5,175,000	558	13,757	134.98	2,658.34	26.08	13.99

1899	9420	138	5,235,000	556	15,049	150.38	2,874.65	28.72	12.71
1900	9627	207	5,301,000	551	15,887	178.29	2,996.94	33.63	10.85
1901	9834	207	5,536,000	563	17,144	192.00	3,096.78	34.68	10.52
1902	9958	124	5,650,000	567	18,820	214.00	3,330.92	37.88	9.64
1903	10150	192	5,813,000	573	19,378	236.00	3,333.63	40.60	8.99
1904	10460	310	5,994,000	573	19,658	259.00	3,279.56	43.21	8.45
1905	10879	419	6,166,000	567	21,962	286.00	3,561.82	46.38	7.87
1906	11141	262	6,282,000	564	24,162	324.00	3,846.21	51.58	7.08
1907	11377	236	6,596,000	580	25,559	363.00	3,874.85	55.03	6.63
1908	11823	446	6,813,000	576	24,336	396.00	3,572.06	58.12	6.28
1909	12479	656	6,993,000	560	26,920	414.00	3,849.60	59.20	6.17
1910	12887	408	7,188,000	558	29,225	456.00	4,065.76	63.44	5.75
1911	13324	437	7,410,000	556	31,215	504.00	4,212.54	68.02	5.37
1912	13859	535	7,602,000	549	33,275	566.00	4,377.13	74.45	4.90
1913	14178	319	7,852,000	554	34,916	633.00	4,446.77	80.62	4.53
1914	13811	-367	8,093,000	586	32,577	673.00	4,025.28	83.16	4.39

Source: Report of the Postmaster General of Canada in *Sessional Papers*, 1867-1915, several volumes and Maddison, *The World Economy*, 184, 194. NoPO=Aggregated number of post offices in Canada; PO/YEAR=number of post offices opened in Canada in that year; POP=population in Canada; PO/p=number of post offices per person in Canada; GDP=gross domestic product; Letters=estimated number of letters posted per year in Canada; GDP/pc=GDP per capita; Letters/pc=estimated number of letters posted per person per year in Canada; Days/Letter=average number of days people sent or received mail in Canada.

Table A-21 Post Offices Growth in Canada by Provinces, 1868-1914

YEAR	ON	QC	NS	NB	PEI	BC	MBNW
1868	1665	784	668	521		1	1
1869	1712	805	703	536		1	1
1870	1747	822	712	539		1	2
1871	1793	844	742	564		1	22
1872	1847	869	768	586		38	27
1873	1914	900	833	611	180	46	34
1874	2001	942	868	633	179	47	36
1875	2077	977	901	651	197	49	40
1876	2130	999	915	663	208	49	51
1877	2203	1025	938	680	213	46	56
1878	2298	1052	960	731	224	47	66
1879	2353	1102	994	762	228	48	109
1880	2427	1123	1008	784	234	50	147
1881	2493	1147	1037	802	237	59	160
1882	2571	1177	1091	828	244	61	199
1883	2617	1210	1131	883	252	66	236
1884	2713	1252	1203	932	271	83	383
1885	2762	1289	1255	997	280	97	404
1886	2835	1320	1300	1019	292	105	424
1887	2891	1372	1345	1048	298	117	463
1888	2927	1385	1372	1070	304	129	484
1889	2971	1423	1399	1085	315	144	501
1890	2997	1429	1403	1089	320	151	523
1891	3026	1441	1431	1101	324	167	571
1892	3060	1486	1481	1123	339	187	612
1893	3058	1533	1534	1138	347	219	646
1894	3102	1575	1562	1146	358	229	692
1895	3138	1600	1589	1162	368	246	729
1896	3185	1640	1648	1181	389	274	786
1897	3198	1664	1657	1183	406	293	790
1898	3213	1698	1673	1182	409	311	796
1899	3228	1744	1686	1180	409	343	830
1900	3282	1781	1723	1196	412	364	869
1901	3311	1830	1754	1217	414	375	933
1902	3321	1873	1777	1241	416	368	962
1903	3359	1932	1789	1253	419	390	1008
1904	3392	1989	1836	1272	426	406	1139
1905	3461	2059	1876	1295	437	437	1314
1906	3506	2090	1892	1305	441	429	1478
1907	3532	2121	1897	1310	445	458	1614
1908	3594	2175	1913	1333	452	501	1855
1909	3694	2269	1938	1397	465	547	2169
1910	3748	2341	1953	1410	467	570	2398
1911	3788	2398	1968	1421	468	613	2668
1912	3845	2508	2063	1452	470	672	2909

