

Trabajo de Investigación del Máster en Historia Económica (UB-UAB-UZ)

The role of State Capacities in the evolution of inequality in Chile between 1850 and 1891

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Abstract:

Chile has historically suffered from high levels of inequality. Many authors place the origins of this phenomenon in the period often termed the *First Globalization* (1850-1891). During this period, Chile experienced several commodity booms and engaged in two major armed conflicts. These events had a profound impact on the State's capacity to extract revenue and to implement economic and social policy. This paper aims to evaluate the evolution of inequality in Chile during this period, highlighting the possible causes. It also examines the development of State Capacities during the same period and analyses the impact that this may have had on inequality.

Key words: *Inequality, State Capacities, First Globalization, Chile*

Resumen:

Chile es un país con niveles de desigualdad históricamente muy altos. Muchos autores han buscado el origen de este fenómeno durante el periodo a menudo llamado *La Primera Globalización* (1850-1891). Durante este periodo, Chile experimentó unos cuantos *commodity booms* y participó en dos conflictos armados importantes. Estos acontecimientos tuvieron un impacto profundo sobre las capacidades del Estado en cuanto a extracción de ingresos y implementación de política económica y social. Este artículo pretende evaluar la evolución de la desigualdad en Chile durante este periodo, recalando las posibles causas. También examina el desarrollo de las Capacidades del Estado durante el mismo periodo y analiza el impacto que puede tener sobre la desigualdad.

Palabras claves: *Desigualdad, Capacidades del Estado, Primera Globalización, Chile*

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1. Introduction

Chile is often cited as the great success story of Latin American economic development over the last two centuries. It experienced unprecedented growth during the 19th Century and largely continued its upward trajectory during the 20th Century. Its position as a major economic power was consolidated in 2010, when it became the first South American country to join the OECD.¹ However, the one caveat to this resounding success is the country's unrelenting problem with inequality. Multifaceted and seemingly unsolvable, inequality has proved to be Chile's last great obstacle in its economic development since independence. Once again, in 2019, Chile found itself in the grip of sweeping protests amid a growing dissatisfaction with the economic structure of Chilean society.² Coupled with the numerous student-led strikes over the last decade³, the protests of indigenous groups and an uprising of fishermen in Chiloé in 2016⁴, these popular movements demonstrate widespread unrest in the country. As the debate on the concentration of wealth and political mismanagement rages, income inequality is very much at the forefront. The roots of this inequality are deep and complex. It is an issue that has plagued Chile ever since its independence in 1818. Whilst the debate surrounding inequality in Chile has tended to focus on its relationship with economic growth or on the structure of the country's economic institutions, in recent years, a number of economists have begun to look at State Capacities and the effect that their development can have on inequality (Cheibub 1998, Centeno 2009, Bénabou 2000, Cardenas 2010, Deaton 2013 and Rodriguez-Franco 2016). In this paper, I aim to explore the State's role in Chile's economic development during a key period in its history, the second half of the 19th Century. I will look at the development of State Capacities in Chile during this period and assess whether this has any connection to the fluctuations in inequality in the country over the same interval.

¹ <https://www.oecd.org/chile/chilesignsupasfirstoecdmemberinsouthamerica.htm>

² <https://graphics.reuters.com/CHILE-PROTESTS/0100B32527X/index.html>
<https://www.theguardian.com/world/2019/oct/30/chile-protests-portraits-protesters-sebastian-pinera>

³ <https://www.bbc.com/news/world-latin-america-22118682>

⁴ <http://www.soychile.cl/Chiloe/Sociedad/2016/05/06/391634/Pescadores-no-bajan-los-brazos-siguen-los-bloqueos-en-Chiloe-por-criisis-de-la-marea-roja.aspx>
<http://www.resumenlatinoamericano.org/2016/04/19/importante-manifestacion-mapuche-williche-se-realizo-en-valdivia-en-contra-de-la-represion-y-la-ley-antiterrorista/>

1.1. Inequality

Why is inequality such a big issue? Whilst there have been voices who have argued that inequality is an inevitable, and even desirable, companion to economic growth (Ostry, Berg and Tsangarides 2014, Lazear and Rosen 1981), the generally accepted consensus is that high inequality is a barrier to both economic development and social cohesion. The so-called *trickle-down* effect, the supposition that an increase in wealth in the richest sectors of society will eventually benefit all strata of society through increased demand and job creation (Barro and Sala i Martin 2003, Kuczynski and Williamson 2003) has been widely questioned since the global economic crisis of 2008 (Dabla-Morris, Kochar, Suphaphiphat, Ricka and Tsounta 2015, Piketty 2013, Stiglitz 2012). As such, inequality has emerged as an essential field of study in Economics and beyond.

Numerous authors point to the many economic and social disadvantages of high inequality; slowing-down the process of development (Alesina and Perotti 1993, Castillo 2013), a sub-optimal use of human resources (Pizarro 2005), compromising sustainable growth (Cingano 2014, Dabla-Morris et al. 2015), negative impact on the development of human capital (Rodriguez-Weber 2014), reduced productivity and added value (Willebald 2010). Stiglitz (2012) also comments on how high inequality can lead to an erosion of trust in institutions, creating incentives for corruption and nepotism. Furthermore, Engerman and Sokoloff (1997) claimed that an unequal economic model favours rent-seeking and is therefore not conducive to sustainable economic growth.

The recent research conducted by Piketty and Sáez (2006 and 2011) and Stiglitz (2012) into income distribution have brought wealth inequality into the public eye. The extreme concentration of wealth detailed in these studies has led to public outrage and unrest worldwide.⁵ Within the sphere of economics, they have brought into question the traditional understanding of inequality represented by the Kuznets curve⁶. Whilst many of these studies have focused on the current plight of inequality in the world today, I would like to analyse a specific period in Chile's history to see what it can show us about the evolution of inequality.

⁵ <https://www.newyorker.com/magazine/2014/05/05/occupy-the-best-seller-list>
<https://www.theatlantic.com/business/archive/2014/09/what-can-explain-the-success-of-pikettys-capital/380667/>

⁶ The Kuznets curve, first theorised by Simon Kuznets during the 1950s, graphs the hypothesis that, as an economy develops, economic inequality will first increase and then decrease.

1.2. State Capacities

In the last few years, State Capacities has emerged as a fruitful area of research in the field of Economic History. Attempts to measure and evaluate State Capacities have included research into fiscal capability, legal capacity, and institutional reach (Tilly 1990, Besley and Persson 2010, Dincecco and Katz 2014, Acemoglu, García-Jimeno and Robinson 2015). As far back as perhaps the first political philosopher Thomas Hobbes, the importance of the strength of the state and its ability to act as a representative of the nation has been highlighted (Hobbes, 2018, p.294). If the state does not have the capability to make decisions, regardless of what those decisions are, the modern nation, according to Hobbes, cannot be said to succeed (2018, p.275 and p. 315). The sociologist Max Weber famously coined the term “*monopoly of violence*” (Weber 2012, p.83) when outlining his requirements for a capable state. By this he meant that the state must be the sole proprietor of any potential coercion by force. If this is not the case, if private collectives or individuals have the power and means to administer violence, then the state cannot be said to be autonomous or capable.

Tilly (1990) took Weber’s supposition one step further and established a direct link between the state’s desire for military success and the establishment of modern nations. He argues that states expand their extractive capacities, i.e. their ability to generate revenue through taxation, in order to wage wars and consequentially acquire the means necessary for state development.⁷ Several contemporary economists (Boix 2009, Deaton 2003 and 2013, Dincecco and Katz 2014) state that, in order to fully understand the evolution of any nation’s economic development, we must take into consideration the role of the state and its ability to act as a key figure in an economic system. As the principal agent, in terms of power and influence, in the national economy, the way in which the state acts will have a profound impact on the economic performance of any nation. In their paper on historical inequality, Milanovic, Lindert and Williamson (2007) suggest that inequality has its origins in the birth of the elite and that it emerges according to how any economic surplus is distributed. Thus, as far as they are concerned, equality depends on the extractive power of elites. Furthermore, several authors have linked state capacities to effective redistribution (Deaton 2013, Centeno 2009, Coatsworth 2008). In this respect, it seems that in order to understand inequality

⁷ Tilly goes as far as to say, “*The central tragic fact is simple: coercion works*” (Tilly 1990, p. 70)

within a nation-state, we must examine its evolution in line with the extractive power of the state in question.

In analysing the role of the Chilean state in Chile's economic development during the second half of the 19th Century, we must evaluate both its power and influence. The state can impact on inequality in several ways, most importantly; taxation, infrastructure and the provision of public goods. The extent to which the Chilean state does, and does not, engage in these activities may help explain the evolution of inequality in Chile. Chile is widely considered to have developed strong state capacities during the 19th Century (Saylor 2012, Soifer 2009) and yet has traditionally suffered from high inequality. My objective is to evaluate both inequality and state capacities during this period and to examine the possible connections between the two.

The hypothesis of this paper is that there is a negatively correlated connection between State Capacities and inequality in Chile in between 1850 and 1891.

1. 3. Methodology

Inequality is a multi-faceted problem, which can be studied from a variety of perspectives and measured in numerous different ways. I will principally focus on income inequality and wealth concentration for this investigation, largely due to the extensive data elaborated by Bertola and Rodriguez-Weber (2009). This is primarily demonstrated through GINI indices and the presentation of income in deciles. However, it is important to note that inequality can also manifest itself through divergences in access and opportunity and is often measured via social mobility (Clark 2013, Mediavilla and Calero 2010, Torche and Wormald 2004). I will attempt to analyse the evolution of inequality in Chile between 1850 and 1891 and examine the role that the state plays in this dynamic. I will briefly explain the state of the argument before outlining my investigation on the possible connection between inequality and state capacities in Chile during this period.

As a way of assessing state capacities, I will primarily look at extractive capability, using data elaborated by Mamalakis (as shown by Bowman and Wallerstein 1982). However, I will also look at some of the other ways in which state capacities have been measured, such as political autonomy and regional reach. For this I have collected data from the national Census of Chile between 1865

and 1895 relating to education and bureaucracy. In this way, I have elaborated a series of graphs charting the possible relationship between state capacities and inequality (Figures 4 and 11).

1.4. Why this period?

The years between 1850 and 1891 represent a key period in Chilean history; economically, politically and historically. According to Williamson (2009), this is also the key period in examining inequality in Latin America. He argues that this relates to Chile's integration into international commodity markets. Chile in 1861 can actually be considered to be the most unequal society of all those studied in his historic dataset (Table 1).⁸ According to his findings, it is in this period that Latin America's problem with inequality is rooted and consolidated. The great divide in economic terms between Latin America and Europe is often noted as a phenomenon of the 20th Century (Williamson 2009). However, the roots of many of the region's problems can be found during the previous century. Chief among these problems is inequality and I believe that the second half of the 19th Century is the most revealing era within this field. It is within this period that the relatively young Chilean republic begins to attempt to consolidate itself as a modern nation-state. Key to this national project is the economic project undertaken by the Chilean government and the ruling classes. After Chile's successful campaigns of territorial expansion during these decades, the South emerges as the great untapped resource, a vast expanse of land upon which the existing *Hacienda* model can be applied. The newly conquered North, meanwhile, is able to reap the rewards of the nitrate boom and position Chile as the prime beneficiary of the global market's soaring demand. Consequentially, between the 1860s and the turn of the century, we observe the emergence of two clear and distinct economically powerful regions in the two extremities of the nation's territory, relatively far from the nation's capital of Santiago. The radical changes to country's geographical, economic and social structure during this period continue to mark Chile today. For these reasons, I believe that it is an era of utmost importance when looking at the evolution of inequality in Chile.

In the context of the study of state capacities in Chile, I believe that this period is again of particular interest. Saylor (2012) links commodity booms with state capacities. He argues that they be positively related and attempts to demonstrate how the "*resource curse*"⁹ can, in some cases be

⁸ Williamson includes many more historic societies in his findings. I have only selected others from the 19th Century for means of comparison with Chile. For full dataset see Williamson (2009)

⁹ This theory argues that regions rich in primary resources will suffer when entering into a trade dynamic. The reasons for this are explained in detail by Coatsworth (2008) and Bértola and Ocampo (2013).

inverted. Whether or not this is the case, he argues, will depend on the coalition politics within the state (Saylor 2012, p. 302). In the case of Chile, we will see the extent to which this process plays out. Similarly, war and territorial expanse have historically been considered key in the formation of the nation-state (Tilly 1990). For this reason, this period in Chile's history, covering two major expansionary wars, is essential to the process of state building.

