



LUND UNIVERSITY

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Master in Economic Development

Chongqing as an Institutional Growth Pole

Fostering the Rise of Private Firms in China's Interior

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Abstract: The rise of private firms was vital for China's coastal economic development, and this institutional change should play an essential role if the country wants to replicate its successes elsewhere. The first testing ground for such replication is the *Go West Program*. Aimed at the catching up of China's interior, the program uses the city of Chongqing as a growth pole. Based on the coastal experience, the city should not only function as a traditional growth pole supporting regional investments and structural transformation, but also as an institutional growth pole fostering the rise of private firms in the region. Looking into Chongqing, this paper is one of the first to study institutional growth poles. Applying a difference-in-difference approach using data from the China Statistical Yearbooks (1986-2015), it is found that Chongqing only limitedly functioned as an institutional growth pole. Only provinces that allowed for the rise of private firms early on in the reform period could benefit from Chongqing. Those provinces already had a relatively similar economic structure to Chongqing, and could profit from strong bottom-up dynamics. With its mixed results, it seems unlikely that Chongqing can bring China's coastal successes to the interior, showing both the importance of local institutional circumstances and the limitations of institutional growth poles.

Keywords: Institutions, growth poles, economic development, capitalism

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1. Introduction

With 800 million people lifted out of poverty, China has been able to realise the largest case of poverty alleviation ever seen in history (World Bank, 2017). However, the number might not stop at 800 million, both in- and outside of China. Other developing nations are trying to learn lessons from China, and with its *Go Out Policy* the Chinese government tries to export its model of development (Grimm, 2014). Many African nations follow practices once common to China. Zambia, Nigeria, and Ethiopia all have special economic zones inspired by the Chinese zones in Shenzhen and Shanghai. Addis Ababa in Ethiopia recently opened a new light rail system – paid for by China, and inspired by that country’s public investment strategies (Economist, 2015). Likewise, export-led growth gains momentum, and foreign direct investment is increasingly important for Africa. Not only in politics, but also in academics is China’s model of development increasingly present. Economists such as Justin Lin (2014) are inspired by Chinese development and heavily support the model’s application in Africa. After decades of failed attempts to develop, Africa goes Chinese: maybe the Chinese model of development can finally bring a solution to chronic poverty (Gamache, Hammer & Jones, 2013).

It is not only Africa that is a receiver of China’s model of development; China itself does so too. Following Deng Xiaoping’s dictum that “it is good to allow some people to get rich first” (Whyte, 2012, p. 231) the Chinese government initially focussed on the development of the coastal areas, while ignoring the interior (Zheng & Chen, 2007). As a result, coastal cities such as Shanghai and Shenzhen boomed, whereas the interior fell behind. This created regional inequality not caused by the limited success of the Chinese development model in general, but rather by the interior’s lack of any development model at all (Whyte, 2012). Nevertheless, an important implication of Deng’s statement is that now the coastal areas are rich, the interior should be able to follow. It was with this in mind that the Chinese government initiated the ‘Go West Program’ in the late 1990s and early 2000s, aimed at bringing development to the interior (Lin & Chen, 2004; Naughton, 2008). A central position in this strategy is taken up by Chongqing, one of China’s largest cities. The idea was that by heavily investing in Chongqing and by using it as a growth pole, other parts of China’s interior would follow. Through Chongqing, coastal wealth should spread to all of China (Lin & Chen, 2004; Cheng, 2013).

In this plan with Chongqing as a growth pole, heavy emphasis was put on investments in infrastructure and special economic zones, all to support export-led growth – just as is the case in Africa’s strategy. However, those proximate causes of growth are only a small part of

China's coastal development model. It was the rise of private firms and businesses that characterized the development of the coastal areas most (Nee & Opper, 2012; Lardy, 2014). In 1978, private firms were virtually non-existent in China. In 2012, close to 11 million private enterprises existed (China Statistical Yearbook, 2013). This growth in private enterprises both has been caused by and was the driver of significant institutional change (Nee & Opper, 2012; 2014). In just over three decades, China's coastal area went from a purely communist, state-led economy to a thriving market economy at the centre of globalization. It was this institutional change and its consequential rise of private firms that played an essential role in the development of China's coastal regions (Nee & Opper, 2012; Lin, Cai & Li, 1996). Consequently, when China tries to export its model of development, it should not only focus on the proximate causes of growth caused by top-down policies, but also on the stimulation of bottom-up institutional change and the rise of private firms. Chongqing should thus not only function as a standard growth pole, but also as an *institutional* growth pole. Only then, the success of China's coastal development can be replicated.

Focussing on the 'Go West Program' and its growth pole of Chongqing, this paper asks the following research question: *How did the city of Chongqing function as an institutional growth pole, facilitating the rise of private firms in its region?* In doing so, the aim of this paper is not only to see whether Chongqing successfully functioned as an institutional growth pole, but also to understand why it has been successful or not. Using provincial level data provided by the Chinese Statistical Yearbooks from 1986 to 2014 and by using a difference-in-difference approach, it is found that the establishment of Chongqing as an institutional growth pole had mixed effects. Only those provinces that already had a relatively similar institutional setting to Chongqing were able to benefit, whereas the most backward provinces lagged behind. This has implications for the Chinese model of development used in both Chongqing and Africa. With its limited ability to support the required institutional change, the model is unlikely to replicate the coastal successes, despite its heavy focus on special economic zones, export-led growth, and public investments.

This paper is structured as follows. In chapter 2, a background is given, going into the literature on growth poles and introducing the case of Chongqing. In chapter 3, a theoretical foundation will be presented, starting with a discussion on institutional change and ending with the creation of a model on institutional growth poles. Then, chapter 4 will introduce the data and methods used. Chapter 5 provides the results. Lastly, chapter 6 gives a discussion and conclusion.

2. Background

To understand how Chongqing could function as a catalyst for economic growth, it is important to comprehend how growth poles work and to be familiar with the position of Chongqing within China. This section provides a literature review on growth poles first, and then introduces the dynamics behind the city of Chongqing.

2.1. Growth Poles: Literature Review

Multiple papers have been written on economic growth poles. Perroux (1950) was one of the first to use the concept of growth poles, stating that industries in the centre are dominating those in the periphery, creating unbalanced economic growth. Boudeville (1966) expanded Perroux's theory by linking the centre to geography. In his view, a city dominates its neighbouring areas through factor movements and input-output linkages. Inherent for the functioning of such a growth pole is that economic growth is unbalanced (Hirschman, 1958; Streeten, 1959). According to this concept, investments in a developing country must be divergent by region or sector, creating an economic disequilibrium. In this disequilibrium, the 'growth pole' or leading industry is highly profitable and can achieve high levels of growth. Due to the existence of forward and backward linkages between the growth pole and other sectors (or regions), the profitability caused by a disequilibrium can spread to other sectors, creating another disequilibrium and supporting more widespread growth (Hirschman, 1958). For example, in the case of Chongqing, China hopes that investing in Chongqing creates a regional economic disequilibrium, making Chongqing highly successful. With Chongqing being successful, neighbouring regions can benefit too through the linkages existing between industries in Chongqing and those around it, creating a new disequilibrium in the whole region. Through the spread of disequilibria, limited investments in a single growth pole can create economic development for a large geographical area.

As Hirschman himself notes, this effect does not only has to be positive: "The 'advanced North' exerts a positive (trickling-down) effect on the 'less developed south' if the two economies are complementary, and the 'North' exerts negative (polarization) effects on the 'South' if the two economies are competitive in structure" (Ke & Feser, 2010, p. 1134). The consequence of this is that 'spread-backwash effects' can occur, through which a growth pole can both harm and support economic development in the region. Consequently, the empirical literature on growth poles mainly focussed on determining whether the net results of spread-backwash effects are positive or negative, mostly in urban-rural contexts. Looking at the influence of urban growth poles on rural areas, it was found that in the USA only rural

areas closest by the growth pole benefitted from this growth pole (Barkley, Henry & Bao 1996; Lewis & Prescott, 1972), whereas those further away faced significant backwash effects due to people and companies moving closer to the growth pole (Ganning, Baylis & Lee, 2013). Those effects are not unique to the USA: in the case of Canada, it was found that only rural areas on the urban fringe benefitted from urban economic growth (Partridge, Bollman, Olfert & Alasia, 2007).

In the limited amount of literature on China, a general positive spread of growth is found from the coastal areas to the central (Brun, Combes & Renard, 2002) and western regions (Groenewold, Lee & Chen, 2007). Using local rather than provincial data, Ke & Feser (2010) find mixed results: growth poles have a positive influence on the development of neighbouring regions, whereas those further away are negatively influenced. Other papers using local data focus not on the imbalance between the coast and the interior, but on the imbalance between urban and rural development. Since the start of the reforms, China's development heavily focussed on urban growth in megacities (Wu & Gaubatz, 2012). It is found that this urban-centric approach might not maximize aggregate growth in the country, with rural areas and small and medium-sized cities lagging behind (Chen & Partridge, 2013). Nevertheless, the literature on growth poles in China remains limited. The above papers all look at the coastal region, with limited attention paid to the western and central regions. Consequently, a significant gap in the literature on growth poles in China continues to exist, with for example no paper being written on major cities such as Chongqing and Chengdu.

Moreover, the problem with the aforementioned theories is that, as Veblen (1898) would say, they are 'not evolutionary': they look at the proximate causes of economic development such as investment and employment, yet ignore institutions. Nevertheless, ignoring institutions in explaining regional economic dynamics might have severe consequences. First of all, growth pole theory cannot explain why some cities are growth poles, whereas others are not. Investments are a proximate cause of growth, but it is institutions that determine whether those investments are successful or made in the first place (Williamson, 1998). Only by understanding a region's institutional environment, it can be understood how the economic success of a growth pole can spread. Secondly, by ignoring institutions, traditional growth pole theory assumes that regions operate in a unified institutional environment, and consequently it can only explain dynamics within such a unified environment. Within an institutionally variegated environment, the interaction between an 'advanced North' and a 'less developed South' becomes complex and ambiguous, and it is institutions that largely shape these dynamics. Consequently, institutions should play

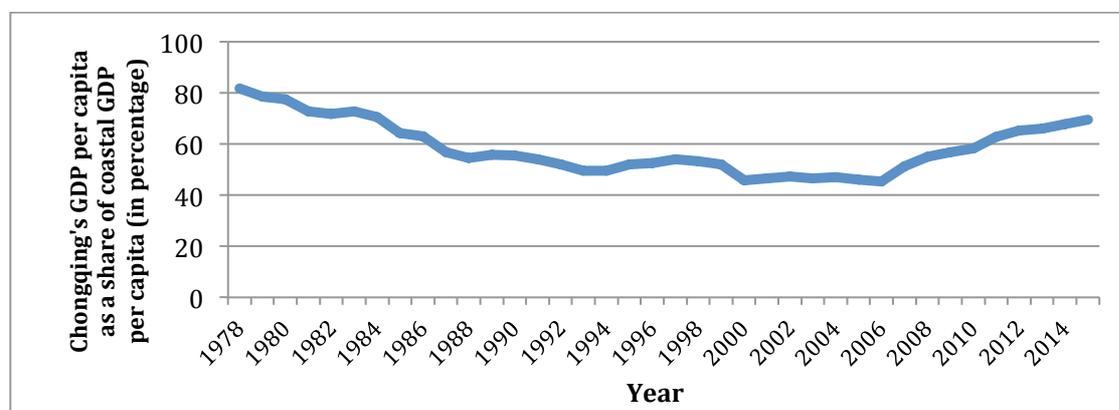
a central role in every theory on growth poles. In this way it is not only traditional growth poles that can be better understood, but also institutional growth poles: large economic centres have the ability to drive regional institutional change.