1913	3775	2600	2032	1440	442	733	3116
1914	3345	2587	2008	1386	292	763	3130

Source: Report of the Postmaster General of Canada in *Sessional Papers*, 1867-1915, several volumes. ON=Ontario; QC=Quebec; NS=Nova Scotia; NB=New Brunswick; PEI=Prince Edward Island; BC=British Columbia; MBNW= Manitoba and North West Territories.

Table A-22 PO Descriptive Statistics of Revenues and Distance to railroad in Western Canada, 1878-1900

	N	Dmax	Dmin	Dmean	REVE	RevQ3	DisQ3	percentRevQ3	Rail_km
1878	64	1219.554	1.866	147.607	59728	56026	46.13	93.8019	30
1879	113	1219.373	0.08	132.018	76349	73595	171.655	96.39288	129
1880	147	1132.659	0.02194	107.169	102473	98308	169.09	95.93551	278
1881	174	1132.659	0.02194	106.451	140540	133445	170.925	94.95162	400
1882	211	1030.416	0.02194	84.38	214354	202897	107.656	94.6551	528
1883	290	304.13	0.0054	35.209	340529	324771	35.417	95.37249	1895
1884	388	366.153	0.0054	38.932	473817	454053	29.318	95.82877	2197
1885	415	366.153	0.0054	31.3	605733	574360	20.138	94.82066	2545
1886	443	366.153	0.0049	27.907	742354	696944	18.784	93.88297	2882
1887	491	366.153	0.00371	29.162	892728	836560	16.163	93.70827	2937
1888	502	366.153	0.00371	29	1052423	979737	17.553	93.09346	2970
1889	503	337.289	0.00371	21.767	1236151	1147942	13.843	92.86422	3377
1890	548	271.389	0.00371	18.522	1440592	1340952	10.758	93.0834	3854
1891	590	271.389	0.00067	17.324	1665612	1558568	9.323	93.57329	4034
1892	619	246.689	0.00067	15.875	1914480	1802073	6.503	94.12859	4386
1893	658	246.689	0.00067	15.582	2186639	2064207	5.491	94.4009	4881
1894	724	246.689	0.00067	17.704	2459454	2334885	5.991	94.9351	4881
1895	755	302.503	0.00037	18.34	2731700	2590358	5.695	94.82586	4881
1896	784	302.503	0.00037	19.075	3023061	2864436	6.054	94.75283	5026
1897	783	302.503	0.00037	18.923	3327337	3143716	6.177	94.48144	5045
1898	803	257.119	0.00037	17.397	3679436	3474862	5.648	94.44007	5374
1899	826	257.119	0.00037	17.581	4030105	3802549	5.638	94.3536	5381
1900	845	232.297	0.00037	15.763	4358883	4123081	4.484	94.59031	6011

Source: Author's GIS spatial analysis and Postmaster General in the *Sessional Papers*, 1867-1915, various volumes. N= Number of Post offices; DMAX= Distance maximum to rail in km; DMin=Distance minimum to rail in km; DMean= Mean Distance to rail in km; REVE= Total revenues in dollars; RevQ3= Revenues of top 25 percent post offices in dollar; DisQ3= Mean distance to rail top 25 percent post offices in km; percentRevQ3= percent top 25 percent post office revenues compared with total revenues; Rail_km= aggregated km of railroads in Western Canada.