2. State of the question

2.1. Inequality

Regarding the origins of inequality in Chile, there appear to be two main schools of thought. The first is often referred to as the institutional argument. This view is characterised by a study of internal structures and power relations. Inequality is seen as a result of unequal economic structures in place within the country (Coatsworth 2008). These structures can manifest their inequity through a variety of forms: racism, education, centralisation of states and limited democracy to name a few (Bértola and Ocampo 2010). Engerman and Sokoloff (2000) argue that high inequality favours rich landlords and rent-seekers, leading to the development of institutions compatible with rent-seeking and therefore compromising long-term economic development. In the case of Chile, as well as most of Latin America, the dominant economic structure in the 19th Century is the *Hacienda*. As much as 80% of Chileans depended in some way or another on the *Hacienda* system (Rodriguez-Weber, 2015, p. 10). A *Hacienda* is typically a large agrarian estate, with a collection of households and a number of workers who live on the property. It is a system originating from the Spanish colonisation of Latin America and is denoted by a strict hierarchical order that conditions the respective economic and social wellbeing of the landowners and the workers (Bulmer-Thomas, 1994). As well as the *Hacienda*, Rodriguez-Weber argues that the structure of the mining sector also lends itself to an unequal distribution of revenue. He argues that the complicated and expensive nature of searching for new mining sources leads to a few big winners but many relative losers (Rodriguez-Weber, 2015, p.53). The institutional argument draws a parallel between these strictly unequal institutions and the high levels of income inequality present across much of Latin America. Within this paradigm, inequality is largely seen as a legacy of colonialism in the region. Independence is seen as a continuation of the colonial order (Acemoglu, Johnson, Robinson, 2001, p. 1376). The newly independent regimes occupy the same extractive position as their colonial antecedents. These authors argue that, due to the rentability of the existing economic system, there

was no incentive for the newly designated rulers to alter the economic structure of the country (Engerman and Sokoloff, 2000, Acemoglu et. al, 2001).

The second major school of thought relating to the study of inequality in economic history relates to the effects of a process of globalization on internal markets. The debate regarding the costs and benefits of globalization is one that is highly relevant to the our current world. Several authors have studied the effects of globalisation on our current economic systems and on our current issues with inequality.¹⁰ These parallels are also drawn in the historical debate relating to the *First Globalization* and inequality in the 19th Century. Williamson (2009) for instance rejects the view that Latin America's problem with inequality is solely a legacy of Spanish colonial rule, going so far as to say that "*historical persistence in Latin American inequality is a myth*" (Williamson 2009, p. 3). He argues that pre-industrial Latin America is in fact less unequal than much of pre-industrial Europe. He instead attributes Latin America's historically high inequality to the effect of the the so-called *First Globalization* on pre-industrial economies. As such, the large increase in inequality experienced in Latin America during the second half of the 19th Century is a consequence of its emergence into an increasingly globalised international market and the role it will play within that market. Lindert and Williamson (2001) explain how globalization can reduce workers' salaries in territories abundant in land and with low population density, very much the case for Chile. This is related to the economic growth experienced through increased access to global markets (Coatsworth 2008). However, as exports grow, land and mineral rents rise relative to wages. These changes negatively impact on the poorer members of society, namely labourers, and favour the wealthiest, land and industry owners. As such, Chile, having benefitted enormously from the increase in demand for exported goods, experiences an especially accelerated process of growth and inequality. Bertola and Ocampo (2010, p. 133) point to the impact of relative price variances as laid out by the Heckscher-Ohlin model¹¹, reaffirming the notion that land prices in resource rich, low population-density Latin America will rise in relation to wages during a period of market integration. In this paradigm, it is the landowners who will see the benefit from any rise in demand. Another argument is presented by Arroyo Abad (2013), who draws a link between inequality and external shocks in the value of land, work and terms of exchange.

¹⁰ For a complete overview, see Milanovic (2016)

¹¹ The Heckscher-Ohlin model proposes that traded commodities are bundles of factors. International commodity exchange, therefore, is *indirect factor arbitrage* in which otherwise immobile factors are transferred from locations where these factors are abundant to locations where they are scarce. For a fuller explanation and application of the model, see Leamer (1995).

The globalization argument set forward by Williamson and Lindert (2001) roughly follows the theory of inequality proposed by Kuznets, albeit with a few caveats. Whilst it is true that, in the case of Chile, there is an increase in inequality during the *First Globalisation*, inequality proves to be a structural issue where the reductions appear only to be blips in an otherwise upward trajectory. This appears to be the main issue with linking the impact of globalisation and inequality. As we can see in Figure 1, inequality in Chile during the period under study does appear to follow the Kuznets projection. However, looking at the picture in the long run, a subsequent rise in inequality can be noted (Figure 5). As such, the connection between globalization and inequality in Chile's case becomes difficult to sustain. Similarly, Bertola and Ocampo highlight an issue with the *relative prices of factors* argument. For the supposition to hold true, they argue that the scarce factor, in this case labour, must have been well remunerated before the market integration. In the case of Chile, this is not the case. As we have touched upon, wages within the agricultural Hacienda system were low before Chile's significant aperture during the *First Globalisation*. It seems, then that in the case of Chile at least, an increasingly globalized economy is not sufficient in explaining rising inequality.

In their analysis of Latin America as a whole, Bértola and Ocampo (2010) attempt to marry these two approaches to studying inequality. They focus on the interaction between international markets and internal institutional structures, using the labour market to analyse growth and inequality. They find that the level of inequality in each nation will depend on how their internal institutions respond to external fluctuations. In the case of Chile, they argue that “*the monopoly of control of the landowners and the lack of power of the peasants places us in a situation of high structural inequality*” (Bértola and Ocampo 2010, p. 130). As demand rises through increased international participation, this inequality is reinforced. Rodriguez-Weber (2014, 2015) offers a more detailed study of how this dynamic was observed in Chile. He argues that an increase in demand, when experienced through the prism of the *Hacienda* model, leads to an increase in revenue for the landowner but no increase in the wages or living conditions of the worker. This is because, while the value of land increased, the “*obligations of the inquilinos*”¹² only increased as their rights were reduced (Rodriguez-Weber 2015b p.10). He attributes this to the strict hierarchical structure in place in these enclosed economic units. As a result of this dynamic, increased demand inevitably leads to

¹² *inquilino* here refers to the worker/tenant in the Hacienda system. They usually had to work in exchange for being granted some land that they and their family were able to live on. This meant that real wage increases were avoided by landowners (Bulmer-Thomas 1994, p. 97)

an increase in inequality. As the landowners became ever wealthier on the back of increasing global demand, the lot of the *inquilino* remained unchanged. Similarly, he suggests that the structure of the mining sector also served to entrench existing inequalities. He describes it as an industry “*for the few*” in which the hunt for profitable mining deposits is comparable to playing the lottery (Rodriguez-Weber 2015b p.54).

It must be noted that during the second half of this period (1873-1891), according to the estimates of Bértola and Rodriguez-Weber (2009), inequality falls. Rodriguez-Weber attributes this, albeit temporary, drop in inequality to an economic crisis that largely affects the wealthiest sections of society and to the mass migrations instigated by Chile’s territorial expansions during this decade. The increased availability of land and demand for workers means that workers’ wages relative to land prices rise during this period. As a result of the territorial expansion, the land/labour ratio increased by as much as 30% (Rodriguez-Weber 2015b, p. 11), leading to a decrease in income inequality. Another possible reason for the reduction in inequality offered by Cariola and Sunkel (1982) is related to the mining boom of the 1860s. They argue that the labour intensive mining sector offered relatively high wages, especially in comparison to the previously dominant agricultural sector. This, in turn, led to increased demand and region-specific *linkage* in the northern part of the country and, while it reduced income inequality in the short-term, it helps to explain the historically high regional inequality in Chile (Badia Miro 2013). Baten and Llorca-Jaña (2020) largely coincide with Rodriguez-Weber’s findings regarding the high levels of inequality present during the period under investigation (p. 27). However, they also stress the importance of the regional dimension when evaluating historic inequality in Chile. They examine the regional variance of immigration and find that regions with more Northern European immigrants tended to perform better in terms of numeracy (p. 27). This suggests another type of inequality altogether, one drawn along ethnic or cultural lines.

While this key interaction between international commodity markets and internal institutions appears to mostly explain the evolution of inequality in Chile, there is an additional element, conspicuous by its absence, that requires our attention when analysing the dynamics at play in Chile’s economic structure. The state doesn’t appear as an active agent in this process of rising demand and rising inequality. I would like to look at the role of the state during the period under investigation and analyse how it interacts with the social dynamic explored by Rodriguez-Weber (2014) and the possible relationship that this may have with inequality in Chile.

2.2. State capacities and inequality

The state, at least in theory, has historically been considered to be the arbiter of property and wealth. Hobbes considered the state to be the only possible distributor of goods (2018, p. 319) Another theorist of the state, Montesquieu commented that “... *in democracy(,) real equality is the soul of the State*” (2007, p. 57). Several contemporary academics have also attempted to draw a parallel between the state and equality. Cardenas (2010) argues that an unequal society will contribute to weaker state capacities. He also demonstrates that the factor most positively correlated with state capacity, measured by tax revenues in his estimations, is income equality. “*Higher economic inequality seems to partially undermine the effects of political democratization on the incentives to invest in state capacity.*” (Cardenas 2010 p. 41). There appears to be a vicious circle at play in this dynamic. High income inequality enables governments to lower their investment in state capacities. Subsequently, the lack of said state capacities will inevitably have an adverse effect on income equality in the long run. Centeno (2009) argues that low extractive capability in Latin America has historically contributed to the high inequality observed throughout the region (p. 14). He argues that weak state capacities, especially at a regional level, have led to an under-provision of services for vulnerable sectors (p. 25). He also touches upon the potential for a vicious cycle to emerge in highly unequal societies, arguing that it is often in certain groups’ interests to maintain the state in a weakened or subordinate condition. Centeno (2009, p. 26) describes how the infrastructure necessary for exporting primary resources is less intensive than in a more balanced economic system. In this way, he argues, there are less incentives for State-driven development in an export-led growth model.¹³

The extent to which the state as an economic agent influences inequality is an interesting debate. It is often accepted that redistribution through taxation and public spending i.e. big state can alleviate the issue of inequality. Lee (2005) analyses to what extent this applies in practise. He argues that democratic quality is the condition factor in the impact of state size on inequality. Size of state can affect inequality in both a positive and negative way. That relationship depends on how democratic

¹³ “*Esta pauta comercial particular puede contribuir a explicar la fragilidad del Estado. La infraestructura necesaria para vender materias primas al mundo es seguramente menos intensiva y extensa que la requerida por una cartera comercial equilibrada. Además, la facilidad con la que pueden obtenerse rentas mediante la venta de productos básicos también elimina incentivos fundamentales para el desarrollo del Estado y genera unas condiciones posiblemente disfuncionales para el desarrollo posterior (es la denominada "maldición de los recursos").*” (Centeno 2009, p. 26)

institutions are. An overdeveloped state apparatus, for example, can skew the public/private sector balance and lead to an underdeveloped private and informal sector. Similarly, public sector development coupled with cronyism and favouritism can increase inequality in limited democracies. Lee concludes that states can only address inequality if institutionalised democracy provides subordinate classes with representation and, as such, a better chance of redistribution. Inequality in Chile was comparatively high in 1850. However, can the state be considered capable at the beginning of the period under question?

3. Historical context

At the beginning of the period under investigation, Chile's economic structure retains elements of pre-capitalism and is very much conditioned by its colonial legacy (Holt 1992). In the decades preceding 1850, there was a consolidation of executive power by the state and a strengthening of the socio-economic stranglehold that the dominant classes maintained over the rest of the nation (Bethell 1991). Chile's economy pre-1850 had very few connections to international markets (Saylor 2012, p. 307). However, it did manage to access international wheat and copper markets with some success (Rodriguez-Weber 2014, 2015). The landed elite dominated the government and other apparatus of the state and key politicians were also amongst the richest members of society.¹⁴ Bethell (1991) argues that the economic growth propelled by Chile's emerging exports enabled the state to consolidate its executive power and strengthen of the socio-economic dominance of the Central valley elite. However, as the importance of international trade increased, an industrial (mostly mining) elite in the northernmost territories and the southern agricultural land-owners emerged as rival economic groups in Chilean society (Pegger-Roman 1991). Tensions between these three groups would go on to shape the direction of Chile's political and economic destiny throughout the following period, culminating in Balmaceda's failed attempt at reform in 1891. The political turmoil of this year represents a key turning point in Chile's history. In fact many Chilean historians see it as the key moment in Chile's history since independence (Bowman and Wallerstein 1982, Pegger-Roman 1991).