In all, because of their tendency to ignore institutions, most recent studies regarding growth-poles are intra-country or regional in nature, studying a homogeneous institutional environment. Those cross-country studies that do exist mostly focus on the neoclassical inputs of growth (Adams-Kane & Lim, 2011). This paper instead takes an institutional perspective: it is institutions that largely determine economic outcomes. As a result, this paper not only adds to the literature by looking at the city of Chongqing and China’s interior, but also by taking an institutional perspective.

2.2 The City of Chongqing

The story of Chongqing in the post-Maoist era can be described in one graph depicting Chongqing’s GDP per capita relative to that of the coastal provinces (see figure 1). In the late 1970s, Chongqing was rather average: it had similar levels of GDP compared to the coastal levels, and benefitted from years of investments by Mao’s government (Zhang & Peck, 2014). Yet, since the start of the post-Maoist era, the city fell behind. Being relatively inaccessible in the interior, the city could not benefit from Deng Xiaoping’s economic transformation, which heavily focussed on the coastal areas (Lim, 2014). Not only could the city not profit from foreign investors flocking into the country, it also had difficulties keeping its old Maoist heavy industries running (Zhang & Peck, 2014). In the late 1970s, Chongqing’s GDP per capita was comparable to that of the coastal areas; in 2000 it did not even have half of it.

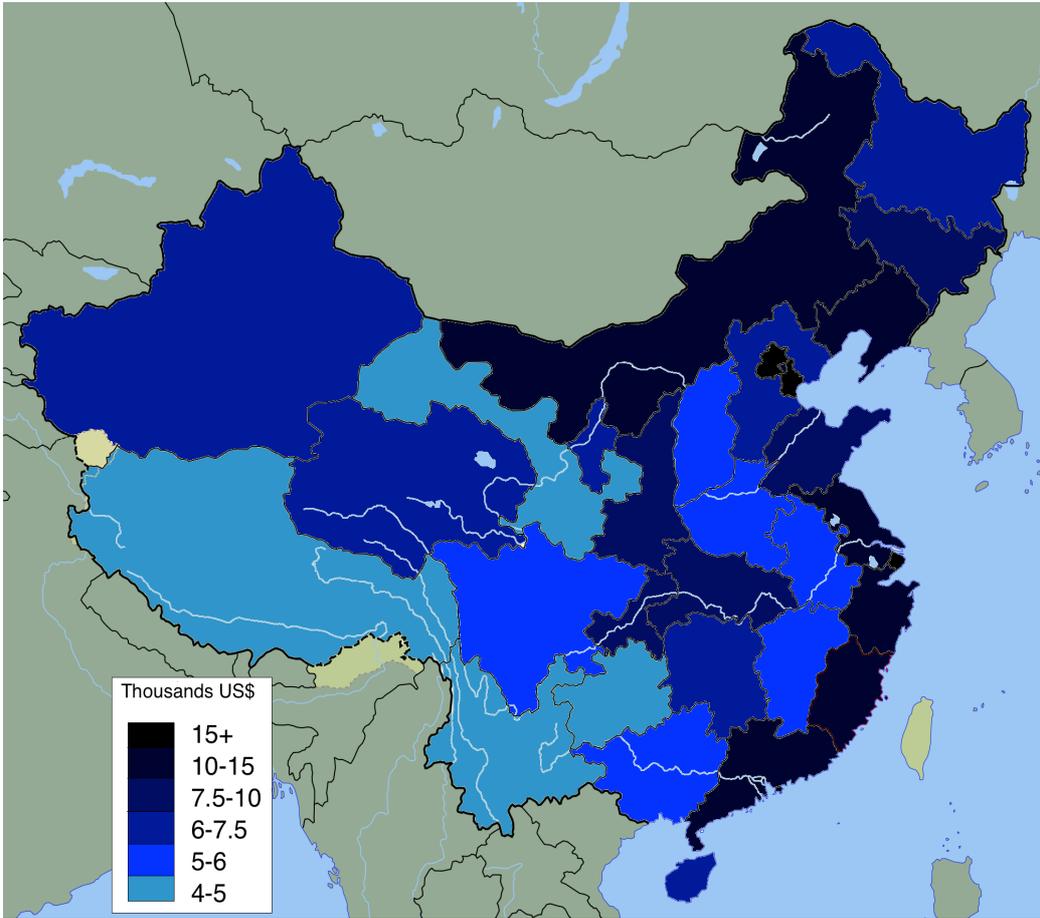
Figure 1: Chongqing’s GDP Per Capita Levels Relative to the Coastal Provinces of Jiangsu, Zhejiang, Fujian, and Guangdong (1978-2015)



Source: China Statistical Yearbook (2015).

Falling behind coastal levels of development, Chongqing was not unique: most of the provinces in China’s interior fell behind, creating significant regional inequality (Zheng & Chen, 2007). Figure 2 shows China’s provinces by GDP per capita, and as can be seen the coastal areas are up to four times as rich as some of the interior provinces, creating a country with regionally varied levels of development. This inequality is the direct consequence of a strategy of unbalanced economic growth: rather than supporting the development of the entire country, the government decided only to support the coastal areas. In this way, the most heard causes of China’s fast economic development, including its increasing technological capability (Fu, 2015; Fu & Gong, 2011; Lo & Li 2006; Rodrik, 2006), the creation of special economic zones (Lo, 2006; Rodrik, 2006; Zeng, 2011), the opening up to foreign direct investment (Du, Lu & Tao, 2008; Sun, 2011), its favourable currency regime (Bonatti & Fracasso, 2013), its decentralized political system (Bardhan, 2002; Montinola, Qian & Weingast, 1995; Shen, Jin & Zou, 2012; Wu, 2015) and the country’s cheap labour force (Chan, 2003) mainly befitted the coastal areas.

Figure 2: Chinese Provinces by GDP Per Capita (Current US\$) in 2014



Source: own creation based on China Statistical Yearbook (2015)

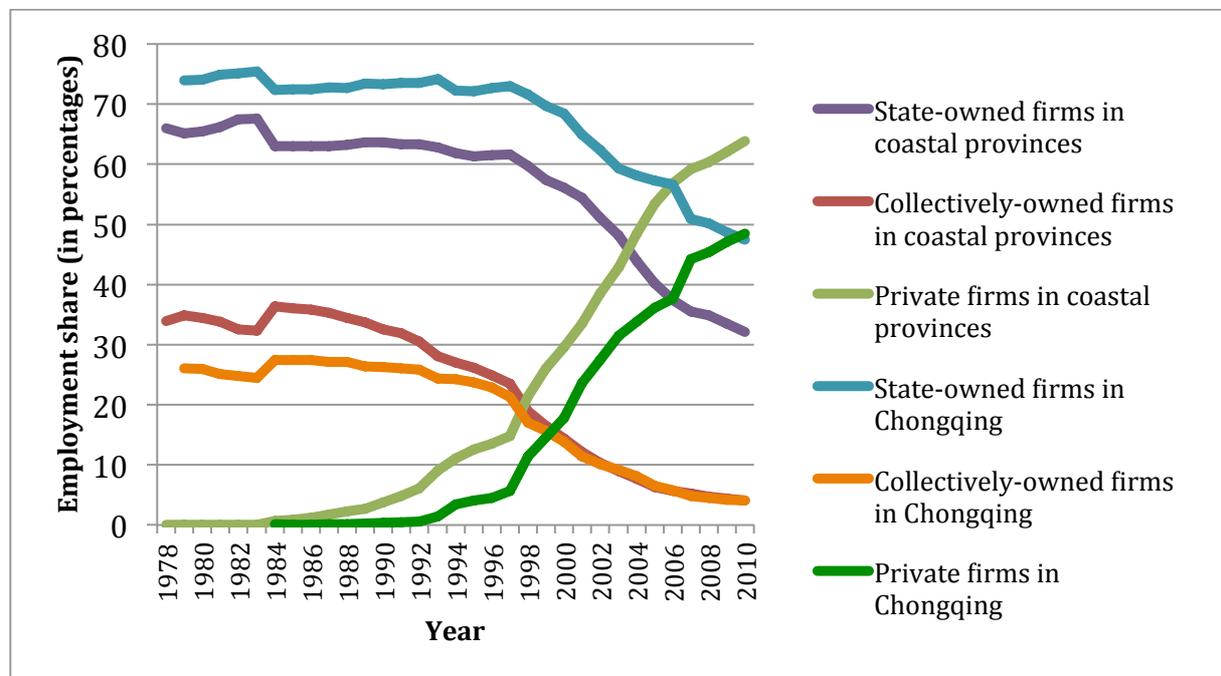
Moreover, as China's interior did not have the legitimacy to allow the rise of private firms, the interior only saw limited institutional change (Zhang & Peck, 2014). As for example Nee and Oppen (2012) argue, institutional change creating 'capitalism from below' was essential in the rise of China. With private firms being inherently more efficient than state-owned or collectively-owned firms, the aforementioned proximate causes of growth could be used efficiently (Shleifer, 1998). Without the rise of private firms, China's export-led strategy would not have been so successful, nor would its cheap labour force have been used so efficiently. In the interior on the other hand, the rise of private firms was lagging behind: with only limited legitimacy to reform coming from the central government, local governments remained conservative, and state-owned enterprises continued to dominate (Zhang & Peck, 2014). So, the coastal areas have been able to benefit from 'China's model of development' in which the government played an important role by creating economic zones and supporting investments, but where private firms played an increasingly important role too (Xu, 2011). The interior on the other hand largely lagged behind, with both few investments and limited institutional change.

Sensing the importance of decreasing China's regional inequality, the government has tried to support the development of the interior. In policy packages such as the 'Go West Program' and the 'Rise of Central China Plan' introduced in the late 1990s, large investment projects were embarked on, and special economic zones were opened (Lin & Chen, 2004; Naughton, 2008). In those plans, Chongqing plays a central role, and being designated as western and central China's growth pole, the city received billions of Yuan to support regional development. In 1997, Chongqing became an independent municipality, after having been part of neighbouring Sichuan province for close to five decades, placing it on par with Beijing, Tianjin, and Shanghai (Lin & Chen, 2004). As the graph in figure 1 shows, the program has been successful for Chongqing. The city has been able to decrease its income gap with the coastal provinces, and was one of China's fastest growing cities since the 2000s, with growth rates exceeding 20% in much of the early 2010s (Cheng, 2013).