Table A-23 Principal Items of Dominion Expenditure, 1868-1914

YEAR	Int. on Debt	P. Works	Rlwy- Canals	Subs. Prov.	Post	Other	Total
1868	4501568	167960	1088251	2753966	616802	4943142	14071689
1869	4907014	73561	1054571	2604050	787886	5481083	14908165
1870	5047054	120031	2436299	2588605	808623	7016002	18016614
1871	5165304	597275	3649298	2624940	815471	6441192	19293480
1872	5257231	918532	6789451	2930113	929609	8841039	25665975
1873	5209206	1397516	7215769	2921400	1067866	21218051	39029808
1874	5724436	1914879	7375536	3752757	1387270	13343198	33498076
1875	6590790	1945494	8669070	3760962	1520861	10401734	32888911
1876	6400902	2216082	8740905	3690355	1622827	9287073	31958144
1877	6797227	1521656	9380223	3655851	1705812	9447227	32507996
1878	7048884	1167590	8854843	3472808	1724939	8276712	30545776
1879	7194734	1090202	8101385	3442764	1784426	9166428	30779939
1880	7773869	1055072	10442360	3430846	1818271	9521338	34041756
1881	7594145	1296185	10258033	3455518	1876658	9316054	33796593
1882	7740804	1412949	9578237	3530999	1980567	10431070	34674626
1883	7668552	1885125	16530905	3606673	2176089	11031547	42898891
1884	7700181	3400228	18789810	3603714	2312965	22053963	57860861
1885	9419482	2484669	16323376	3959827	2488315	14487408	49163077
1886	10137009	2615754	11812796	4182526	2763186	30326297	61837568
1887	9682929	2986360	8705212	4169341	2818907	13641403	42004152
1888	9823313	3125894	7986578	4188514	2889729	14324592	42338620
1889	10148932	2874639	8624794	4051428	2982321	14836082	43518196
1890	9656841	5193427	9459528	3904922	3074470	13206649	44495837
1891	9548137	2453248	8273632	3903757	3161676	13452758	40793208
1892	9763978	1852241	7432368	3935914	3316120	15971515	42272136
1893	9806888	2109710	7442289	3935765	3421203	14137873	40853728
1894	10212596	2136014	8603348	4206655	3517261	14332360	43008234
1895	10466294	1844710	7743763	4250675	3593647	14873244	42772333
1896	10502430	1414595	9640316	4235664	3665011	14638868	44096884
1897	10645663	1592957	6695906	4238059	3789478	16010693	42972756
1898	10516758	2065331	8924908	4237372	3575413	16014499	45334281
1899	10855112	2287758	12437850	4250636	3603799	18107480	51542635
1900	10699645	3379716	11865170	4250608	3758015	18764313	52717467
1901	10807955	4393565	14893676	4250607	3931446	19695567	57972816
1902	10975935	6411419	13441175	4402098	4023637	24716536	63970800
1903	11068139	5333557	12762468	4402503	4105178	24074727	61746572
1904	11128637	5941727	14237741	4402292	4347541	32197110	72255048
1905	10630115	8407488	17906714	4516038	4634528	32709256	78804139
1906	10814697	9844244	15734544	6726373	4921577	35235607	83277042
1907	6712771	7318442	10737077	6745134	3979557	30285058	65778039
1908	10973597	11690376	18717297	9032775	6005930	56158705	112578680
1909	11604584	15132479	18315299	9117143	6592386	72679633	133441524

1910	13098160	11775824	15192251	9361388	7215338	58752813	115395774
1911	12535851	12364148	15524369	9092472	7954223	65390187	122861250
1912	12259397	14460872	17461250	10281045	9172036	73507482	137142082
1913	12605882	19526020	23368317	13211800	10882804	64856055	144450878
1914	12893505	29107530	32149036	12280469	12822058	86988450	186241048

Source: Canada. Dominion Bureau of Statistics. General Statistics Branch, *The Canada Year Book 1926* (Ottawa: F. A. Ackland, 1927), 763-765. Int. on Debt= Interest on Debt; P. Works=Public Works; Canals=Canals; Subs. Prov=Subsidies to provinces; Post=Post Offices cost of operation excluding postmasters salaries and mail transportation; Other= undisclosed federal expenditure.