¹⁴ Saylor (2012) comments on the personal wealth of Chile's then President Manuel Montt and one of his Interior Ministers, Francisco Javier Ovalle (p. 307)

Bethell (1987) also refers to the political dominance of certain families, namely Errazuriz, Bulmes and Montt, and how this contributes to the widening gap between rich and poor in Chile during the 1850s and 1860s.

The Industrial Revolution in Western Europe brought with it an increase in demand for primary resources and Chile found itself in a privileged position to take advantage of this. The increase in demand was felt in both Chile's agrarian sector and its mineral mining industry. As such, this period is dominated by a series of commodity booms (Bulmer-Thomas 1994). New markets in California and Australia contributed to the export of large quantities of wheat during the 1860s. This increased the importance of the southern regions, which had the most existing commercialised wheat production around 1850 (Saylor 2012). Meanwhile, a mining boom centred around silver and copper exports flourished in the north (Rodriguez-Weber 2015, p.149). Due to its "*early institutional consolidation*" (Rodriguez-Weber 2014 p.175) and the existence of mining stations, Chile quickly became the leading worldwide copper source until 1883 (Saylor 2012). It is important to reference here Chile's importance in the copper market pre-1850. Between 1830 and 1839, Chile already accounted for 35% of the United Kingdom's total copper imports (Llorca-Jaña 2017, p. 33). The early development of the copper mining sector in Chile arguably lay the foundations for expansion and growth in the latter part of the 19th Century, stimulating institutional and industrial development (Llorca-Jaña 2017, pp. 44-50).

This period is referred to by many economists as the *First Globalization* due to the enormous increase in international trade. Within this context, following the Hecksler-Ohlin model, it is to be assumed that resource-abundant regions like Chile will benefit from entering the international market and its revenues duly increased (Table 2). During the early 1870s, the commodities bubble deflated somewhat and Chile would briefly suffer an economic downturn (Rodriguez-Weber 2014, 2015). However, Chile also managed to wage two successful military campaigns during this decade that would have an enormous impact on its future; *The Occupation of the Araucanía* and *The War of the Pacific*. Both conflicts brought about massive territorial gains for the Chilean State and would have a significant impact on the direction of the country's economic development. The crisis of the early 1870s proved to be short-lived and was followed by a surge in the market for nitrates, which Chile would again greatly benefit from during the late 1870s and the 1880s thanks to its almost complete monopoly of the market after the War of the Pacific. Chile now found itself in possession of two new resource rich and as yet unexploited regions; prime agriculture land to the south and untapped mining opportunities to the north. According to Rodriguez-Weber (2015), Chile's GDP per capita increases significantly as a result of its increased activity in international markets during this period. Notable advances were also made in infrastructure and education (Sofier 2009, Rodriguez-

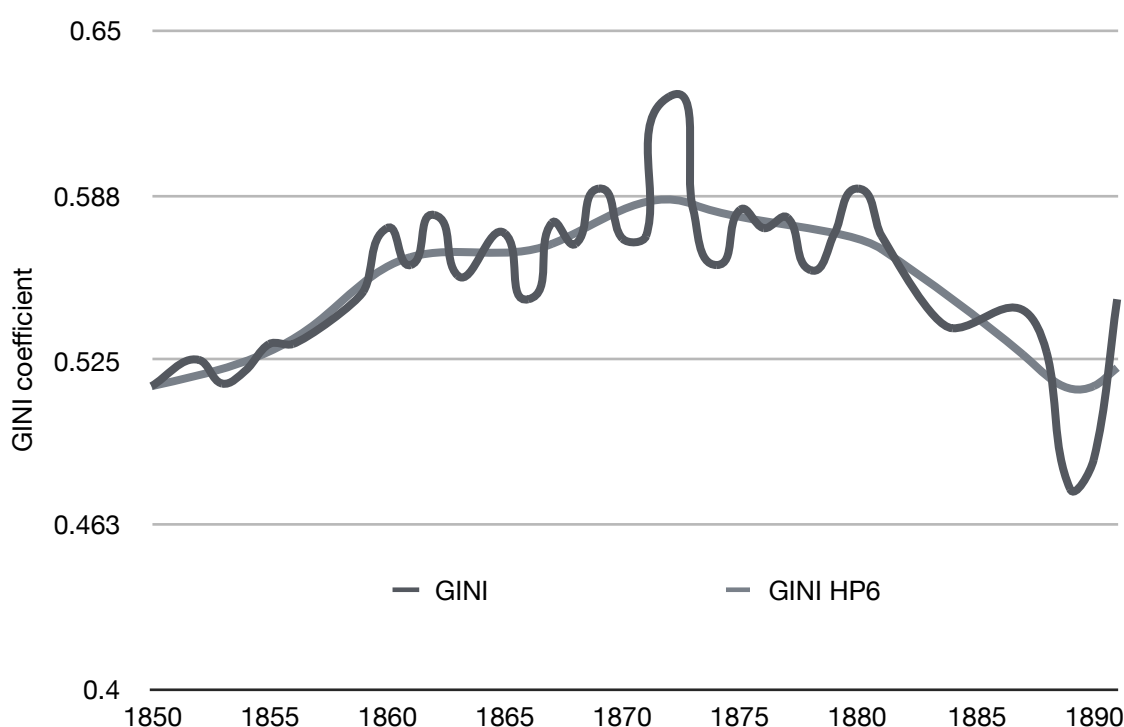
Weber 2014) and Chile appeared perfectly positioned as an emerging economic power as the end of the 19th Century approached.

However, the question remains as to whether Chile really made the most of these advances or whether an opportunity was missed. As mentioned, the nitrate industry grew in global importance and Chile's was a major player on the world stage. Propelled by the revenues generated by this sector, Chile experienced incredible economic growth during the later 1870s. However, regional and income inequality persisted within the nation and the Balmaceda government's attempts at financial and economic reform catastrophically failed. The extent to which the state was able to take advantage of the upsurge in economic activity would heavily condition Chile's development over the following century, for better and for worse.

4. Analysis of the inequality and State Capacities between 1850 and 1891

4.1. Inequality data

Figure 1. GINI index between 1850 and 1891.

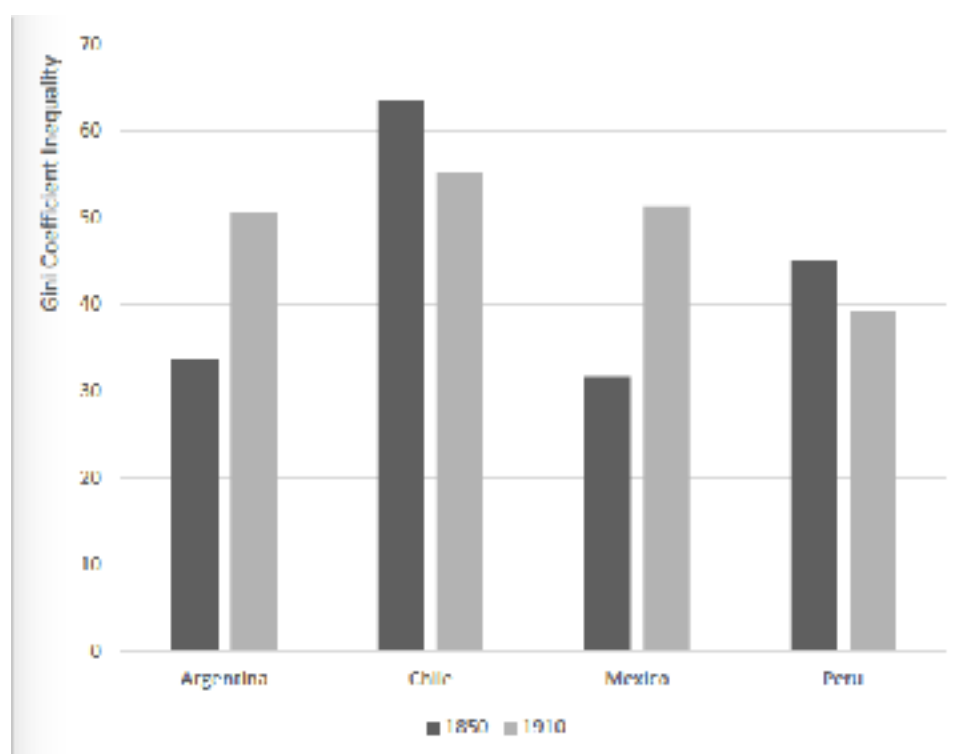


Source: Rodriguez-Weber (2014)¹⁵

¹⁵ GINI HP6 refers to the estimated tendency applied through the Hodrick-Prescott filter. For a full explanation, see Rodriguez-Weber (2014)

Looking at the evolution of the GINI coefficient throughout this period (Figure 1), we can observe a clear increase in the years leading up to 1873 followed by a reduction between 1873 and 1891. It is, however, important to note that Chile begins this period with comparatively high inequality and that subsequent fluctuations must be understood in this light. Although Williamson (2009) argues for a link between the *First Globalization* and a rise in inequality in Latin America on the whole, his data confirms Chile's position as a global leader. Not only is the GINI coefficient the highest among other estimates for the 19th Century but Chile's extraction inequality ratio is also highest (Table 2). What does this tell us? Chile is about as unequal as it can possibly be, considering the relative wealth of the nation at the time. Similarly, Baten and Llorca Jaña (2020), in the context of Latin America, place Chile first among the most unequal countries (Figure 2). Although inequality is reduced between 1850 and 1910, it remains the highest among the four nations shown.

Figure 2. GINI Coefficient Inequality in selected Latin American countries (1850 and 1910)



Source: Baten and Llorca-Jaña 2020.¹⁶

The Inequality Possibility Frontier (IPF), developed by Milanovic, Lindert and Williamson (2007), establishes the maximum amount that the “elites” of any given society can extract. The examples of England & Wales and The Netherlands at the start of the 19th Century represent the two wealthiest

¹⁶ Their source given as van Zanden et. al. (2014)

societies in the sample. Consequently, their IPFs are higher than that of Chile in 1861. However, the fact that, in Chile's case, the inequality extraction ratio¹⁷ is so comparatively high (Table 1) demonstrates the extent of the inequality and wealth concentration prevalent in Chilean society at the time. This brings into question the relationship between these “elites” and the State and its institutions. Is the state responsible for this ratio being so high? Is it permissive in the extraction? Or is it irrelevant? As I have stated, this period in Chile’s history contains expansionary conflicts, economic booms and busts and culminates in civil war. Whilst all of these events are relevant to the evolution of inequality, I will focus on their impact in the context of the development of state capacities and how this can contribute to the debate around inequality in Chile.

Table 1. GINI and Inequality extraction ratio.

	GINI	Maximum feasible GINI (IPF)	Inequality extraction ratio (%)
England & Wales 1801	51.5	85	60.6
Bihar (India) 1807	33.5	43.7	76.7
Netherlands 1808	57	83.3	68.5
Naples 1811	28.4	52.9	53.7
Chile 1861	63.7	76.8	83
Brazil 1872	43.3	58.3	74.2
Peru 1876	42.2	54	78.1
Java 1880	39.7	54.6	72.8
China 1880	24.5	44.4	55.2
Japan 1886	39.5	67.2	58.8

Source: Williamson (2009)

4.2. State Capacities in Chile

Chile is considered by Saylor (2012) to be Latin America’s most accomplished “*state builder*” (p. 302). In the period leading up to 1850, the Chilean state does appear to be, at the very least, a stable presence, especially compared to some of its neighbours (Rodriguez-Weber, 2015, p.59, Bertola and Ocampo, 2013, p. 115). Violent conflicts and political instability are the principal negative factors in

¹⁷ By this, the authors refer to the actual GINI as a percentage of the maximum feasible GINI.

economic development in most Latin American countries during this period (Bértola and Ocampo, 2013). As such, Chile's internal political and military stability can be seen as a strong advantage in comparison to its neighbours (Collier, 1977). Its only major conflict during this period is an external war, *The War of the Pacific*, which, if anything, only serves to benefit Chile from an economic standpoint.¹⁸ Bertola and Ocampo (2013, p. 115) actually point to the war as a demonstration of the strength of Chile's state during this period. The state's willingness and ability to defend its economic interests with an armed expansionist conflict suggests a confidence in its capacity to provide a stable environment for enterprise to thrive.