Nevertheless, as identified above, investments are only a small part of why China's coastal area was able to develop: the rise of private enterprises was important too. Here, Chongqing has been successful as well. Until 1997, state-owned enterprises (SOEs) continued to be the dominant type of firm ownership in Chongqing (Zhang & Peck, 2014). After the introduction of the 'Go West Program', the amount of private firms in Chongqing started to increase quickly (see figure 3). With private firms being inherently more efficient (Shleifer, 1998) and with the creation of new jobs in those private firms, the Chongqing government

was able to restructure the local economy through the selling off or closing down of inefficient state-owned enterprises, while supporting the creation of ‘state-owned champions’ that are highly innovative (Zhang & Peck, 2014). In this way, the ‘Go West Program’ started off a process of institutional change in which the local economic structure was transformed from a communist state-led system to a capitalist market economy. As a result, Chongqing was not only able to close the gap between itself and the coast in terms of GDP per capita, but also in terms of institutions: capitalism and its private firms now came to Chongqing (Lim, 2014).

Figure 3: Employment Share by Ownership: Chongqing vs. Coastal Provinces of Jiangsu, Zhejiang, Fujian, and Guangdong (1979-2010)



Source: China Statistical Yearbook (2015)

Still, the central government’s goal was not only the rise of Chongqing itself, but rather of the whole inland region. In the government’s strategy, it is through the rise of Chongqing that other areas in the interior should follow (Lin & Chen, 2004), generating the multiple disequilibria as predicted in the concept of unbalanced growth (Hirschman, 1958). However, just as with Chongqing itself, this process should not only lead to an increase in investments and income, but also to a process of institutional change in the whole region. Consequently, by using Chongqing as a growth pole for the interior, the city should not only spark off a process of increasing investments, but it should also facilitate the further rise of

private firms in the area - it should function as an *institutional* growth pole. In the previous section, it was identified that the current literature has little to offer with regard to such an institutional growth pole, and a theory on how an institutional growth pole would work thus has to be created. This will be done in the next chapter.

3. Theoretical Foundations

In order to understand the prospects of Chongqing as an institutional growth pole, it is important to have a thorough understanding of where institutions come from and how they change. In this chapter, an attempt to get to this understanding is made by giving an overview of the literature on institutional change first. Then, a model of institutional change based on the reviewed literature is introduced, followed by an explanation of the functioning of institutional growth poles.

3.1 Institutional Theory: State of the Art

Institutions are at the heart of every institutional growth pole: it is through institutional change that a growth pole can function or not. In order to understand how a growth pole can function, having a thorough understanding of how institutions can change is thus essential. However, before going into the respective institutional theories, a definition of what institutions are is needed.

Every author within the field of new institutional economics uses a different definition of what institutions are. Whereas Douglas North (1990) sees institutions as the ‘rules of the game’, Thorstein Veblen (1909) talks about “the settled habits of thought common to the generality of men”. In both North and Veblen’s definition, institutions are complex and all-encompassing. However, as Hodgson (2004) says, this creates difficulties with regard to the distinction between ‘formal rules’ and ‘informal constraints’: what is the difference between them, and how are they related? A definition that does not face this problem is provided by Oliver E. Williamson (1998), who did not consider institutions as a singular entity, but rather as the interaction between different layers of institutions: 1) ‘higher’ institutions such as culture and religion; 2) formal institutions constituting the rules of the game; 3) informal institutions such as governance or the playing of the game; and 4) resource allocation and employment. The four layers do not operate in a vacuum, but continuously influence each other, creating a dynamic understanding of institutions. The advantage of Williamson’s definition is that a clear distinction between formal and informal institutions exists. For the theory on institutional growth poles, this definition allows for a dynamic model in which a growth pole can work through both formal change and informal adaptations. Consequently, Williamson’s idea of institutions will be used for this paper.

Nevertheless, to understand how Chongqing can function as an institutional growth pole, it is important to understand how institutions change: it is through institutional change that a growth pole can influence the economic prosperity of its surrounding regions. Just as

with definitions on institutions, multiple theories on institutional change exist. A distinction can be made between 1) the elite- or state-led approach; and 2) the individual- or masses-led approach. The first approach, represented by among others North, Wallis, and Weingast (2009) and Acemoglu, Johnson, and Robinson (2004; 2013) champions top-down institutional change, whereas the second approach, represented by among others Greif & Laitin (2004), emphasizes bottom-up institutional change.

In the state-led or elite-led approach, it is the elite in charge of the state that influences if not determines institutional change. The approach makes a clear division between the elites and non-elites, or, in the case of Acemoglu, Johnson, and Robinson (2004) the *de jure* power and the *de facto* power. In general, the elites and non-elites do not have the same interests: each wants to improve their own positions, oftentimes by extracting rents from the state. Consequently, in most elite-led approaches a continuous struggle for power exists, with the elite trying to cling to power while ignoring what is best for a country. An important consequence of this struggle for power is that it must be assumed that institutional change can only occur through formal power: the elites decide which institutions will be implemented or not, and it is thus elites who determine the economic fate of a country. Only when the non-elites overwhelm the elites (either through a revolution or a slow increase in economic power) can they change a country's course, but not before becoming the elite themselves.

The disadvantage of this elite-led approach is that with its focus on elites, the role of non-elites – or masses and individuals – is neglected. In elite-led theory, an institutional growth pole would only function if the elite wants it to function, and masses have no influence on this functioning. Still, non-elites do have a significant influence over institutional change and its influence on an economy's development. First of all, with regard to formal institutions, non-elites influence the way laws and regulations are interpreted and implemented. For example, within the European Union, Italy and Germany interpret the same laws differently (Majone, 1994), creating a variegated institution environment despite attempts to streamline this environment through the creation of an overarching legal system (Berglund, Gange & Van Waarden, 2006). Secondly, non-elites can change the informal institutions. An important example is trust. After the fall of the Soviet Union, both Poland and Russia introduced capitalist-like formal institutions. Yet, levels of trust were much higher in Poland than in Russia, and consequently free-market exchanges in Poland were much more successful than in Russia: in Russia, people did not trust each other, harming the creation of a capitalist society (Frye & Shleifer, 1997). Here, individuals determined the success of

capitalist free-market institutions and thus the success of institutional change in both Poland and Russia.

Solving for this problem are the theories that focus on institutional change in a bottom-up manner. Here, a distinction between elites and non-elites is still made, but no formal power is needed to start a process of institutional change. Instead, non-elites can start a process of institutional change without obtaining formal political power by, for example, decoupling from the current norms and values. When enough individuals decouple, the existing institutions fall apart, leaving the elite with no choice but to start institutional change. An important theory within this subfield is given by Greif and Laitin (2004), who focus on self-undermining and self-reinforcing institutions. In their view, institutions can start to undermine themselves. For example, an institution fostering inequality may inevitably lead to its own fall, as the call for redistributive policies will ultimately prevail. This concept is important: it explains why some masses might start to mobilize against the current institutions, and thus explains how change from below can occur.

Another important distinction between different theories of institutional change is their focus on intentionality. In some theories, such as those by North, Wallis, and Weingast (2009) and Acemoglu, Johnson, and Robinson (2004) and most other elite-led approaches, it is assumed that institutions are intentional outcomes: individuals struggled for them being put in place, as they were beneficial for their own outcomes. However, and this is a point made by most bottom-up approaches, institutions can be an *unintended* consequence of certain policies. In China, the household responsibility system (HRS) was introduced in 1978 to improve agricultural productivity (Lin, 1987). This goal was reached, yet an unintended consequence was the rise of private enterprises established by successful farmers, sparking off a process of bottom-up institutional change supporting the rise of capitalism (Nee & Opper, 2012). When the Chinese government introduced the HRS in 1978, it certainly did not want to establish capitalism, yet it could not know the HRS would result in capitalism: for this, the institutional environment is simply too complex.

In all, current theories on institutional change can be divided in top-down and bottom-up approach, each with their own strengths and weaknesses. Moreover, whereas some theories focus on intentional institutional change, others emphasize the complexity of institutional change and thus the role of unintended consequences. For the functioning of an institutional growth pole, a model solely focussing on bottom-up or top-down dynamics is insufficient: both masses and elites can play a role. A model on institutional change must thus be able to unify the different theoretical positions. This will be done in the next section, where

the strongest aspects of the above theories will be used to create a new model on institutional change.

3.2. A Model of Institutional Change

In order to explain how Chongqing could function as an institutional growth pole, elements can be taken from the different types of theories, creating one coherent theory able to explain institutional change in China's interior. For this, a few aspects are important. First of all, a distinction between the elites and non-elites must be made, just as Acemoglu, Johnson, and Robinson (2004), and North, Wallis, and Weingast (2006) do. Initially, institutional change in China was driven by entrepreneurs or the non-elites, despite opposition by the elites (Nee & Opper, 2012). In 1978, entrepreneurs established successful private firms, despite government resistance to this development. Only later in the reform period, especially after 1986, did the Chinese government embrace capitalist reforms (Naughton, 2008). This does not only show that the elite and masses can have opposite goals, but also that they can embrace each other and work together. Over time, China's elite embraced the capitalist practices of the masses, reinforcing the process of institutional change started from below. Secondly, related to this is that both bottom-up and top-down change must play a role. As said, entrepreneurs were able to create change from below. However, the government did not stand still: it created new regulations, established special economic zones, and supported export-oriented firms. Consequently, a theory should account for both types of institutional change, and the two types should be able to reinforce each other. Lastly, a distinction between the different *types* of institutions must be made. During China's reforms, informal institutions were changed first, with for example the creation of informal financial networks. Only later, the formal institutions changed (Nee & Opper, 2012). Therefore, the interplay between formal and informal institutions should play a central role in the framework.

As mentioned above, elite-led theory makes a clear distinction between elites and non-elites. However, unlike elite-led theory, it is not only elites that must be able to start a process of institutional change, as non-elites must be able to do so as well. For this the distinction made by Acemoglu, Johnson, and Robinson (2004) between the *de jure* and *de facto* political power comes in handy: if one of the two powers becomes predominant, it might be able to start a process of institutional change in order to improve its own standing. So, the elites would be the ones with *de jure* political power, whereas the non-elites would be those with *de facto* political power. In practice, this means that the *de jure* power holder is the government,

or the Chinese Communist Party, whereas the de facto power holders are entrepreneurs and other individual citizens.