Table A-24 Dead Letters Reports, 1866-1914

Year	No Letters	No. Dletters	No.DLValues	%DLetters	%DLValue
1866	13,000,000	250,000	1035	1.923077	0.414
1867	14,200,000	269,952	870	1.90107	0.32228
1868	18,100,000	312,000	956	1.723757	0.30641
1869	21,920,000	307,889	1372	1.404603	0.445615
1870	24,500,000	324,000	1137	1.322449	0.350926
1871	27,050,000	335,000	1580	1.238447	0.471642
1872	30,600,000	380,000	2441	1.24183	0.642368
1873	34,579,000	426,000	2840	1.231962	0.666667
1874	39,385,500	508,000	3416	1.289815	0.672441
1875	42,000,000	572,000	4519	1.361905	0.790035
1876	41,800,000	587,000	6831	1.404306	1.163714
1877	41,510,000	563,000	7519	1.3563	1.335524
1878	44,000,000	630,000	7214	1.431818	1.145079
1879	43,900,000	540,000	7546	1.230068	1.397407
1880	45,800,000	592,000	7176	1.292576	1.212162
1881	48,170,000	534,000	7537	1.108574	1.411423
1882	56,200,000	568,000	8059	1.010676	1.418838
1883	62,800,000	620,000	9269	0.987261	1.495
1884	66,100,000	666,000	6648	1.007564	0.998198
1885	68,400,000	694,000	6039	1.01462	0.870173
1886	71,000,000	787,000	6171	1.108451	0.784117
1887	74,300,000	833,000	6352	1.121131	0.762545
1888	80,200,000	916,000	6552	1.142145	0.715284
1889	92,668,000	893,000	7259	0.963655	0.812878
1890	94,100,000	922,000	6821	0.979809	0.739805
1891	97,975,000	973,000	5936	0.99311	0.610072
1892	102,850,000	1,057,000	5677	1.02771	0.537086
1893	106,290,000	1,009,000	5855	0.94929	0.580278
1894	107,145,000	1,036,000	6249	0.966914	0.603185
1895	107,565,000	960,000	5460	0.892484	0.56875
1896	116,028,000	969,000	4775	0.835143	0.492776
1897	123,830,000	875,000	4731	0.706614	0.540686
1898	134,975,000	940,000	5966	0.696425	0.634681
1899	150,375,000	831,000	7084	0.552618	0.852467
1900	178,292,500	1,067,000	8102	0.598455	0.759325
1901	191,650,000	1,071,011	9777	0.558837	0.912876
1902	212,628,000	1,207,772	10330	0.568021	0.855294
1903	235,791,000	1,536,749	9133	0.651742	0.594307
1904	259,190,000	1,405,362	10841	0.542213	0.771403
1905	285,541,000	1,550,018	12207	0.542836	0.787539
1906	323,644,000	1,984,854	13533	0.613283	0.681813

1907	273,071,000	1,706,745	12173	0.625019	0.713229
1908	396,011,000	2,577,909	18398	0.650969	0.713679
1909	414,301,000	2,375,714	17803	0.573427	0.749375
1910	456,085,000	2,547,749	19461	0.558613	0.763851
1911	504,233,000	2,963,117	21932	0.587648	0.740167
1912	566,140,000	3,449,167	25000	0.609243	0.724813
1913	633,475,000	3,667,605	30613	0.578966	0.834686
1914	673,145,000	3,457,721	33708	0.513667	0.974862

Source: Report of the Postmaster General in the *Sessional Papers*, 1867-1915, various volumes. No Letters= estimated number of letters posted in Canada; No. Dletters=Total number of dead letters reported; No.DLValues=number of dead letters containing money value; %DLetters=percent of dead letters compared to the total number of letters; %DLValue=percent of dead letters containing money value compared to the number of dead letters.