Weberian state capacity, encapsulated in the famous quote "*Monopoly of violence*" (2012, p. 83) measures the extent to which the state can be classified as the sole proprietor of violence. He argued that this condition was key to the development of the modern nation state. In Chile's case, certainly in comparison to other Latin American nations at the time, the state does appear to largely occupy this position (Acemoglu et al. 2015, Bertola and Ocampo 2013, Thies 2005). In the period preceding 1850, Bethell (1991) argues that the state regularly resorted to tactics of repression and control in order to achieve stability. Between the rebellion of 1851¹⁹ and the civil war of 1891²⁰, the Chilean state can be considered as the sole proprietor of violence. While these external conflicts contributed to the strengthening of the state's apparatus, other Latin American states were being weakened by their own civil wars (Bertola and Ocampo, 2013).

As mentioned previously, there are several ways in which academics have attempted to measure state capacities and one such way, famously posited by Tilly (1990) is related to the state's ability to extract revenue in order to wage war. In this way, he connects the "*thirst for military success*" (Besley and Persson, 2010, p. 3) with the establishment of the modern nation state. Tilly (1990) argued that war preparation was a key part of the formation of European nations. His argument is that rulers gradually built strong extractive institutions and, as such, developed the first modern states. War, according to this paradigm can be the basis for state-building. However, this

¹⁸ Chile also engages in an internal conflict of sorts in the "Pacificación" of the Araucanía during this period. However, as I will go on to discuss, this conflict resulted in territorial expansion and according to various academics served to further demonstrate the Chilean state's capability (Saylor 2012 p.307, Rodriguez-Weber 2014)

¹⁹ Saylor (2012) gives a fuller account of the dynamics leading up to this rebellion. He explains how the emerging export-led mining and agricultural sector attempted to alter the institutional bias favouring the central valley and Valparaíso elite (pp. 313-314)

²⁰ Pregger Roman (1991) offers a detailed study of the events leading up to the civil war and of the consequences therein.

argument is refuted in the case of Latin America by Centeno (2002) He argues that warfare in Latin America only led to “*blood and debt and not much more*” (p. 127). Thies (2005) backs up the point that the extractive capacity of a State is not necessarily increased post-war. Specifically in the plight of Chile, the idea that war increased state capacities pre-1850 is rejected by Saylor (2012). In the case of the *War of the Pacific*, whilst it undoubtedly increased Chile’s potential revenues, it didn’t affect the state’s power to extract revenues through taxation. Furthermore, as this war was not a response to geographical hostility, it did not contribute to major state building (Saylor, 2012, p. 308). Saylor argues that the *War of the Pacific* only contributed to the development of state capacities in so far as it enabled Chile to further benefit from the nitrate boom. However, Thies (2005) does suggest that, after minor territorial wars, national discourse was used by the Chilean state to fuel a rivalry with Argentina and establish nationalism as a force. He argues that this was mainly achieved through education and the national press (p. 454).

Whether or not it is related to war, most authors, when studying state capacities, focus on the state’s ability to extract revenue through taxation. Dincecco and Katz (2014) argue that a state is only as capable as its ability to generate revenue. Related to its extractive capability, another key element in measuring the state’s capacity is to evaluate its ability to implement its project or policy (Besley and Persson, 2010). If the state cannot deliver on its objectives, there is a question as to whether it can truly be said to function as a sovereign state (Hobbes, 2018, p. 404). Does the Chilean state display the power and authority necessary to assert itself over the various influential economic and social groups during this period? Saylor (2012) draws a link between commodity booms and the expansion of state capacity. Does this dynamic play out in the case of Chile? To what extent does Chile harness the dramatic economic growth it experiences during the second half of the 19th Century to strengthen its state capacities? In the following section I will attempt to evaluate Chile’s state capacity as measured through its extractive capability and its ability to implement policy and expand its influence over Chilean society.

4. 3. The State, extractive capacity and the nitrate boom

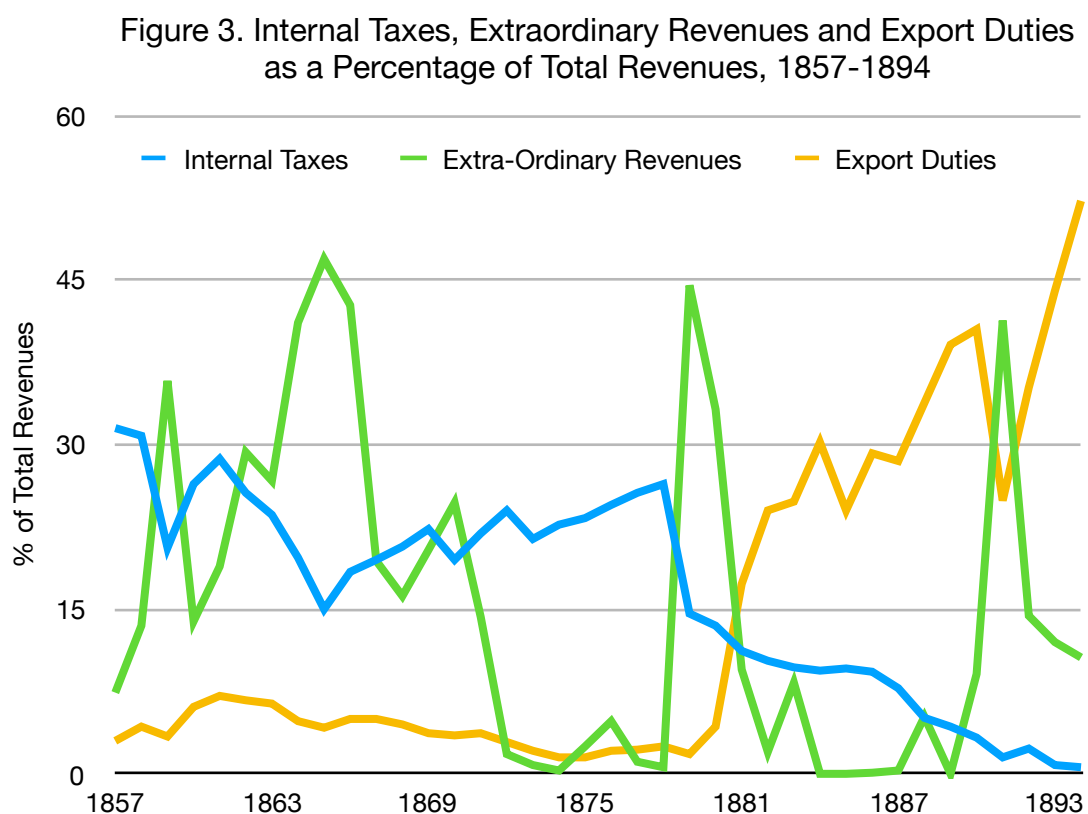
In the period building up to 1850, the Chilean State can be said to represent an unwillingness to adapt and reform (Mayo 1981). Successive conservative governments had strengthened the position of the state as an authority during the 1830s and 1840s (Collier 1977). As for fiscal policy, following independence, the state largely depended on the indigenous tribute and on indirect

taxation on imports (López Taverne 2014). However, as we move into the 1850s, the mining industry continues to grow and the economic groups involved in their extraction begin to lobby the State for infrastructural improvements (Mayo 1981). The resistance of the Montt government to provide the British-backed mining sector with the conditions it requires to flourish mean that these groups act at odds with one another and the mining sector can be said to provide its own infrastructure in the shape of transport and technological advancements (Saylor 2012, Pregger-Roman 1991). Saylor (2012) argues that, although government policy initially favoured the landed elites of the central valley, “*politically-marginalized exporters*” (p. 3) would successfully press the government into action after the armed uprisings of 1851. He gives the example of the railroad policy. Initially, the policy “*disproportionately benefit(ed) the ruling coalition members*” (p. 8) in the central valley and the port of Valparaíso, but, after significant pressure, unmediated institutions were built in order to wrestle back control of local affairs. He believes that, in this way, the mining industry, mostly copper at this stage, along with the burgeoning wheat exportation sector in the south, forced the government into improving infrastructure and expanding their bureaucratic reach in order to suppress opposition.

During the *War of the Pacific*, these warring political factions largely united and contributed to a successful war effort that would theoretically benefit them all. At the beginning of the conflict, in the year 1879, “Extra-ordinary revenues” amounted to 44.5% of total revenues, rising from a meagre 0.6% the previous year (Bowman and Wallerstein 1982). Here we have a demonstration of the Chilean state’s impressive power to generate tax revenue from its population in times of external armed conflict. However, the positive impact on Chile’s wider society of the successful military campaign and the nitrate industry it protected and allowed to flourish is slightly more questionable. The major beneficiaries of the upsurge in nitrate extraction are the mining companies themselves, dominated as they were by foreign (mostly British) capital (Pregger-Roman 1991, Mayo 1981). That is not to say that Chile didn’t manage to generate a significant proportion of its revenue through taxation of the nitrate sector. The State achieved this by offering recognition of pre-war property rights, enabling existing mining companies to continue their activity in the newly incorporated territories (Gallo 2009). Furthermore, given the “*virtual monopoly enjoyed by Chile, the nitrate companies were able pass the tax on to consumers relatively easily*” (Bulmer-Thomas 1994, p. 117). From 1880 onwards, export duties began to represent a greater and greater share of Chile’s revenues. Contributing to a negligible 1.8% of total revenues in 1879, they rose to an

incredible 52.2% in 1894 (Bowman, Wallerstein 1982). By this measure, the *War of the Pacific* can be said to increase the state's capacity to collect public revenues (Sabaté and Peres-Cajías 2020).

This shift in how the state generates revenue through taxation demonstrates how, during the nitrate boom, the state was able to dismantle some of its previously essential structures. As Centeno (1997, 2009) highlights, the state is content to generate revenue through taxing the mining sector and therefore no longer needs to explore alternative, more sustainable approaches to wealth generation. Furthermore, he specifically links the “*sub-utilization of direct taxes*”²¹ with high inequality in Latin America (2009, p.14). After the *War of the Pacific*, all factions of the Chilean ruling classes agreed that “*part of the nitrate wealth should be distributed simply through reductions in domestic taxes*” (Bowman and Wallerstein, 1982, p. 454). Mining sectors, especially, tend to exist as enclaves (Gallo 2009, Saylor 2012). As such, they do not necessarily demand or encourage the development of a capable state. Whilst the industry is thriving and the state can continue to generate revenue, there doesn't appear to be a problem. In the terms laid out by Saylor, the Chilean state can lean on the mining sector for revenue because mineral exporters, largely foreign, were “*excluded from the ruling coalition*” (Saylor, 2012, p. 310).



Source: Estimates of Mamalakis as presented in Bowman and Wallerstein (1982).

²¹ Translation my own

Chile, as we have seen, demonstrates its ability to extract taxation in times of national emergency (Figure 3)²². However, its inability, or unwillingness, to consistently tax its own citizens (demonstrated in Figure 3 by Internal Taxes) once the nitrate industry begins to dominate the economy is evident. Sabaté and Peres-Cajías (2020) demonstrate how legislative acts and ministerial decrees related to taxes decrease after *The War of the Pacific* (p. 35). The state's subsequent dependence on export duties brings into question its ability to effectively generate revenues through sustainable taxation. Bowman and Wallerstein (1982) argue that successive regimes, including the Balmaceda administration, contributed to the dismantling of the internal tax system, making the Chilean state essentially dependent on export duties, the vast majority derived from the nitrate industry, for its revenue. They show how internal taxes as a proportion of total revenue fell from 31.5% in 1857 to 1.5% in 1891 and as low as 0.3% in 1898²³ (p. 445). Sabaté and Peres-Cajías (2020) also comment that Chile's fiscal policy after the War of the Pacific resulted in *"the near disappearance of direct taxes from the central government's accounts"* (p. 37). In this regard, we can observe a secondary issue relating to Chile's *"Dutch Disease"*²⁴ problem. Not only does it make the national economy vulnerable to external market shocks, it also means that any such shock will disproportionately affect their ability to generate revenue. As such, any market fluctuations will be doubly impactful upon Chile's national economy (Blakemore, 1979). Bulmer-Thomas (1994) examines the weakness of the export-led growth model to external shocks. He argues that Chile's economy suffers in the long run due to its *"commodity concentration"* and *"lack of geographical diversification"* (p. 80). Additionally, Chile's increasing dependence on the nitrate industry for revenue comes at the cost of both the copper and silver industries (Bulmer-Thomas 1994, p. 63) and grants undue power to those groups representing its interests (Pregger Roman 1991).