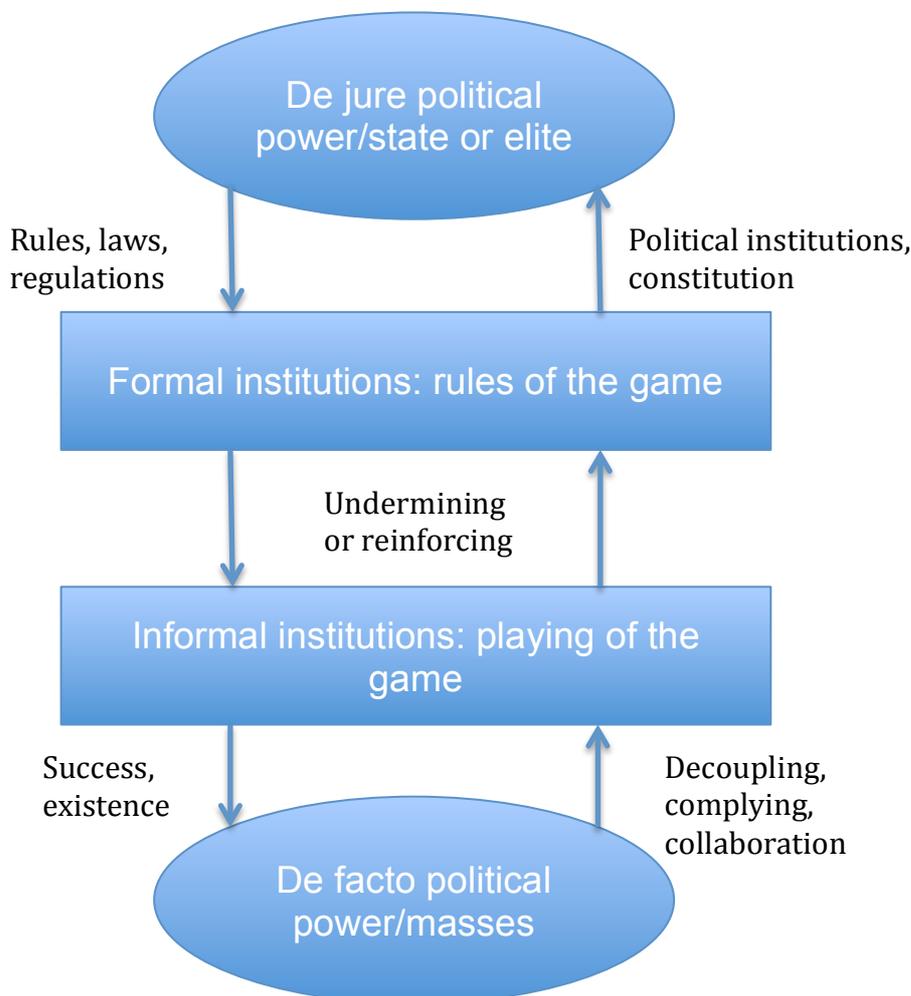
Important is that the two participants can start a process of institutional change without having the de jure political power: entrepreneurs championed capitalism in China, without having ties to the government. It is here that the distinction between different types of institutions as represented by Oliver Williamson's (1998) definition of institutions comes in: formal institutions can only be directly changed by the de jure political power, whereas the de facto political power has the ability to change informal institutions. So, borrowing from Williamson, two types of institutions exist in the framework: 1) the formal rules of the game or formal institutional environment; and 2) the playing of the game or the informal institutional environment. Just as in Williamson's framework, those two types of institutions do not operate in isolation, but instead influence each other.

Still, just adding formal and informal institutions does not mean that change can come from both below and the top: if the elite does not want change, it simply keeps strict laws and regulations, i.e. formal institutions, preventing bottom-up change. Consequently, the idea of Greif and Laitin must be used: institutions can be self-reinforcing and self-undermining, and beforehand it is difficult if not impossible to know how an institutional will work. Keeping in mind the distinction between the two types of institutions, one institutional layer can reinforce or undermine the other layer. For example, in Yeltsin's Russia the informal institutions supporting greed and corruption undermined the formal institutions (Frye & Shleifer, 1997). Important for this is that beforehand it is difficult to understand whether (in)formal institutions are undermining or reinforcing, and that the consequences of an institutions can be unintended. Only by including both the distinction between different types of institutions and the existence of unintentionally self-undermining or self-reinforcing institutions, a theory of institutional change from below *and* above can be made. Without those two aspects, an elite would never allow institutional change from below, making the theory unable to explain the working of China's institutional transition and the working of Chongqing as an institutional growth pole.

Figure 4 shows a graphical depiction of this mechanism. On top, the de jure political power, or the state, implements rules, regulations, and laws, which determine the formal institutional environment. The other way round, the formal institutions determine who is in power: political institutions such as the constitution determine who has de jure political power, and determine the reach of this power. The formal institutions influence the informal institutions and vice versa. The two types of institutions do not have to be aligned, and can

undermine each other. At the bottom, the de facto political power, or ‘masses’, can be found. The institutional environment influences them, as it is institutions that determine the success of those actors. Important here is that there is no direct link between formal institutions and the de facto political power: informal institutions determine the working and implementation of formal institutions, and formal institutions thus only indirectly influence the outcome. Lastly, the de facto power holders can influence the informal institutional environment, for example by decoupling from the existing rules or by establishing innovative forms of collaboration, changing the playing of the game.

Figure 4: Model of Institutional Change



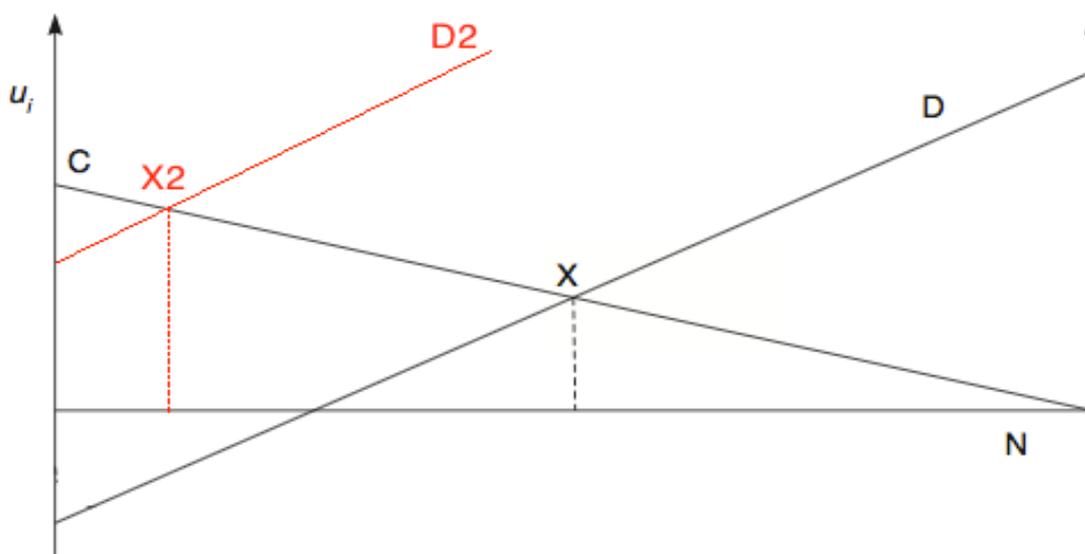
Source: Own creation

Using this framework can explain both top-down and bottom-up changes, includes both masses and elites, and makes a distinction between different types of institutions – taking lessons from multiple theories in the field. Nonetheless, an important question remains: does

the de jure power not have an inevitable advantage over the de facto power, as it is a more unified group *ex vi termini*? The state has clearer boundaries than a loose collection of individuals and entrepreneurs, and consequently they might be inherently more successful in capturing the process of institutional change (Ostrom, 1990) – making change from below unlikely, and the model rather weak.

Under specific circumstances, the problem of collective action might be solved, and institutional change from below might indeed occur through strong collaboration between individual actors, unifying their de facto political power. To understand how individuals can decide *en masse* to deviate from the existing norms and values, a Schelling diagram might be useful (Nee & Opper, 2012). This diagram, which can be found in figure 5, shows the utility an individual gets from complying (line C) or decoupling (line D) from the existing norms. If not a single individual decouples, the utility from decoupling will be low, whereas complying gives high levels of utility. If a lot of people start to decouple however, the utility gained from this decoupling starts to increase, whereas the utility gained from complying decreases. Nevertheless, decoupling continues to give less utility than complying until a tipping point is reached, X, after which decoupling is the most rational option. Once this tipping point has been reached, individuals will start to decouple *en masse*, and the existing norm or value will break apart. In the framework, this would mean that the de facto power is able to change the informal institutions, and that those informal institutions start to undermine the formal rules of the game.

Figure 5: Schelling Diagram



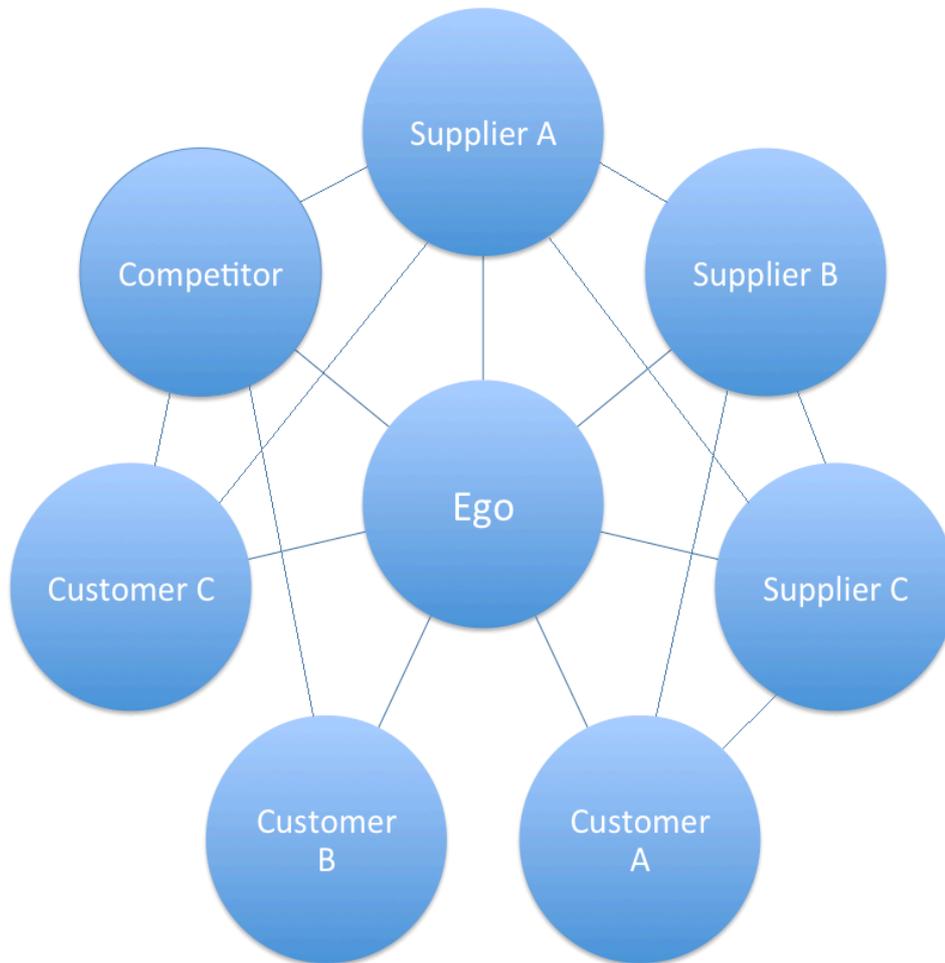
Source: Nee & Opper (2012).