Table A-25 Average amount of money per dead letter

Year	\$/DL	\$/Cash	\$/BE	\$/Chq	\$/Drf	\$/Oth
1866	107.6319	6.007042		483.9613		212.4186
1867	93.94598	5.505906		419.9007		109.9415
1868	93.16423	6.229358		320.2707		154.0698
1869	76.4395	5.951772		407.8201		194.3925
1870	77.34653	5.505682	449.0377	211.3647	251.6491	163.135
1871	88.02848	5.099798	696.2179	80.31915	352.2152	199.8122
1872	82.06391	4.72394	164.0213	124.6477	210.2906	280.8465
1873	168.1007	6.404943	450.437	158.3904	334.0159	185.6268
1874	63.22131	4.512795	367.2313	109.7543	143.4167	135.9027
1875	148.7207	4.95052	543.4306	157.567	463.6301	179.5928
1876	78.31474	4.586075	160	110.86	232.9458	174.0721
1877	77.7352	4.856791	301.8611	130.4567	292.1086	184.8965
1878	74.68284	4.605589	165.991	114.7664	267.3966	183.0873
1879	49.55672	4.131129	613.7353	87.25356	264.5094	140.4026
1880	53.11427	5.254428	475.2593	82.11786	165.1941	174.5489
1881	49.25474	4.961634	268.7231	91.40979	210.5577	188.9486
1882	68.373	5.88897	307.0377	150.891	242.117	281.1426
1883	54.12601	6.402758	493.2368	144.7059	237.6043	176.0731
1884	61.24082	6.712817	403.7966	166.7959	232.3355	179.7171
1885	60.51399	5.889638	523.1707	128.8711	159.9303	175.8072
1886	46.96629	5.974618	240.6154	94.08919	152.1748	114.3895
1887	54.93955	5.925278	554.2245	134.2555	205.0258	133.4321
1888	90.05708	5.73205	382.0656	123.1632	254.123	306.8856
1889	49.75878	5.717492	315.1429	123.9632	176.2199	153.0368
1890	45.97244	4.306486	376.25	135.0022	155.4461	144.6862
1891	51.45401	5.547193	163.8627	102.8574	111.8063	155.3798
1892	143.5878	6.126844	194.8444	122.3006	1904.714	160.458
1893	54.4123	5.414924	286.2979	120.9904	184.8918	153.6782
1894	60.7414	4.550071	256.0606	132.8453	223.4435	211.1343
1895	41.03846	4.757438	551.6129	65.65166	108.0717	122.1265
1896	59.23435	4.917253	75.38462	281.6645	112.9032	120.0465
1897	48.83344	4.650085	330.7407	131.9584	160.4278	120.8956
1898	38.95877	4.053312	317.52	84.26825	148.1168	137.2552
1899	57.08597	4.672435	270	111.5692	286.9503	169.506
1900	60.74661	4.751453	219.6667	230.8809	154.9299	147.8529
1901	41.53442	3.623868	348.7241	113.4538	171.9082	126.8058
1902	46.0153	3.849624	256.1522	109.8928	227.1746	131.5103
1903	48.76196	5.319356	475.0606	146.1588	172.5824	95.87834
1904	40.43317	4.800985	349.0192	97.81327	170.1379	92.49201

1905	40.56795	3.876854	478.0238	125.1718	244.2902	65.96625
1906	49.94081	4.454525	370.9167	152.2203	273.3291	69.72873
1907	43.05405	4.02359	270.5938	118.7745	158.523	66.35706
1908	40.29416	5.225294	209.7105	101.4819	133.9202	76.41967
1909	41.69309	4.322687	152.3667	92.42916	146.225	89.62017
1910	58.15349	5.013083	125	151.5192	373.6587	80.91727
1911	57.57592	3.827428	243.3333	145.8482	191.454	86.91894
1912	44.32904	4.26388	280.5385	79.00833	195.4887	76.94238
1913	70.91657	4.835449	123.44	172.2421	176.4968	90.89312
1914	52.83241	4.013444	198.6667	102.9045	180.667	95.7852

Source: Report of the Postmaster General in the *Sessional Papers*, 1867-1915, various volumes.

\$/DL= Total average of money per dead letters; \$/Cash= average cash money per letter; \$/BE= average amount per Bill of Exchange; \$/Chq= average amount per cheques; \$/Draft= average amount per Drafts; \$/Other= This item includes a variety of financial instruments that changed over time such as Coupons, Bonds, Promissory notes, Stocks certificates, Passages, Registered letters and other documents.*In 1892 the amounts under "Drafts" was very unusual.