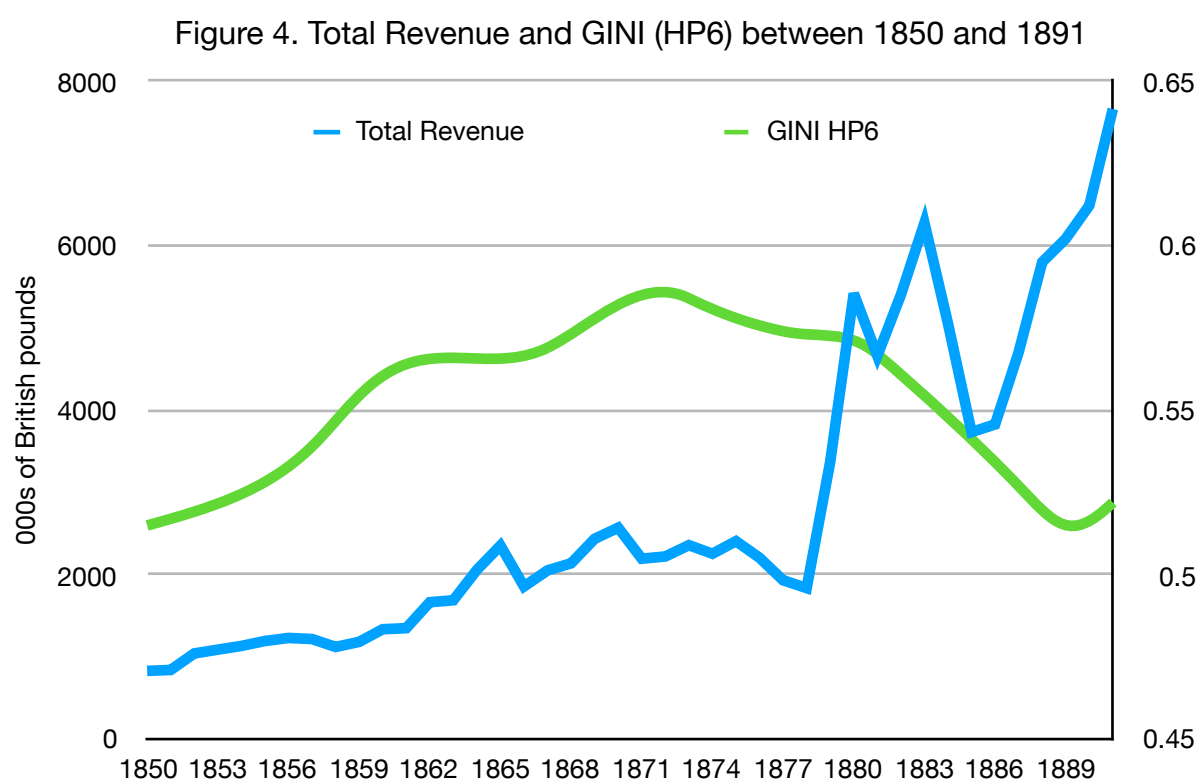
The Balmaceda government's attempts to introduce protectionist measures in order to access the fruits of the mining industry and their aim for public investment to galvanize a programme of industrialisation were met with stern resistance and their attempts to put the state at the forefront of

²² All three spikes in Extra-Ordinary revenues represent armed conflicts. The first is related to the military campaigns waged against the indigenous population who inhabited large parts of the southern territory of current-day Chile. The second represents the War of the Pacific waged between Chile, Bolivia and Peru over access to the nitrate deposits in the Atacama desert. The third coincides with the civil unrest following the collapse of the Balmaceda administration.

²³ Estimates of Mamalakis as shown in Bowman and Wallerstein (1982) p. 445

²⁴ Dutch Disease is a term coined by the magazine *The Economist* in 1977 referring to the effect on the economy of The Netherlands following the discovery of gas reserves in 1959. The term refers to the potential negative impact that an increase in the economic development of a specific sector can have on other sectors. (<https://www.economist.com/the-economist-explains/2014/11/05/what-dutch-disease-is-and-why-its-bad>)

the national economic project were ultimately stymied (Pregger-Roman 1991). A union of the liberal mining sector and the conservative land-owners opposed the government's attempt at reforming the financial sector and impeded any pursuit of structural change. According to Pregger-Roman (1991), the power struggle leading up to the rebellion of 1891 demonstrates that the Chilean State was largely subordinate to exogenous factors. It failed to achieve sufficient autonomy and, as such, dominant factions coalesced and, with the aid of external forces, managed to assert their authority over Chilean society. According to the earliest conceptions of the modern state as outlined by Hobbes, this inability to implement its policy or project renders the state essentially unfit for purpose (2018, pp. 251, 275, 319, 404). Similarly, by Dincecco's (2015) criteria, the Chilean state could be seen to lack "*productive capacity*"²⁵, or the ability to effectively channel public funds (p. 901). Following this line of analysis, it could be suggested that the Chilean state failed to fully capitalise on its substantial economic growth in order to develop an autonomous, strong and healthy state in the 19th Century.



Source: Total Revenue is derived from Mamalakis' estimates as presented in Bowman and Wallerstein (1982). The GINI is an estimate developed by Rodriguez-Weber 2014.

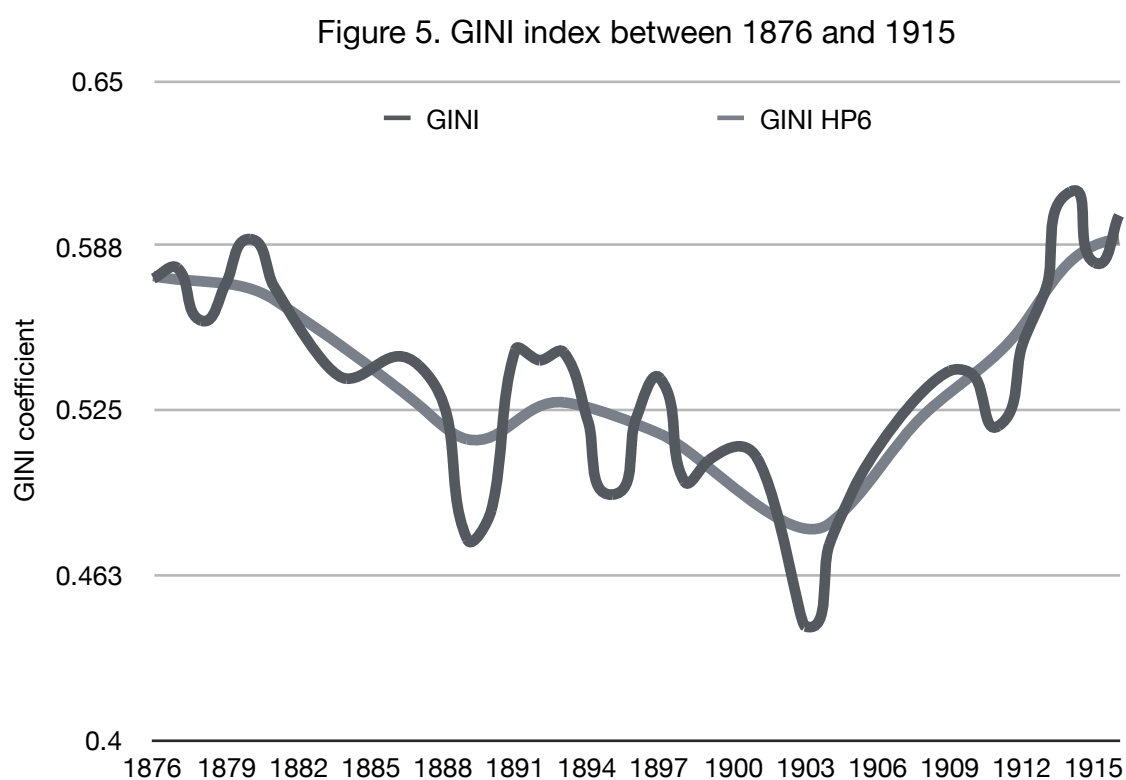
Touching on the Milanovic et al. (2007) conception of the Inequality Possibility Frontier, the ability of Chile's elites to close ranks and hinder the government's attempt at reform and structural change

²⁵ He takes the definition from Besley and Persson (2011)

seems to suggest that Chile's economic growth during this period only serves to reinforce the existing status quo and the extraction ratio of the economic elites remains significantly high. The disproportionate influence of the mining sector on economic activity increases the social power of the groups involved in this sector thereby increasing their capacity for extraction. This would mean that any growth in this period would negatively impact on inequality. At the same time, the crutch of the mining revenues enabled the government to descend into oligarchy and cronyism, in which their focus was the protection of their and their allies' interests and the result was severe mismanagement of Chile's budget and economic strategy. This would appear to endorse the classical view amongst Chilean political historians, as explained in Bowman and Wallerstein (1982), that the failure of the Balmaceda project would condemn Chile to decades of oligarchical lethargy. They point to parallels between the parliamentary oligarchs and the *hacienda* model long-favoured by their contemporaries; short-sighted, inefficient and profligate. The dismantling of the executive wing of government and the reduction of the state's economic role seems to be an example of a state actively removing its capacities to effectively govern. Returning to Cardenas' (2010) observation, we can see how high inequality, in this instance, could have created a vicious cycle, weakening the state and laying the foundations for cronyism and corruption. The laissez-faire approach protected the interests of the oligarchical elite but paralysed the state as an active economic agent for years to come. Rodriguez-Weber (2015) argues that the dependence of the Chilean state on exports contributed heavily to a lack of internal investment, reducing the possibility of long-term positive *linkage*.

On the other hand, Bowman and Wallerstein's (1982) own research appears to show that the government's spending on industry during the period following the civil war of 1891 began to recover a short few years later and reached the levels it had done during the Balmaceda regime by the beginning of the 20th Century (p. 438). It is also important to note that this increasing dependency on export duties for tax generation occurs after the initial sharp rise in inequality observed by Rodriguez-Weber (2014). As previously mentioned, a reduction in inequality between 1873 and 1891 can be observed after the increase between 1850 and 1873 (Figure 5). Taking into account the institutional dynamic explained by Rodriguez-Weber, it follows that, during an economic downturn and a time of territorial expansion, workers wages will not necessarily suffer relative to land prices. As such, a reduction in inequality during a period of crisis makes sense. During the economic crisis of 1873, the wealthy appear to bear most of the brunt and, in the subsequent boom years, society initially appears to benefit as a whole. However, another possible

reason that we see a reduction in inequality post-1873 may be due to the fact that, during these years, we see the fruits of some of the successes of Chile's state building during the 1850s and 1860s. As I have mentioned, after the commodity booms during these years, significant increase in spending on infrastructure was observed (Saylor 2012, Rodriguez-Weber 2014, 2015). This may suggest a positive relationship between increased State Capacities and improved equality. The improved State Capacities as a result of the commodity booms (Saylor, 2012) preceding the economic downturn of the 1870s could have been a contributing factor in the reduction in inequality experienced during the subsequent decades. While causation is difficult to establish, looking at Figure 4, there does appear to be an inverse relationship between revenue and inequality (measured by the GINI index). As revenue rises, especially in the period after 1877, there does appear to be a reduction in inequality. Furthermore, it is during this period of increased equality that the state can be said to be dominant in its relationship with the mining sector (Gallo, 2009). As such, the state manages to expand its *extractive capacity* "in spite of substantial opposition from the nitrate producers" (Gallo, 2009, p. 170).



Source: GINI is taken from Rodriguez-Weber's own estimations (Rodriguez-Weber 2014)

However, the country's subsequent dramatic upturn in inequality is equally significant and instructive (Figure 5). The increasingly equitable state of affairs during the final years of the 19th Century is short lived and precedes another sharp spike in inequality at the start of the 20th Century.