Nevertheless, an important question remains: how can tipping point X be reached? Many individuals need to deviate and accept low levels of utility before the tipping point is reached – an almost impossible task. However, here the idea of self-undermining and self-reinforcing institutions comes in. Line D shows a self-reinforcing institution: tipping point X requires an insurmountable amount of individuals to deviate, and it is unlikely that this will take place. The institution will survive. However, line D₂ shows a self-undermining institution: here, the amount of utility one gets from decoupling is much higher, and as a result fewer individuals are needed to reach the tipping point. With only a few individuals needed to decouple before a process of mass decoupling is started, institutional change is much more likely.

Still, although this Schelling diagram can explain how one specific institution can change, it does not fully explain how a process of large-scale institutional change can persist over a long period of time, as could be seen in China and as needed for Chongqing to properly function as an institutional growth pole. Here, network theory and resource dependence theory provide a solution: humans and their organizations are inherently social, and as a result deal with family, friends, colleagues, suppliers, customers, competitors, and the government (Pfeffer & Salancik, 1978). However, being embedded in their environment, a large interdependency between different actors exists: firms depend on suppliers for their input, on customers for their profits, and on the government for their institutional stability, whereas individuals depend on family and friends for emotional satisfaction (Hillman, Withers & Collins, 2009). Because of this interdependence, social actors are vulnerable, and exclusion from a network could have devastating results. It is exactly this negative consequence of exclusion that keeps people together and facilitates long-term institutional change.

Figure 6 shows a standard close-knit network taken from network theory (Duschek, 2004; Grant & Baden-Fuller, 1995; Grandori & Soda, 1995). Here, ego has relations with multiple firms, including suppliers, customers, and competitors. However, ego is not the only one who has this social relations: the different suppliers know each other, just as some of the customers know some of the suppliers. In this way, a complex network of social relations exists, in which information on reputations is easily shared. Consequently, when ego decides to cheat on supplier A, it not only involves supplier A, as A will share information that ego cheats with the other members of the network. In this way, the trust of not only supplier A is broken, but that of multiple actors in the network. As a result, supplier A is not the only one who will terminate contacts with ego, but other suppliers, customers, and competitors will do so as well.

Figure 6: Close-knit Networks



Source: own creation

Now, imagine that informal institutions have been adapted to the needs of the actors, whereas the formal institutions have not. Here, a process of institutional change from below is under way, but has not been finished yet: it takes time before the informal institutions can undermine the formal institutions. However, actors are able to stick to the informal institutions and survive, as their close-knit networks with its strong punishment mechanism creates a situation in which actors have to comply with the informal institutions, and can even benefit from them. In this way, the informal institutions can gain strength, undermining the formal institutions and consequently starting off a process of institutional change. Through the close-knit networks, actors have been able to help each other and punish those that tried to undermine the informal institutions – giving an explanation of how an entire institutional system can be changed from below over a long period of time.

3.3 Institutional Growth Poles

Using the theoretical framework in figure 4, an institutional growth pole can work in two ways: through its influence on top-down decisions made in neighbouring provinces, and through its support of bottom-up processes in the region. To start with the bottom-up processes, institutional growth poles influence the tipping points in neighbouring regions. To illustrate this, the Schelling diagram in figure 5 comes in handy. In the figure, a neighbouring province of Chongqing before the Go West Program is depicted by the line D. Decoupling and starting private firms is still costly: the local government is against it, social norms actively work against it, while no networks decoupled individuals can rely on exist. D₂ on the other hand depicts the same province after the Go West Program. As the amount of private firms in Chongqing increased and their importance for Chongqing's economy swelled, would-be entrepreneurs in surrounding areas can benefit too: networks established by private entrepreneurs in Chongqing can include entrepreneurs from neighbouring provinces. This increases the strength of the de facto power, and consequently the ability to create informal institutions that undermine the formal institutions. With the formal institutions being undermined, a bottom-up process of institutional change can occur, driven by the changes in neighbouring Chongqing. Important here is that the institutional change is spatially dependent: networks can only benefit those that are close to Chongqing, as otherwise the costs of participating in the network would be too high. Consequently, only the regions closest to Chongqing can directly benefit from it as an institutional growth pole, whereas those further away cannot.

Besides changing the de facto power and starting off a bottom-up process, institutional change in Chongqing can influence the de jure power in neighbouring provinces as well. First of all, a change in leadership can occur. In the case of China, this would not mean that the Communist Party is ousted, but rather that some individuals from different ideological groups within the party gain power, whereas others lose. For example, individuals with strong ties to SOEs might be replaced by officials with strong linkages to private firms. This is heavily influenced by the second mechanism supporting top-down institutional change: the spread of ideas. Inspired by policies in Chongqing, local officials might see that supporting private firms can benefit them, and the elite's pro-reform groups gain legitimacy and power, tipping the balance in favour of market reforms. Consequently, an institutional growth pole could not only work in a bottom-up manner with an increasing amount of private entrepreneurs creating informal institutions, but also through an increasing willingness of local governments to implement reforms preferred by the de facto power.

3.4 Hypothesis

In the previous chapter, it was identified that much of China's economic rise can be attributed to the surge in private firms. This rise was both the result of and driving force behind China's institutional change and the creation of a capitalist economy. However, as identified above, it was mainly the coastal area benefiting from this rise, with the interior falling behind in its share of private firms. As a result, Chongqing as an institutional growth pole could mainly benefit the interior by fostering the rise of private firms. With private firms being inherently more efficient (Shleifer, 1998), this would improve the economic opportunities of China's interior and decrease regional economic inequality in the country. Keeping in mind the theory on institutional growth poles, this leads to the following hypothesis:

H₁ = After its establishment as an institutional growth pole in 1997, Chongqing intensified the rise of private firms in its neighbouring provinces.

By empirically testing this hypothesis for all the provinces together and individually, the dynamics behind Chongqing as an institutional growth pole can be identified and, using the institutional framework introduced above, analysed. Therefore, an econometric model to test for the hypothesis will be introduced in the section.

4. Data and Methods

To test for the hypothesis and to understand the dynamics behind Chongqing as an institutional growth pole, a solid econometric model based on previous research and in line with the paper's theoretical framework must be used. This chapter introduces the data and methods used for this paper, and gives the descriptive statistics.

4.1 Data

In order to find an answer to the research question, data from the China Statistical Yearbooks of 1986 until 2015 will be used. For those yearbooks, local governments collect data on a broad range of economic, political, and social topics (China Statistical Yearbook, 2015). From the local level, the data is passed on to higher levels, giving a wealth of information at the village, county, township, prefectural, provincial, and national level. As this paper focuses on the influence of Chongqing on its neighbouring provinces, only the sections dealing with the relevant provinces will be used (i.e. the Statistical Yearbooks of the relevant provinces). As a result, panel data on economic and political aspects of all required provinces can be found, enabling a study on institutional change since the start of the reforms. With regard to the time-span, 1986 is chosen as the first year of this study, as it was in this year that private firms were allowed to register themselves, and no reliable information on private firm activity before this year exists. 2014 is the last year for which data is available. Still, studying the period 1986-2014 gives an adequate overview of the rise of private firms in Chongqing and its surrounding provinces.

Nevertheless, it has to be kept in mind that some consider Chinese data to be unreliable and adapted to the political goals of the multiple levels of government (Koch-Weser, 2013). In China, (local) officials are ranked on the basis of their region's economic performance, measured by the indicators provided by those same local governments (Bell, 2015). Consequently, local officials have an incentive to falsify local economic data in order to improve their own ranking. Moreover, politically sensitive information can be withheld or adapted, all leading to incorrect data and consequently unreliable statistical analysis. Still, Chinese data can be used for the purpose of this paper. First of all, although absolute numbers might be unreliable, trends generally are trustworthy: local governments can only limitedly distort data, and unrealistic numbers will stand out (Lin, 1988). As this paper investigates whether Chongqing influences the trend of firm growth in neighbouring provinces, the data can be used. Secondly, there is no reason to assume that local governments differ in their effort to alter data, and consequently within-country analysis can be reliable (Lin, 1988). As

local officials have the same incentives to change data, it is likely the data will be skewed in the same direction. So, as this paper only looks at Chinese provinces and not at cross-country comparisons and relies on trends rather than absolute numbers, the data provided by the China Statistical Yearbooks can be used.

4.2 Methods

In order to understand the influence of Chongqing as an institutional growth pole on regional institutional change, a difference-in-difference approach will be used. Through the difference-in-difference approach, two groups are compared over time, with one group undergoing a ‘treatment’, whereas the other does not (Hamilton, 1994). In this case, the ‘treatment’ is the installation of Chongqing as an institutional growth pole in 1997. The group undergoing this treatment are Chongqing’s neighbouring provinces, whereas the control consists of provinces in China’s interior that do not share a border with Chongqing, and, in line with the framework used in this paper, thus do not benefit from the institutional change coming from Chongqing. An important assumption of the difference-in-difference approach is that a common trend exists. As seen in figure 7 on page 29, a clear common trend between the treatment and control group exists, and this assumption is thus met. The difference-in-difference technique leads to the following base-model:

$$(1) \quad \textit{Private Firms}_{it} \\ = \beta_0 + \beta_1 \textit{GrowthPole} + \beta_2 \textit{BorderingProvince} + \beta_3 \textit{GrowthPole} \\ * \textit{BorderingProvince} + \varepsilon_{it}$$

In this model, the dependent variable is the share of employment in private firms in each province i at time t . As institutions themselves are difficult if not impossible to measure, private firms function as a proxy of institutional change: private firms are a direct result of the creation of capitalist institutions, and it was through the creation of private firms that China’s coastal areas were able to develop quickly. Others using private firms as a proxy to measure the rise of capitalism in a Chinese context include Nee and Opper (2012), Lardy (2014), and Boisot and Child (1996). With regard to this variable on private firms, the dataset sets two important yet surmountable limitations. First of all, private firms are indicated as ‘other’, i.e. non-government-owned. Consequently, no distinction between domestic and foreign private firms can be made. Secondly, the ‘other’ variable does not capture so-called ‘red-hat firms’, or firms that were de facto privately owned, but operated under a ‘red-hat’ of government

ownership in the form of township- and village-enterprises (TVEs). Nevertheless, keeping in mind that TVEs largely disappeared in the early 1990s and that red-hat firms were mainly a coastal phenomenon, it seems unlikely that red-hat firms will distort the analysis (Veeck, et al., 2011).