Table A-26 Money Orders Flow, 1868-1914

YEAR	Total Issued	Paid CND	Paid OC	%MO POC
1868	3,352,881	2,959,763	393,119	11.72
1869	3,563,645	3,193,306	370,339	10.39
1870	3,910,250	3,489,610	420,640	10.76
1871	4,546,434	4,067,735	478,699	10.53
1872	6,154,120	5,573,020	581,100	9.44
1873	6,239,505	5,569,298	670,207	10.74
1874	6,757,427	6,090,173	667,255	9.87
1875	6,711,539	6,132,095	579,444	8.63
1876	6,866,619	6,157,813	708,805	10.32
1877	6,856,821	6,164,826	691,995	10.09
1878	7,130,896	6,412,577	718,319	10.07
1879	6,788,723	6,086,521	702,202	10.34
1880	7,207,337	6,385,211	822,126	11.41
1881	7,725,213	6,679,547	1,045,665	13.54
1882	8,354,154	7,018,526	1,335,628	15.99
1883	9,490,900	7,634,735	1,856,164	19.56
1884	10,067,835	7,971,920	2,095,915	20.82
1885	10,384,211	8,254,003	2,130,208	20.51
1886	10,231,189	8,146,096	2,085,094	20.38
1887	10,328,985	8,093,887	2,235,098	21.64
1888	10,916,618	8,520,776	2,395,842	21.95
1889	11,265,920	8,692,419	2,573,501	22.84
1890	11,997,862	9,359,434	2,638,427	21.99
1891	12,178,178	9,554,052	2,624,126	21.55
1892	12,825,701	10,210,099	2,615,602	20.39
1893	12,902,976	10,404,857	2,498,119	19.36
1894	13,245,990	10,487,280	2,758,710	20.83
1895	13,187,322	10,736,647	2,450,674	18.58
1896	13,081,861	10,726,661	2,355,200	18.00
1897	12,987,231	10,680,835	2,306,396	17.76
1898	14,518,480	12,082,658	2,435,822	16.78
1899	14,467,997	12,001,225	2,466,773	17.05
1900	16,209,069	13,148,521	3,060,549	18.88
1901	17,956,257	14,324,288	3,631,969	20.23
1902	23,549,402	18,423,034	5,126,368	21.77
1903	26,868,202	20,761,077	6,107,125	22.73
1904	29,652,811	21,706,474	7,946,337	26.80
1905	32,349,475	23,410,484	8,938,991	27.63
1906	37,355,673	26,133,565	11,222,108	30.04
1907	32,160,098	21,958,855	10,201,243	31.72

1908	49,974,007	31,836,628	18,137,379	36.29
1909	52,627,769	36,577,551	16,050,218	30.50
1910	60,967,162	41,595,205	19,371,957	31.77
1911	70,614,862	45,451,424	25,163,438	35.63
1912	84,065,891	52,568,432	31,497,459	37.47
1913	101,153,272	61,324,029	39,829,243	39.38
1914	109,500,670	66,113,221	43,387,449	39.62

Source: Report of the Postmaster General in the *Sessional Papers*, 1867-1915, various volumes. Paid
 CND=money orders paid within Canada; Paid OC=money orders paid in other countries.