Instead of observing the tendency we would expect in a Kuznets-type curve, Chile's inequality rises higher than ever after the earlier reduction. The fact that the wealthiest sections of society so easily recovered their relative economic dominance in Chilean society after the crisis of the 1870s, culminating in the "*oligarchical republic*" (Rodriguez-Weber 2014) of the early 20th Century, brings into question the validity and meaningfulness of the reduction in inequality experienced at the end of the 19th Century. Here a further look at Chile's state capacities may allow us to better understand the tendency observed.

The previously discussed dismantling of the internal taxing structure can only exacerbate Chile's vulnerability to external shocks (Centeno, 2009) and help lay the foundations for this drastic upsurge in wealth inequality that occurs at the beginning of the following century. As the mining industry gradually moved into the hands of Chileans (as opposed to foreign, largely British enterprise), tax revenues from the mining sector began to decline (Rodriguez-Weber, 2015, p.19). Here we again observe the consequences of Chile's dependence on one sector for its tax revenues. Unlike when the industry was mainly under foreign ownership, there is now a reluctance to tax local enterprise as heavily (Bowman and Wallerstein, 1982, p. 454). Cardenas (2010) states that fiscal state capacity is essential for the state to "*be able to deliver public goods or to engage in redistribution between different groups in society*" (p.2). Furthermore, he argues that concentrated wealth and political influence dis-incentivise investment in state capacities as they can potentially contribute to a redressing of the balance between different social groups (Cardenas 2010). The dominant group is reluctant to invest in state capacities, thereby maintaining the socioeconomic status quo (Acemoglu, Robinson et al., 2001). Extractive elites have no interest in infrastructure investment as their favoured economic model favours an inflexible hierarchical society (Engerman and Sokoloff, 1997, 2000). Centeno (2009) also touches upon this potential for a vicious cycle to emerge in highly unequal societies, arguing that it is often in certain groups' interests to maintain the state in a weakened or subordinate condition. In this way, these groups can almost bypass the state entirely in the knowledge that they, as the primary wealth generators, hold the true power in their dynamic with the state. This dynamic may help to explain Chile's long standing issues with wealth concentration. This point is especially relevant in the context of the debate surrounding tax revenues. Whilst, as we will see, tax revenues continue to rise after the shift in focus to external taxes²⁶, the extremely low proportion of tax provided by internal or domestic taxes may help to

²⁶ by this I refer to "Export and Import duties" as demonstrated in Bowman and Wallerstein 1982 pp. 443-444

reinforce the power of wealthy groups and establish a pattern of extreme wealth concentration that continues to be observed in Chile to this day.

It is important here to draw a distinction between the state and these so-called economic elites. In 19th Century Chile they are, of course, very closely linked²⁷ but they are crucially distinct groups with different agendas and different priorities. Whilst their interests may often overlap, they are not one and the same (Pregger Roman, 1991). In this regard, there is an interesting debate to be had about who holds the power. Cardenas (2010, p. 14) explores the idea of de facto power. Even in apparently democratic regimes, power is often held by certain social groups due to their social and/or economic status. As I have mentioned, the Chilean state's relationship with economic elites is tumultuous during this period and several authors (Pregger Roman, 1991, Bowman and Wallerstein, 1982) point to the failure of the Balmaceda regime to assert itself with its proposed economic project as evidence of the state's subordination to these powerful economic elites, bringing into question the state's capacity to effectively govern. Centeno (2009) also explores the differences between power and influence and how they apply to the Chilean state and economic elites during this period.²⁸ Blakemore (1979) argues that, whilst the nitrate boom acted as "*a vital source of modernisation and transformation of the whole economy*"²⁹ (p. 26), the way in which Chile responded to the boom frustrated any chance of the "*dominant classes*" facing up to their responsibilities to the country (p. 26). By this he means that the soaring revenues provided by the *War of the Pacific* and nitrate industry enabled "*the Chilean oligarchy*" (p. 26) to delay significant overhaul of the social structure of the country. Furthermore, Centeno (1997) argues that the incorporation of nitrate territories allowed the Chilean state to expand without having to "*confront the rampant inequality*" (p. 1587) within.

²⁷ Several authors have closely examined the close ties between Chile's economic and political elites both in the present day and over the course of its history. See; [Matamala](#) (2015), Mönckeberg (2001), Pizarro (2005)

²⁸ "*Las diferencias en cuanto a poder e influencias también significan que aquellos de quienes el Estado depende para recaudar sus ingresos son los que más fácilmente pueden escapar del brazo del Estado y mejor pueden sustituir los roles tradicionales de este con la provision de servicios privados. De este modo, los ricos no solo pueden evadir el pago de impuestos, sino que también pueden evitar las consecuencias de tener un Estado débil por medio de una seguridad, una educación y una sanidad privatizadas*" (Centeno 2009, p. 26)

²⁹ Attributed to Mamalakis in *Growth and Structure* (p. 38) - own translation

4.4. Public spending, infrastructure and inequality

I have analysed the changing way in which the Chilean state generated revenue over this period and how this may have affected its capacity to assert itself as a redistributive force. However, does this theory play out when analysing the outlay of the Chilean state during this period? As I have previously indicated, there are several ways to examine state capacities, not just extractive capability. Another way is to observe the state's actions, namely how it spends the revenues it has managed to generate. While the Chilean government undoubtedly allowed itself to become dependent on the mining industry for its revenues, it must be stressed that Chile's revenues did increase dramatically over the period in question, especially during the 1880s (Table 2). Furthermore, the state did invest heavily in infrastructure following on from the commodity booms of this period (Bowman and Wallerstein 1982, Soifer 2009, Bertola and Ocampo 2010, Saylor 2012). The state's presence as a provider of public goods actually increases in many aspects throughout this period. As such, there is a strong argument to be made that the Chilean State can, in fact, be considered as increasingly capable during this period. High fiscal capacity is in general linked to improved infrastructure (Dincecco and Katz, 2014) and, as revenues soared post-1850, public expenditure also increased substantially, rising from £785,000 in 1850 to £7,526,000 in 1890 (Table 2). Accordingly, measured by expenditure alone, the Chilean State can be said to increase its capacity significantly.

Table 2. Revenue and Expenditure (£) between 1850 and 1890

Year	Revenue (£)	Expenditure (£)
1850	834,000	785,000
1860	1,340,000	1,367,000
1870	2,573,000	2,418,000
1880	5,419,000	3,567,000
1890	6,487,000	7,526,000

Source: Original estimations are of Mamalakis presented in Bowman and Wallerstein (1982 pp. 449-450)

In this vein, both Rodriguez-Weber (2014, 2015) and Saylor (2012) argue that the export boom led to an increase in state revenues and enabled a virtuous cycle to emerge in Chile's economic structure. Rodriguez-Weber does concede that the vast majority of state revenues are derived from

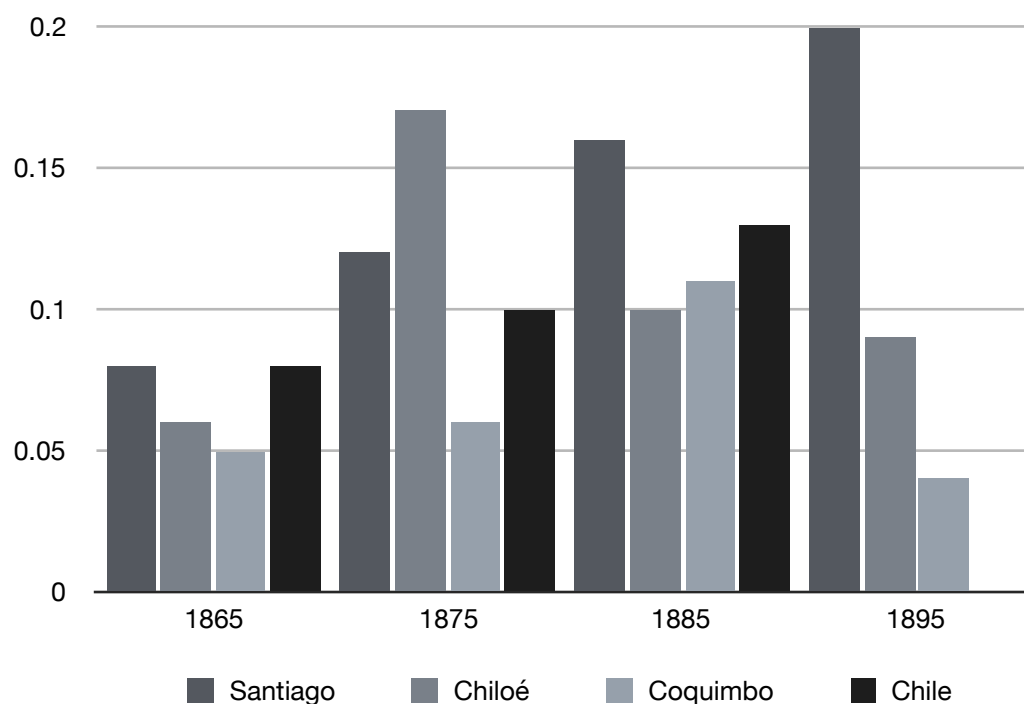
export duties but argues that the overall increase led to an improved investment in infrastructure, making Chile's economy "*more dynamic and open to foreign trade*" (Rodriguez Weber 2015b p. 9). Saylor (2012) coincides with the view that the commodity booms of this period contributed to a strengthening of Chile's state apparatus, both directly and indirectly. He argues that the threat of emerging economic groups gaining influence and economic power provoked the "*ruling coalition members*" to expand their state capacities (p. 306). However, while spending clearly increased during the period in question (Table 2), scholars disagree as to whether the nitrate boom was really *transformative* for the Chilean economy (Bulmer-Thomas 1994). As a way of verifying this claim, I will briefly analyse two ways in which the Chilean state can be said to have increased its presence during this period; bureaucracy and education. I will also attempt to examine the effect that this may have had on inequality.

4.4.1. Bureaucracy

According to Cardenas (2010, p. 19), a state's capacity to tax depends on previous investments, including its bureaucratic structure. "*Accumulated stock*" of state capacity determines maximum tax rate. Assuming that taxation is essential for any state-managed redistribution, this would suggest that a healthy bureaucratic presence is essential in combating inequality. Centeno (2009) claims that a state's capacity also depends on the "*personal*", largely referring to bureaucrats, and its "*information*", or its ability to gather information effectively through census and voting. As such, in analysing Chile's state capacity and its ability to provide public goods during this period, it is important to examine the development of its national bureaucracy. As far as the "*information*" is concerned, Chile's censuses are extremely detailed and complete in comparison to contemporary nations (Perez and Rodriguez Weber, 2012).

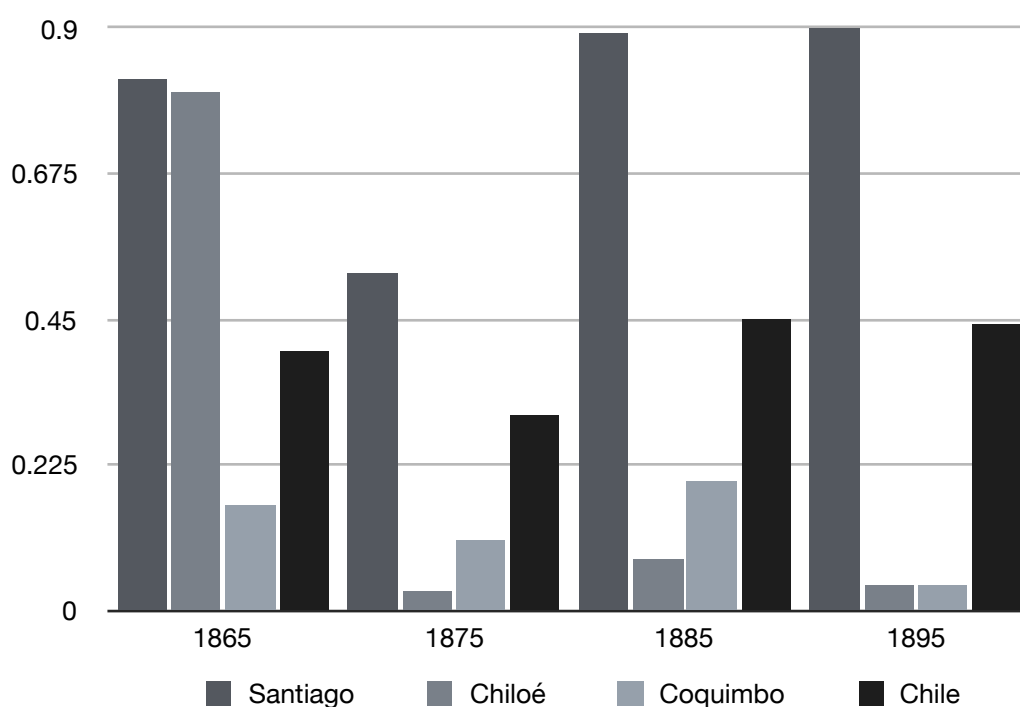
There is an interesting caveat to be made when equating the provision of public goods with improved equality. As Cardenas (2010) points out, the provision of public goods, namely healthcare, education and infrastructure, benefits all groups. This he places in contrast with redistribution, clearly designed to benefit lower income groups and redress the imbalance in society. As such, we must be careful in directly equating the provision of public goods with improved equality. If all members of society benefit equally from a public good, then that good's impact on inequality will be minimal.