With regard to the independent variables, *GrowthPole* is a dummy variable accounting for the moment Chongqing became an institutional growth pole in 1997. Before 1997, this dummy is coded as 0, and after 1997 it is coded as 1. *BorderingProvince* is a dummy variable measuring whether a province in China's interior is bordering Chongqing or not. In the theory, the spread of institutions is spatially dependent, and the institutional growth pole Chongqing should thus benefit those provinces closest to it most. In the dummy, provinces sharing a border with Chongqing are coded with 1, whereas those that do not share a border are coded with 0. Lastly, *Growthpole * BorderingProvince* is an interaction effect between the two dummy variables. This variable is the key output: it shows how much more (or less) Chongqing's neighbouring provinces have seen a rise in private firms, and it is this variable that can measure how Chongqing has functioned as an institutional growth pole.

Nevertheless, keeping in mind that provinces around Chongqing have different characteristics ranging from differences in climate to different economic backgrounds, it is important to control for this. Moreover, it is important to control for time-fixed effects: over time, the role of private firms has changed in China, with a continuing alteration in China's formal and informal institutional environment. Consequently, difference-in-difference analysis with province- and time-fixed effects should be used, based on model 1. In this version, time- and province-fixed effects are controlled for. This leads to the following fixed-effect model:

$$(2) \quad Private\ Firms_{it} = \beta_0 + \gamma + \delta + \beta_1 GrowthPole * BorderingProvince + \varepsilon_{it}$$

Here, the dependent variable of private firms is the same as in model 1, and functions as a proxy for institutional change. Moreover, just as in model 1 the intercept variable *GrowthPole * BorderingProvince* still is the key output measuring the strength of Chongqing as an institutional growth pole. The difference is that γ measures province-fixed effects such as differences in climate, and that δ measures time-fixed effects such as a nationwide change in policies. Also, the variables *GrowthPole* and *BorderingProvince* have been taken out, as they would give problems of collinearity with the fixed effects: whether one is bordering

Chongqing is a province-fixed effect, and the creation of Chongqing as a growth pole is a time-fixed effect.

4.3 Descriptive Statistics

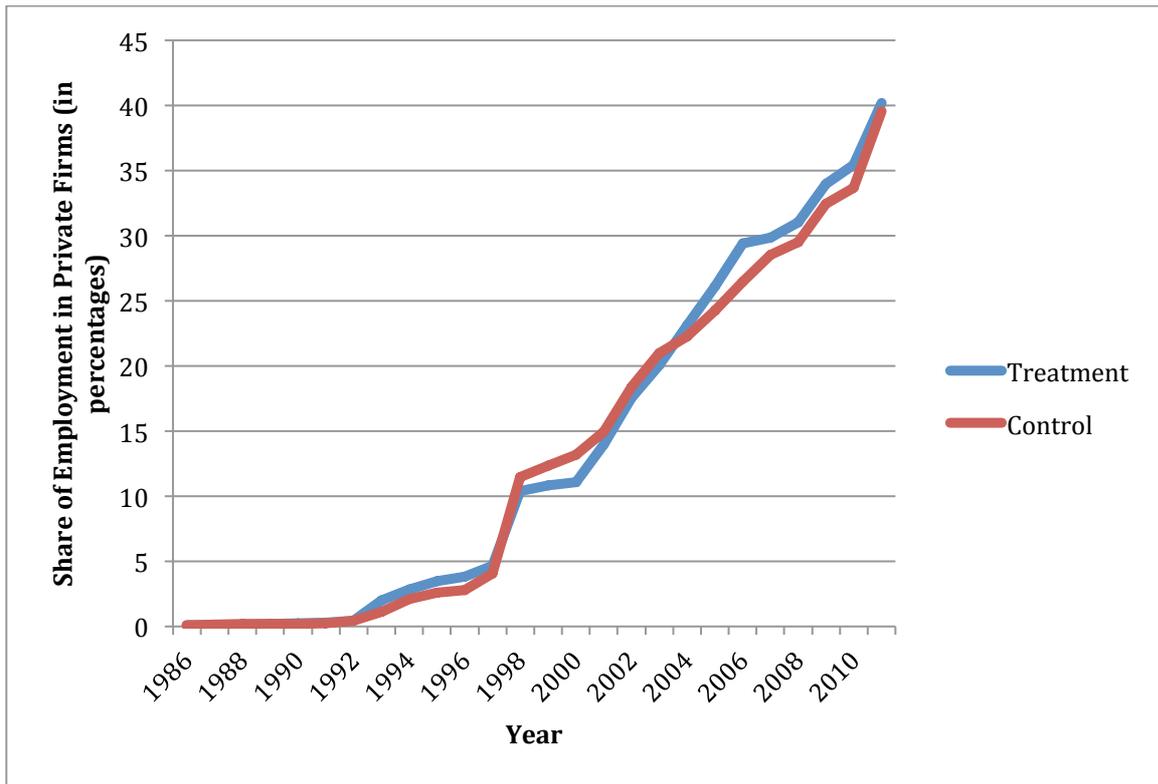
Due to constraints imposed by the dataset, the panel covers a period of 29 years (1986-2014), capturing most of China’s period of institutional change. The treatment group, i.e. provinces sharing a border with Chongqing, consists out of five provinces: Sichuan, Guizhou, Hunan, Hubei, and Shaanxi. For the control group, all provinces that are part of the Go West Program or the Rise of Central China Plan that do not share a border with Chongqing are included. This group has a total of 12 provinces. For all provinces, data on the year 2011 is missing, but otherwise the amount of missing values is limited. Consequently, the panel is strongly balanced.

Table 1: Dataset Composition

Specification	Time Period	No. of Provinces	Provinces	No. of Observations
Treatment: Neighbouring Provinces Chongqing	29 years (1986-2014)	5	Sichuan, Guizhou, Hunan, Hubei, Shaanxi	-
Control: Other ‘Interior’ Provinces	29 years (1986-2014)	12	Yunnan, Guangxi, Tibet, Qinghai, Xinjiang, Gansu, Ningxia, Inner Mongolia, Shanxi, Henan, Anhui, Jiangxi	478 (strongly balanced)
Control: Provinces in Go West Program	29 years (1986-2014)	8	Yunnan, Guangxi, Tibet, Qinghai, Xinjiang, Gansu, Ningxia, Inner Mongolia	377 (strongly balanced)

Looking at the share of employment in private firms in the two groups (figure 7), it can be seen that the control group and the treatment group are remarkably similar: they both see a steep increase in the amount of private firms, especially after 1997, the year in which the government shifted its policy focus to the interior. With regard to the role of Chongqing, it can be seen that initially, Chongqing’s neighbouring provinces fell behind, yet that after the year 2000 this trend changed with Chongqing’s neighbouring provinces overtaking other provinces in the interior around the year 2004 – giving just a weak indication that Chongqing successfully functioned as an institutional growth pole.

Figure 7: Share of Employment in Private Firms in the Relevant Provinces



Source: China Statistical Yearbooks 1986-2014.

5. Results

Table 2 gives the results of the difference-in-difference analyses. Model 1 shows the base-model identified above. The interaction effect measuring whether Chongqing functioned as a growth pole is not significant. However, it has to be kept in mind that this model does not control for province- and time-fixed effects. Model 2 does control for those effects, but the interaction between Chongqing as a growth pole and whether a province borders Chongqing remains not significant. This means that the creation of Chongqing as an institutional growth pole did not generate a higher growth rate of the amount of private firms in China's central region. In other words, the amount of private firms in provinces far away from Chongqing grew just as quickly as those nearby. To control for this result, model 3 only looks at provinces in China's Go West Program. The interaction is still not significant, confirming the notion that Chongqing did not advance the rise of private firms in its region.

Models 2 and 3 using difference-in-difference analysis with fixed effects indicate that Chongqing did not function as an institutional growth pole for the region as a whole. Nonetheless, provincial differences might exist, and therefore models 4 to 8 test whether an effect can be found in individual provinces neighbouring Chongqing. Here, an interesting result is found. Whereas for Guizhou, Hunan, and Shaanxi no significant results are found, for Sichuan ($p < 0.05$), and Hubei ($p < 0.05$) a significant result is found. The creation of Chongqing as a growth pole did have a significant influence on the rise of private firms in those specific regions, leading to a 4.6% and 5.7% extra increase in the share of private firms in those provinces. So, whereas Chongqing did not function as an institutional growth pole for its region as a whole, it did function as an institutional growth pole for two of its neighbouring provinces. The next section tries to understand why this is the case, using the model on institutional change introduced above as a framework.

Table 2: Output Difference-in-Difference Analysis

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Share	Share	Share	Share	Share	Share	Share	Share
	Private	Private	Private	Private	Private	Private	Private	Private
	Firms	Firms	Firms	Firms	Firms	Firms	Firms	Firms
			<i>Go West</i>	<i>Guizhou</i>	<i>Hunan</i>	<i>Shaanxi</i>	<i>Sichuan</i>	<i>Hubei</i>
			<i>Program</i>					
Interaction	2.293 (1.809)	2.261 (2.398)	2.728 (3.220)	0.301 (2.026)	2.818 (1.974)	-2.410 (2.026)	4.643** (2.026)	5.685** (1.973)
GrowthPole	19.18*** (0.980)							
Bordering Province	0.322 (2.351)							
Province FE	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.778 (1.275)	0.124 (0.924)	0.156 (1.254)	0.118 (1.167)	0.117 (1.163)	0.137 (1.167)	0.121 (1.170)	0.121 (1.164)
Observations	450	450	289	344	345	344	344	345
R-squared		0.909	0.882	0.892	0.892	0.890	0.895	0.896
Number of ID	17	17	11	13	13	13	13	13

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

6. Discussion and Conclusion

To understand the mixed results of the difference-in-difference analyses, it is important to recognize the differences between the five provinces dealt with. Provincial differences can explain why some are more receptive to change than others, and general patterns could be found. Table 3 gives an overview of some of the main characteristics of the five provinces useful for analysing provincial differences.