Table A-27 Money Orders, Deposits and Bank Notes in MB-NWT and Canada, 1868-1914

YEAR	A	B	C	D	E	F	G
1868	9,350,646	3,342,574		35.75			33,653,594
1869	9,539,511	3,551,552		37.23			40,028,090
1870	15,149,031	3,898,747		25.74			48,763,205
1871	20,914,637	4,537,902		21.70			56,287,391
1872	25,296,454	5,144,834		20.34			61,481,452
1873	27,165,878	6,177,905		22.74			65,426,042
1874	27,904,963	6,815,329	12,761	24.42			77,113,754
1875	23,035,639	6,721,439	26,452	29.18	0.39	0.11	74,642,446
1876	21,245,935	6,866,618	29,139	32.32	0.42	0.14	72,852,686
1877	20,704,338	6,856,837	28,350	33.12	0.41	0.14	74,166,287
1878	20,475,586	7,130,895	46,751	34.83	0.66	0.23	70,856,253
1879	19,486,103	6,788,723	69,986	34.84	1.03	0.36	73,151,425
1880	22,529,623	7,207,442	172,396	31.99	2.39	0.77	85,303,814
1881	28,516,692	7,725,212	221,372	27.09	2.87	0.78	94,346,481
1882	33,582,080	8,354,153	398,241	24.88	4.77	1.19	110,133,124
1883	33,283,302	9,490,899	677,722	28.52	7.14	2.04	107,648,383
1884	30,449,410	10,067,834	696,788	33.06	6.92	2.29	102,398,228
1885	30,720,762	10,384,210	717,948	33.80	6.91	2.34	104,014,660
1886	31,030,499	10,231,189	787,355	32.97	7.70	2.54	111,449,365
1887	32,478,118	10,328,984	666,204	31.80	6.45	2.05	112,656,985
1888	32,205,259	10,916,617	786,177	33.90	7.20	2.44	125,136,473
1889	32,207,144	11,265,919	828,992	34.98	7.36	2.57	134,650,732
1890	32,834,511	11,997,861	829,106	36.54	6.91	2.53	135,548,704
1891	33,061,042	12,478,178	1,105,384	37.74	8.86	3.34	148,396,968
1892	33,788,679	12,825,701	1,224,687	37.96	9.55	3.62	166,668,471
1893	33,811,925	12,902,975	1,307,745	38.16	10.14	3.87	174,776,722
1894	31,166,003	13,245,990	1,361,685	42.50	10.28	4.37	181,743,890
1895	30,807,041	13,187,321	1,419,561	42.81	10.76	4.61	190,916,939
1896	31,456,297	13,081,860	1,457,526	41.59	11.14	4.63	193,616,049
1897	34,350,118	12,987,230	1,471,837	37.81	11.33	4.28	211,788,096
1898	37,873,934	14,518,480	1,740,418	38.33	11.99	4.60	236,161,062
1899	41,513,139	14,467,997	1,608,179	34.85	11.12	3.87	266,504,528
1900	46,574,780	16,209,069	1,821,228	34.80	11.24	3.91	305,140,242
1901	50,601,205	17,956,258	1,642,380	35.49	9.15	3.25	349,573,327
1902	55,412,598	23,549,402	2,999,152	42.50	12.74	5.41	390,370,493
1903	60,244,072	26,868,202	4,080,157	44.60	15.19	6.77	424,167,140
1904	61,769,888	29,652,811	4,726,367	48.01	15.94	7.65	470,265,744
1905	64,025,643	32,349,476	5,895,818	50.53	18.23	9.21	531,243,476
1906	70,638,870	37,355,673	7,490,235	52.88	20.05	10.60	605,968,513
1907	75,784,482	32,160,098	6,972,443	42.44	21.68	9.20	654,839,711
1908	71,401,697	49,974,007	10,746,640	69.99	21.50	15.05	658,367,015
1909	73,943,119	52,627,769	12,997,165	71.17	24.70	17.58	783,298,880
1910	82,120,303	60,967,162	16,761,555	74.24	27.49	20.41	909,964,839
1911	89,982,223	70,614,862	20,069,263	78.48	28.42	22.30	980,433,788
1912	100,146,541	84,065,891	25,926,344	83.94	30.84	25.89	1,102,910,383
1913	105,265,336	101,153,272	33,393,000	96.09	33.01	31.72	1,126,871,523
1914	104,600,185	109,500,670	36,601,782	104.68	33.43	34.99	1,144,210,363

Source: Canada. Dominion Bureau of Statistics. General Statistics Branch, *The Canada Year Book 1915* (Ottawa: J. de L. Taché, printer to the King, 1916), 577. Postmaster General in the *Sessional Papers*, 1867-1915, various volumes. A=Bank Notes in circulation \$. B=MO in Canada \$. C=MO in MB-

NWT in \$. D=MO in Canada as % Bank Notes in circulation. E=MO in MB-NWT as % MO in Canada. F=MO in MB-NWT as % bank notes in circulation. G=Bank Deposits in \$.

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