Figure 6. Public employees as % of total population



Source: Own calculations. Censo General de Chile (1865, 1875, 1885 and 1895)³⁰

Figure 7. Police and Military as % of population



Source: Own calculations. Censo General de Chile (1865, 1875, 1885 and 1895)

Returning to Chile's bureaucratic capability, the presence of bureaucracy is noted as being comparatively impressive in Chile during this period (Mayo 1981). Santiago-based bureaucrats

³⁰ Total population taken as official registered number (not estimations made by censor)
No figure given for national number of public employees in Census of 1895

were deployed across the country to rural municipalities (Saylor 2012, Soifer 2009). According to the conception of State Capacities put forward by Acemoglu et al. (2015), Chile's state can perhaps be said to have an impressive reach in this regard. They argue that a state's capability can be measured by its bureaucratic presence. Saylor (2012) also argues that the central state managed to displace "*local notables from key posts in municipal governments and implanted state agents instead, greatly curtailing local autonomy*" (p. 302). In this regard, Chile can be said to have extended its state capacities. However, when analysing the data regarding the presence of public employees in various regions of Chile over the period studied, the results are mixed (Figure 6). It must be noted that, according to Sabaté and Peres-Cajías (2020), the percentage of public employees rose to 0.44% in 1990 (p. 30), indicating a large increase after 1885.³¹ While there does appear to be a notable increase in public employees in Santiago, the same cannot necessarily be said of other regions (Figure 6). Within the context of the struggle for power in Chile during this period in its history, the state can be said to be largely concentrated in the central area of the country. The machinery of state; the customs house, government positions and a large part of Chile's bureaucratic structure was housed in Santiago and the port of Valparaíso (Pregger Roman 1991). This potential lack of reach may undermine the state's power and influence over local elites, something possibly played out on the political stage during the tumultuous period culminating in the civil unrest of 1891. Sabaté and Peres-Cajías (2020) argue that the improvement in Chile's *administrative capacity* is more noteworthy in the Ministry of Finance but that it was largely "*concentrated in a sector (imports and exports)*" (p. 31). Again, this suggests that the growth in state capacities was essentially linked to international trade and didn't necessarily connote a "*widespread network of fiscal agents capable of implementing complex direct taxes throughout the territory*" (Sabaté and Peres-Cajías 2020, p. 31). The military/police presence demonstrated in Figure 7 appears to suggest a similar pattern in terms of regional disparity³². This would suggest that, although in Weberian terms the state can be said to have a *monopoly of violence*, this factor is again conditional on the regional element. Chile's State Capacities in this regard can be said to be expanded during this period but to widely vary depending on the region, possibly to be expected in a country with regions so far from the administrative capital.

³¹ This figure surpasses even that of Great Britain (p. 31)

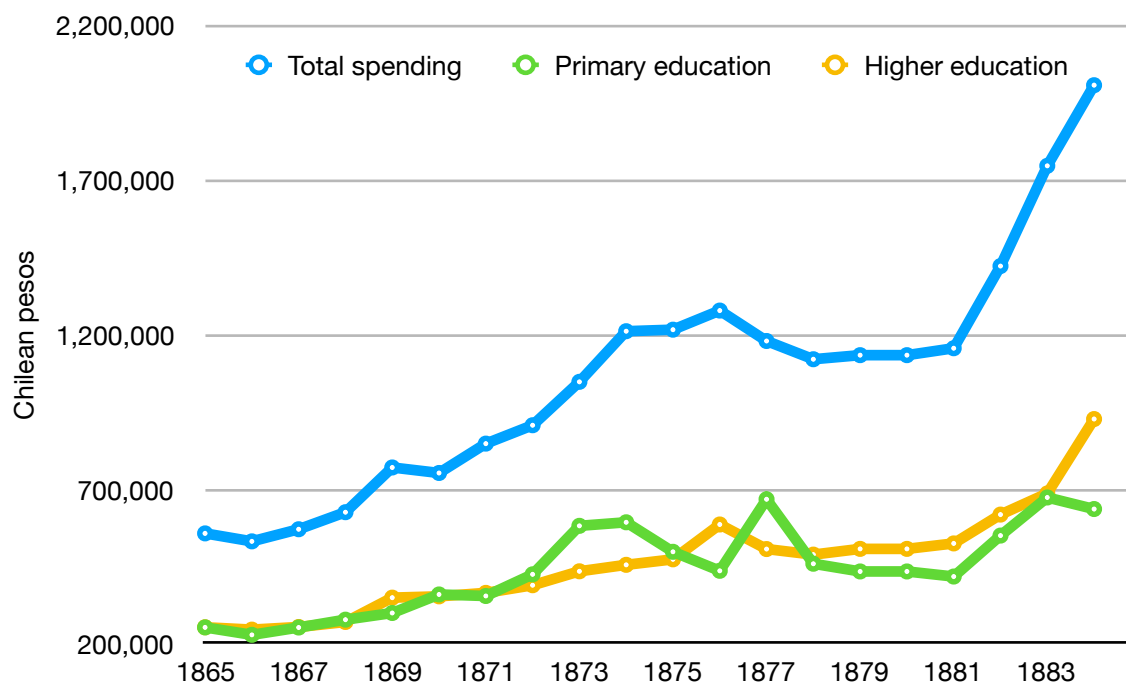
³² Discounting the outlier of Chiloé in 1865 (probably a result to the internal wars against indigenous groups being waged by the Chilean government at the time, Chiloé being one of the southern regions under the control of the military at the time)

4.4.2 Education

Saylor (2012 p. 302) links the provision of public goods to the growth of State Capacity. One of Chile's relative successes during this period, according to Soifer (2009), was the state's public primary education provision. According to several authors, education is a key factor in affecting social mobility and, by extension, structural inequality (Torche and Wormald 2004, Castillo 2013, Mediavilla and Calero 2010). Access to education, especially at the primary level, has been shown to have a tangible relationship with potential earnings (Blanco, Astorga, Guadalupe, Hevia, Nieto, Robalino and Rojas 2007). "*Returns from knowledge allow its holders to reproduce the institutions and relations that sustain their advantages*" (Tilly 2005, p. 213). In this way, education provision in Chile during this period can provide an insight into the relationship between inequality and State Capacities.

Looking at total public expenditure in education between 1865 and 1884 (Figure 8), we can see how spending gradually increased until 1875 before levelling off. However, after the *War of the Pacific* and the resulting boom in nitrate revenues, we can observe a significant upturn in state-sponsored investment in education. Soifer (2009) specifically describes how public primary education is key in bridging the gap between social classes. It can therefore be seen as a useful indicator of equality of opportunity and social mobility. It is important to note therefore that, whilst it is clear that education receives increased funding from 1881 onwards, the rise in investment in primary education is not as great as that in higher education. This could help to explain why the predicted improvements in social mobility through increased spending on education are not necessarily borne out in the decades that follow. Linked to Chile's bureaucratic capability, state-funded education provision allowed the government to implement a uniformed and ordered social structure. The separation of the bureaucratic wing of government (largely based in Santiago) from local elites enabled an increase in public school provision, something to which those local elites had been resistant (Soifer, 2009). Furthermore, the centralised inspection system, through the deployment from the capital of educational agents to different regions of the country, increased the state's infrastructural power over the regions, enabling the state to increase its authority and influence over Chilean society (Soifer, 2009).

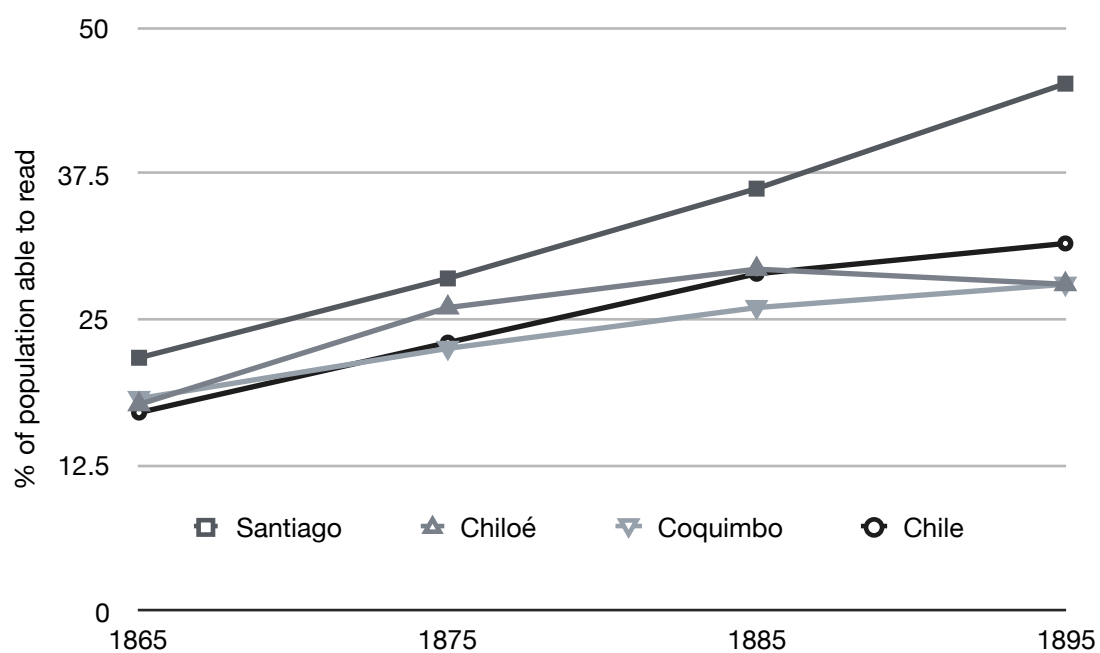
Figure 8. Public spending on education



Source: Census of Chile (1885 and 1895) (figure given for higher education includes “preparatory and special education”)