Table 3: Characteristics of Chongqing's Neighbouring Provinces

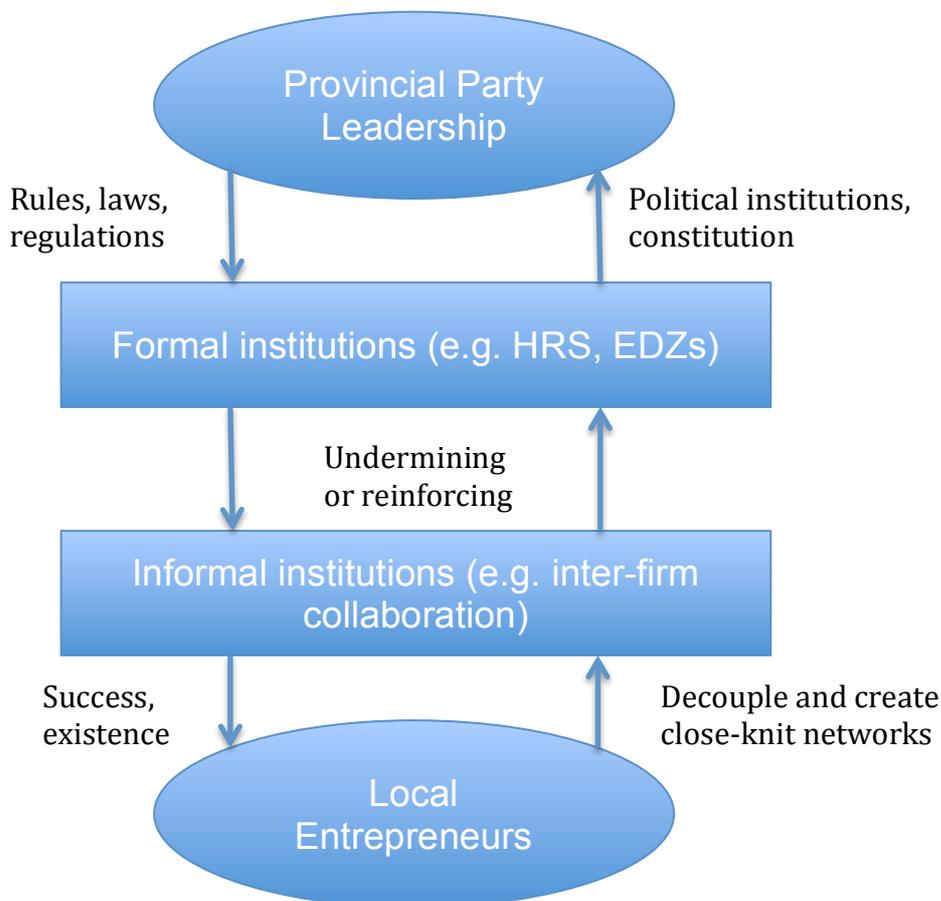
	Guizhou	Shaanxi	Hunan	Sichuan	Hubei
Chongqing	No influence	No influence	No Influence	Influence	Influence
Resources	Rich	Rich	Rich	Rich	Poor
First development zones	No zone established before 2000	1992, focussed on SOEs and heavy industry	1992, high-tech SOEs	1988, high-tech industries, both private and SOE	1992, low-tech, small-scale industries, especially private firms
GDP per capita (1978) in nominal RMB	175RMB	293RMB	286RMB	261RMB	332RMB
Nominal annual GDP per capita growth (1978-2016)	9,11%	9,80%	8,96%	9,87%	9,98%
SOE decline (1978-1995)	- 14.0%	- 23.4%	- 25.3%	-39.8%	-39.4%
Rise Private Firms	Late	Late	Late	Early	Early
1978 Leadership	Maoist	Maoist	Maoist	Dengist	Dengist

Source: China Statistical Yearbooks; Teiwes & Sun, 2015; Cheung, Chun & Lin, 1998; Guo, 2013.

For the analysis, the framework on institutional change introduced in chapter 3 will be used. Figure 8 gives the same framework, but then adapted for this specific analysis. At the top is the provincial party leadership, who can support top-down change by, for example, implementing the household responsibility system (HRS) or by creating economic development zones (EDZs). At the bottom, local entrepreneurs can be found, who decouple

and work together through close-knit networks. With those close-knit networks, informal institutions can be created, ranging from collaborations on innovation or the sharing of financial resources. It is the interplay between the different aspects and actors that determines whether Chongqing could successfully function as an institutional growth pole in a particular province. For example, the provincial party leadership decides on the implementation of the rules beneficial to private firms, heavily influencing the formal institutions and the way they undermine or reinforce existing informal institutions. For the analysis, figure 8 shows two ways to go forward. One way is analysing top-down change, focussing on the local leaderships and the formal institutions they created, and one is analysing bottom-up dynamics, focussing on entrepreneurs, their networks, and the informal institutions they created. However, before doing so, it is important to know the different outcomes in the five provinces, i.e. the role of private firms in each province. The next section will thus look at the position of private firms in the five provinces first. The subsequent sections then look at top-down and bottom-up changes respectively.

Figure 8: Model of Institutional Change Applied to the Case Study



Source: own creation, based on analysis.

6.1 Private Firms and Institutional Reforms in the Five Provinces

The analytical framework in figure 8 has no predictive powers, and can only be used if a) the outcome of institutional change is known, and b) the position of participating actors is understood. Provincial differences with regard to these aspects thus must be understood, before analysing top-down and bottom-up change. In the case of China's evolutionary institutional transition, two aspects are important: 1) the rise of private firms; and 2) the attitude of local governments with regard to institutional reforms. The first point is the direct outcome of successful institutional change, and the second point is the position the elite takes in the process of top-down change¹.

With regard to the first point, data on the rise in the share of industrial output by private firms (or decline by state-owned firms) during the initial reform period (1978-1995) can be useful. The higher the share of private firms, the more important they are for the local economy, and the stronger their position is. As data on private firms is only available from 1986 onwards, data on the decline in output of state-owned firms is more illuminating. Here, an interesting pattern can be found: Shaanxi, Hunan and Guizhou saw a decrease of only 23.4%, 25.3% and 14.0% respectively, whereas Hunan, and Hubei saw a decline of 39.8% and 39.4% respectively (Wei, 2000). The provinces that could not benefit from Chongqing as an institutional growth pole saw the weakest decline in state-owned firms during the early reform period. Conversely, the provinces that did benefit from Chongqing saw the strongest increase in private firms. Apparently, those provinces that had the strongest initial position of private firms benefitted most from Chongqing.

With regard to the second point, a local government's attitude with regard to institutional reforms is difficult to measure. A useful proxy is the establishment of economic development zones (EDZs) in the respective provinces. EDZs were essential in China's reforms, and are considered as a first step towards capitalism (Lo, 2006). By establishing an EDZ, local governments welcomed (foreign) private firms as a means to development, signalling a willingness to tolerate the rise of private firms. As of today, all five provinces have (multiple) EDZs. Most interesting however is the year in which the first EDZs were established and the goal they served. All five provinces except for Guizhou established the first EDZs in the late 1980s or in 1992, the year of Deng Xiaoping's Southern Tour. Guizhou, which was not influenced by Chongqing as an institutional growth pole, only established its

¹ Based on previous literature on bottom-up dynamics in China (Nee & Oppen, 2012; Lardy, 2014), it is assumed that the masses, or entrepreneurs, want institutional change favouring capitalist practices. Their attitude towards institutional change is thus not analysed in this paper.

first (and to date only) EDZ in 2000 (Guo, 2013). With regard to the other four, differences with regard to the focus of the EDZs exist. In Hubei, the *Hubei Jingzhou Chengnan Economic Development Zone* mainly focussed on private firms in the low-end industries (Guo, 2013). The zones in Hunan and Sichuan both focussed on hi-tech industries, but only Sichuan's heavily relied on (foreign) private enterprises (Guo, 2013). The *Baoji Hi-Tech Industrial Development Zone* in Shaanxi on the other hand mainly focussed on SOEs in the heavy industries, for example supporting the automotive industry (Guo, 2013). This difference is significant: although Sichuan, Hubei, Hunan, and Shaanxi all established EDZs early in the reform period, the latter two did not aim at increasing the share of private enterprises, but rather at the strengthening of existing SOEs. So, in the early reform period (1978-1996), the provinces that did benefit from Chongqing as an institutional growth pole had established EDZs specifically targeting (foreign) private enterprises, whereas Shaanxi, Hunan and Guizhou had not – confirming the previous conclusion that only the provinces that had a strong initial position of private firms benefitted from Chongqing.

A second approach to determine a province's view on institutional change favouring capitalist aspects is its position with regard to the household responsibility system. Introduced by Deng Xiaoping and his allies in 1978, the HRS was introduced in a gradual manner. Provinces and local communities could decide by themselves whether they wanted to implement the HRS or not, and significant debates on the topic have been held (Teiwes & Sun, 2015). Looking at the five provinces, the above conclusions are confirmed: the provinces that benefitted most from Chongqing were also most open to change. Sichuan was, together with Anhui, the first testing ground for the system, and Hubei enthusiastically embraced the system from 1979 onwards (Hendrischke & Feng, 1999). Hunan and Shaanxi on the other hand were more conservative, and started to introduce the system in 1981 and 1982 respectively (Xu, 2013). Besides adopting the system late, they also did so in a slow manner: it took until the mid 1980s until the system was fully implemented in Shaanxi (Cheung, Chung & Lin, 1998). Guizhou is a different case: although the province aimed to introduce the system, it failed to do so, as famine and severe droughts prevented the local government from fully implementing the HRS, and communist institutions continued to persist (Teiwes & Sun, 2015).

In all, as the decline in the share of SOEs in industrial output, the established of EDZs, and the introduction of the HRS shows, those provinces that benefitted from Chongqing as an institutional growth pole were among the first to embrace pro-capitalist institutional change, whereas those that did not benefit had a more conservative attitude. This deduction leads to

two interrelated questions: 1) why did some provinces initially favour private enterprises more than others? and 2) why did those provinces with a stronger initial view of private firms benefit more from Chongqing than others? Using the institutional framework depicted in figure 8, two beginnings of an answer exist. Firstly, a stubborn elite could have prevented top-down changes facilitating the rise of private firms, decreasing the role of private firms both before and after the creation of the institutional growth pole. Secondly, weak bottom-up dynamics could have led to only a limited rise in private enterprises, both weakening the initial rise of private firms and their potential benefit from Chongqing. To see whether those explanations are reasonable, top-down and bottom-up dynamics of institutional change in the provinces must be analysed – starting with the top-down dynamics in the next section.

6.2 Explaining Differences in Top-down Change

The government plays an important role in figure 8's framework, despite the existence of bottom-up dynamics. Not only can it implement top-down changes, it also takes up an essential role in tolerating bottom-up development. A harsh government can punish everyone starting a private firm, preventing bottom-up changes, whereas a more lenient government can turn a blind eye on entrepreneurs starting a firm, allowing for all-embracing institutional change. Important here is that the position of a government is not fixed. It can be influenced by bottom-up pressures or by changing economic, political, and social circumstances. As a result, governments can adopt positions formerly only taken by the masses. In China, some local governments abandoned communist policies rapidly, and adopted policies favoured by entrepreneurs relatively early, whereas others were more stubborn and refused to change (Yang, 1996). In the previous section, it was identified that the provinces that did not benefit from Chongqing were at least more suspicious of private firms than those two that did benefit. This raises the question why the provinces behaved the way they did. Multiple reasons as to why elites would be suspicious of institutional change are put forward in the literature, of which the influence of GDP, natural resources, factor endowments and agriculture, and ideas will be discussed here.

Gross Domestic Product. In the literature on institutions and economic growth, an important dilemma is whether good institutions cause growth, or whether growth causes good institutions. In theory, economic wealth or high levels of GDP per capita could make a province more receptive to the creation of 'good institutions' (Shirley, 2005). Economic wealth could make local governments more able to create an environment in which private firms can rise, allowing them to be more receptive to institutional change originating from

Chongqing. In this line of reasoning, the richer a province is in the year Chongqing was created an institutional growth pole, the more likely it is to benefit. Nevertheless, the outcome does not univocally support this theory. As can be seen in table 3, although Guizhou is the poorest of the five, Shaanxi is among the richest, and no clear pattern can be found.