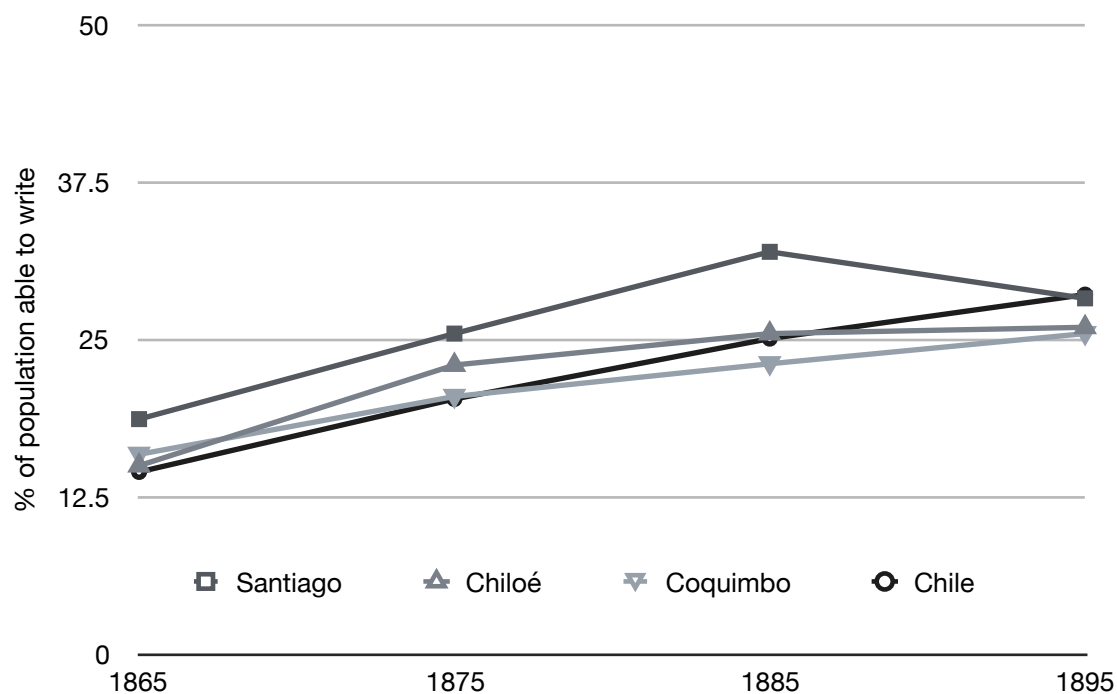
Within the debate on Chile’s state capacities, centralised provision of education as a public service can be said to promote long-term growth (Dincecco and Katz 2014). It is argued that centralised education consolidates the use of a common language, culture and set of values and can contribute to more efficient trade, innovation and labour flexibility. In this light, it can be seen as a demonstration of the strength of Chile’s state and an example of one of the successes the state achieved during this period (Dincecco and Katz 2014). The increasing literacy rates appear to confirm the improvements in education provision during this period. However, the difference in trajectories between different regions is again observed (Figures 9 and 10). While education can be a key component in addressing inequality, its unequal provision can also exacerbate pre-existing issues with stratification (Tilley 2005). We can see in Figure 9 that, although all three regions experience a rise in literacy rates over the period in question, Santiago improves at a much steadier rate, leaving the national average in its wake. Similarly, Baten and Llorca-Jaña (2020) demonstrated a similar trend in numeracy rates. They observed a significant rise during the decades under investigation, but noted high regional variance (pp. 19-23). Both metrics demonstrate a degree of centralisation and certainly regional inequality, at least as far as human capital is concerned.

Figure 9. Literacy rates in various regions of Chile 1865-1895
("Saber leer")



Source: Own calculations. Censo General de Chile (1865, 1875, 1885 and 1895)

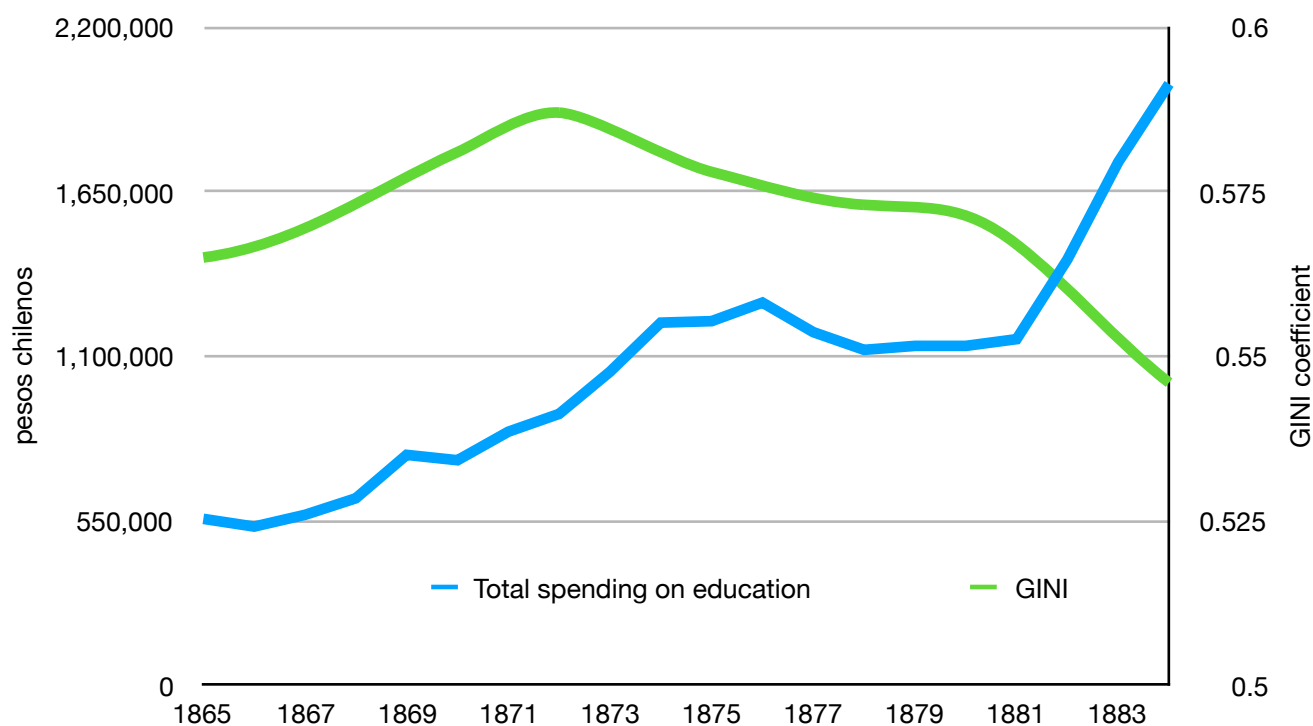
Figure 10. Literacy rates in various regions of Chile 1865-1895
("Saber escribir")



Source: Own calculations. Censo General de Chile (1865, 1875, 1885 and 1895)

Not all scholars agree on the effectiveness of the Chilean education system in the late 19th Century. Rodriguez-Weber questions the commitment of the Chilean state to education in comparison to the neighbouring countries of Argentina and Uruguay and suggests a link between this shortcoming and long-run inequality (2014). Ibañez Santa Maria (2005) argues that the education reform so praised by Soifer actually only served to reinforce class divisions and reaffirm the inflexibility of the socio-economic structure. Castillo (2013) also claims that Chile lacks educational development and attributes this to the “*absence of incentives*” (p.166) in a *latifundista* economic system. He argues that local elites needed unskilled manual labourers and any investment in human capital did not represent an attractive proposition. Soifer (2009) agrees with this analysis but believes that the state is largely successful in overcoming these regional impediments to educational development.

Figure 11. Public spending on education and GINI (HP6) coefficient 1865 to 1884



Source: Public spending on education - Censo General de Chile (1885 and 1895)

GINI coefficient - Rodriguez-Weber (2014)

Nevertheless, the increased investment in education and bureaucratic capabilities from 1850 onwards demonstrates a significant expansion of Chile’s State Capacities. Figure 11 demonstrates the relationship between spending on education and inequality (as measured by GINI coefficient). Again, while causality is hard to prove, there appears to be a certain correlation between increased spending and reduced inequality. However, the objections raised regarding the true impact of infrastructure, whether it be education, railroads or public institutions, on inequality demonstrate

that a capable state, in terms of revenue and expenditure, may be necessary but perhaps not sufficient in positively affecting inequality. In his paper on development in Chile, Pinto (1959) raises the question of “*For whom?*” Growth, revenue generation and public spending are all well and good but the key to development, according to Pinto, is in establishing who serves to benefit from any given policy and to act accordingly. Chile’s persistent problem with inequality arguably demonstrates the State’s failure to take that question into consideration. This caveat demonstrates Lee’s (2005) argument that government spending alone is not enough to reverse inequality. If underprivileged groups are not represented in the decision-making process than inequality can actually be exacerbated by public good provision. In this way we can see how increased State Capacities could actually have contributed negatively to inequality in Chile.

5. Conclusions

As I have attempted to demonstrate, analysing State Capacities in Chile during this period is a complicated process. Furthermore, attempting to establish a connection between State Capacities and inequality is difficult. It seems that State Capacities are strengthened during the first part of the period, largely coinciding with the first commodities boom. This is backed up by the findings of Saylor (2012) and Soifer (2009). This improved State Capacity is also demonstrated in the successful wars waged by the state during this period. During the beginning of the period, we initially observe an increase in income inequality. However, as we approach the 1870s, a reduction in inequality begins to develop, perhaps partly due to the effects of infrastructural and educational investment by the State in the wake of the aforementioned commodity booms. Nevertheless, as the state attempts to further expand its capacities during the 1880s, it is undone by its extractive dependence on the newly dominant nitrate industry. With the fall of Balmaceda in 1891, the state shows itself to be subordinate to economically dominant groups and, as such, Chile descends into a period of rising inequality culminating in the *oligarchical republic* of the early 20th Century.

The rise in inequality between 1850 and 1873 demonstrates that the connection between inequality and State Capacities is not always decisive. It appears to be the case that State Capacity is necessary but not sufficient in understanding inequality. We can trace the root of the rise in inequality to the elite-peon dynamic of the *Hacienda* and how Chile’s entry into a globalised market accentuates the great divide between social classes (Rodriguez-Weber, 2014). However, the fact that the state stops seeking to generate revenues through the taxation of landowners after the nitrate boom enables the

exacerbation of that existing unequal structure. Landowners are not compelled to offset their increasing revenues with any meaningful increase in taxation and, as a result, after a temporary reduction, inequality rises again and remains at a comparatively high level. The State, in developing a dependent relationship with the newly flush mining industry for its revenue generation, contributed to the perpetuation of this skewed dynamic and laid the foundations for the rampant wealth and income inequality that Chile would experience throughout its subsequent history.

As mentioned earlier, Lee (2005) argues that democratic quality is the condition factor in the impact of state size on inequality. He argues against the traditional paradigm of *big state = more equality* with the assertion that the size of the state can affect inequality in both a positive and negative way. He concludes that states can only address inequality if institutionalised democracy provides subordinate classes with representation and, as such, a better chance of redistribution. Therefore, a state might be considered capable in terms of revenue extraction but conditions, such as democracy, external forces and integrity are important. In Chile's case during this period, the State appears to be capable, especially in military, fiscal and bureaucratic terms. However, the state's inability to implement reform undermines its claim of capability and arguably condemns Chile's long-term economic project. Furthermore, the disproportionate influence of the mining sector on state revenues demonstrates a clear imbalance in the structure of Chilean society in the late 19th Century. Whether or not there is collaboration and lobbying or hostility and discord between the mining sector and the state, it is inarguable that the extreme concentration of the government's revenue sources in its export sector heavily impacts upon the State's Capacity as a redistributive force. It therefore follows that Chile will continue to struggle with both regional and national income inequality over the following decades.

In this way, in spite of the many advances made during this period, it could be argued that the state largely failed to become an active agent of redistribution and that the dismantlement of its internal taxation system rendered the state vulnerable to the country's emergent economic elites. During this period, the Chilean state demonstrates both its increasing capabilities as an effective provider of services and bureaucratic functions and its inability to assert its dominance over powerful economic and political factions.

5.1. Further study

It is important to note that Chile today has one of the best revenue generating tax systems in Latin America, coupled with relatively low rates of corruption. As such, the Chilean state today can be said to be relatively capable. Inequality, meanwhile, is slightly reduced from the highs of the late 19th and early 20th Century but remains a persistent problem. This brings into question the link between State Capacities and inequality. Consequently, the stratification of Chilean society and the rigidity of that class structure makes for interesting further study. The social dynamics outlined by Pregger-Roman (1991), Mönckeberg (2001) and Clark (2014), among others, may be suggestive in this regard.

It is interesting to note, when analysing the state's provision of education and bureaucracy during this period, the regional differences mentioned above. According to Acemoglu et al. (2015), it is important to distinguish between national and regional capacities. The authors claim that these regional capacities are key to long-term performance. Regional divergences in both education and bureaucratic presence point to an unequal provision of public goods. Whilst it may not be the case that Santiago was the richest region at this time in pure income (Badia Miró 2013), it can certainly claim to be the bureaucratic and educational capital centre of the country, thereby boasting much greater human capital than Chile's other regions. The regional inequality observed here, coupled with the inequality of income between regions explored by Badia Miró (2013) suggests a nation abounding with disparities. In the period under investigation, *"the differences in inequality between North and South Chile were much larger than many national differences between countries"* (Baten and Llorca-Jaña 2020, p. 27). This regional element surely contributes to and magnifies existing inequalities in the country at large. A further study of the state's regional capacities and how those affect regional inequality would, I believe, be instructive.

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