However, the dynamics can also work the other way round: the poorer a province is, the more willing it is to accept significant institutional change. This is especially the case for the beginning of the reform period (1978), where local governments were often so poor that they had nothing to lose from any reform. Even if the central government would not like the rise of capitalism in its provinces, local governments did, as they could benefit from an increase in economic activity in their jurisdiction. In the Yangtze River Delta, Nee & Opper (2012) found that the poorer a municipality, the more likely it was to adopt reform measures. Moreover, the household responsibility system was initially only designed for the poorest provinces, whereas the richest provinces were told to continue with the Maoist system. Nevertheless, this line of reasoning does not hold with the data too: Guizhou was one of the poorest provinces in all of China, yet failed to embark on a prolonged process of institutional change, whereas Hubei was one of China's richest provinces, and spearheaded the rise of private firms in China's interior.

Natural Resources. Another possible explanation can be found in the endowment of natural resources. Multiple studies have found a relationship between natural resources and institutions (Leite & Weidmann, 1999; Mehlum, Moene & Torvik, 2006). Here, state-owned firms extracting natural resources continue to dominate the market, and local governments have little incentives to tolerate the rise of private firms or improve their position. In this paper's theoretical model, this would mean actors at the top are relatively strong, whereas bottom-up dynamics are rather weak. However, the outcome does not seem to support this line of thinking. All provinces except for Hubei are richly endowed with natural resources, and although a relation between resources and local institutions might exist, it cannot explain the divergent experience of the five provinces.

Factor Endowments and Agriculture. In their theory on factor endowments and institutions, Sokoloff and Engerman (2000) argue that the institutional differences between North- and South America can be explained by differences in factor endowments. North America had more inclusive factor endowments, whereas South America was endowed with factor endowments that leaned toward exploitation through for example slavery on cotton farms. In the current paper's model, this would – just as with natural resources – mean that the top is relatively strong, whereas the bottom is rather weak. In their theory, Sokoloff and

Engerman (2000) mainly look at differences in a region's main agricultural crops. In the five provinces, differences exist: whereas the northern provinces of Shaanxi and partially Hubei mainly focus on wheat production, the southern provinces of Sichuan, Guizhou, and Hunan heavily rely on rice (National Geographic, 2009). However, for Sokoloff and Engerman's theory to work, differences in the nature of the crop with regard to exploitation need to exist – something that is not the case here. Both wheat and rice crops allow for small-scale farming, and in all provinces small-scale farming is the norm².

Ideas and Convictions. Deidre McCloskey (2015) argues that 'it was ideas and ideologies, not interests or institutions' which caused the era of modern economic growth. McCloskey argues that a distinction between ideas and institutions exists, but this does not have to be the case. Individuals longing for institutional change, be it in the masses or the elite, do so because it is in their own personal interest, but also because it is in their conviction that this change is best. As argued in chapter 3 and also put forward by for example Alston and Mueller (2016), institutional change is complex and human actors cannot know the full consequences of their proposed institutional change. A path to 'good institutions' exists, but actors do not know what this path actually looks like (Alston & Mueller, 2016). As a result, disagreements on what is the right course can exist, mostly based on personal convictions and ideas. It is based on those ideas that local elites can team up with local masses and start off a process of prolonged institutional change favouring the rise of private firms. Local leaders can become convinced that increased incentivization and privatization is needed for a province's economic future, and be supportive of the creation of a form of capitalism. In China, local party secretaries appointed by the central government can heavily influence top-down reforms, and be at least conducive to bottom-up developments (Xu, 2011).

Looking at the party secretaries at the initial period of reforms, significant ideological differences exist. After the death of Mao, China was divided between Maoists who wanted to keep collectivized agriculture and opposed incentivization, and the Dengists who supported agricultural and economic reforms as proposed by Deng Xiaoping (Yang, 1996). Of the five provinces, Sichuan and Hubei had strong pro-Deng secretaries, whereas the secretaries of Hunan and Shaanxi were staunch Mao supporters (Teiwes & Sun, 2015). Sichuan was under the leadership of Zhao Ziyang, who was one of the first to implement the household responsibility system and later became Deng Xiaoping's prime minister overseeing the

² Obviously, this only was the case after the implementation of the HRS, which was finished in most provinces during the early 1980s. Still, keeping in mind that before the HRS all agricultural activity was communal, no matter province or region, factor endowments through agriculture is unlikely the reason for the provinces' variegated experience with institutional change.

country's economic liberalization (Yang, 1996). Secretary Chen Pixian in Hubei was pursued during the Maoist era, and was one of Deng Xiaoping's first rehabilitations (Hendrischke & Feng, 1999). As secretary, Chen heavily supported Deng's liberal policies, explaining the quick rise in private firms in the province and the province's early introduction of the HRS.

In Hunan meanwhile, Mao's designated heir Hua Guofeng and his successor Mao Zhiyong heavily opposed the measures by Deng, with the former being in a power struggle with Deng Xiaoping (Yang, 1996). Only in 1981 did the province start to introduce the HRS, after severe pressure from the central government (Xu, 2013). In Shaanxi, old Maoists were in power, critical of potential reforms and opposing any form of capitalism to exist in the country. As a result, the province started to introduce the HRS only in mid-1982, one of the latest provinces to do so (Cheung, Chun & Lin, 1998). Of the five provinces, Guizhou is the exception. It was one of the 'pioneering provinces' that introduced the HRS quickly and was open to economic reforms, but the rise of private firms was only limited. The main reason for this is that although the province was open to reforms, it was unable to implement them. Being one of China's poorest provinces already, the province also faced a severe drought and resulting famine in 1978, stalling agricultural and economic reforms, and making its leaders unable to create a period of significant institutional change (Teiwes & Sun, 2015).

The five provincial governments thus did have different positions with regard to top-down change favouring the creation of capitalist-style institutions. Hubei and Sichuan favoured the creation of capitalist-style institutions early on, whereas Hunan, Guizhou, and Shaanxi did not. Despite suggestions from the literature on institutional change that they might have an influence, a province's GDP, natural resources, and factor endowment and agriculture did not determine its position with regard to institutional change. What did have an influence was the role of ideas. Hubei and Sichuan had leaders with ideas similar to those of Deng Xiaoping, and those leaders were able to push for reforms. Hubei and Sichuan introduced the HRS early on, and experimented with new laws and regulations for private firms. The fact that Hubei and Sichuan did have progressive leaders calling for change is unlikely to be due to specific characteristics of those provinces. Instead, it seems that the right persons were on the right place at the right time. Had Hubei and Sichuan had different leaders, it is likely that their following experiences would have been different. In figure 8, Hubei and Sichuan's provincial leadership thus implemented formal institutions (such as the HRS), which allowed for the

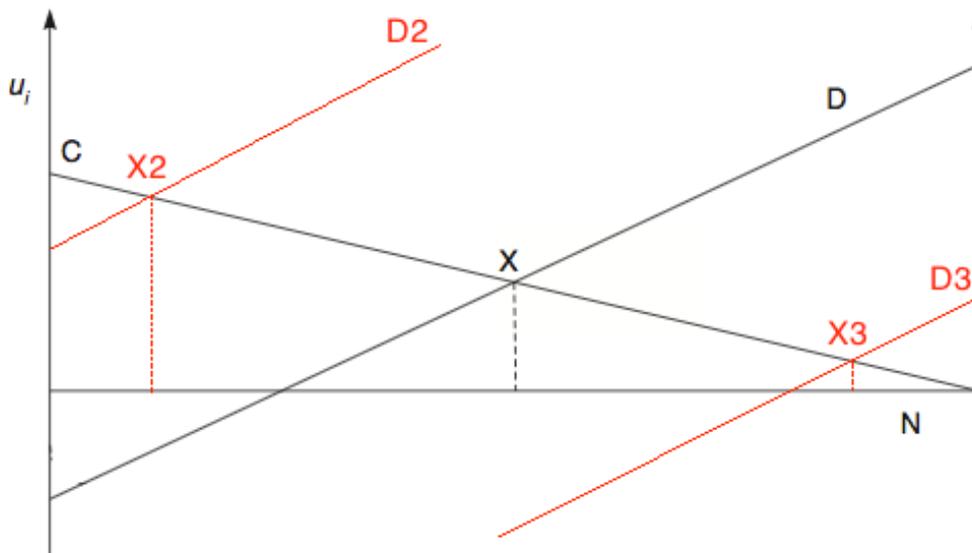
existence of informal institutions that could in the end undermine the communist system. In the other three provinces, the formal institutions were much more strict (for example by continuing communal farming), preventing the rise of undermining informal institutions.

Still, halfway the 1980s the Maoist provinces realized that increased incentivization and liberalization was a good way forward, which, Hirschman (1967) would argue, is a good thing: they abandoned their failure. The above discussion however implies that this shift was too late. Choices made by a provincial leadership in 1978 matter for a province's ability to benefit from Chongqing as an institutional growth pole two decades later. Following the example of Sichuan and Hubei did not lead to the expected benefit in Hunan, Guizhou, and Shaanxi. An important question thus remains: why did the position of a province's leader in 1978 matter for this province's ability to benefit from Chongqing as an institutional growth pole, almost two decades later? To answer this question, a look into the provinces' bottom-up dynamics must be made – something done in the next section.

6.3 Why Bottom-up Dynamics Lost Its Power

Bottom-up institutional change is less likely to occur in an environment hostile to this change. In Guizhou, Hunan, and Shaanxi, local governments tried harder to keep the socialist economy intact, whereas the local governments in Hubei and Sichuan were more open to change. In the theoretical framework, this has the following effect. The local leadership at the top wants to keep the status quo, and institutional change thus cannot occur through top-down reforms by changing the formal institutions. Consequently, change must come from below by entrepreneurs who decouple from the existing norms. However, with a strong local government opposing this decoupling, decoupled individuals are put under pressure. Private entrepreneurs might be put into prison, or their belongings might be confiscated (Nee & Opper, 2012). In the Schelling diagram, reintroduced in figure 9, this means that the costs of decoupling are relatively high, for example at line D_3 . Accordingly, the tipping point is relatively far to the right, and institutional change from below is unlikely to occur.

Figure 9: Schelling Diagram



Source: Nee & Oppen (2012).

The difficulty of reaching tipping points in Guizhou, Hunan, and Shaanxi also explains why those provinces benefitted less from Chongqing as an institutional growth pole. As shown in chapter 3, proximity to an institutional growth pole shifts the tipping point to the left, as the potential benefit from decoupling increases. Even when assuming that this effect will be similar for all its neighbouring provinces, it allows for the different results found in the analysis, as the effect heavily depends on the initial position of the tipping point. In Hubei and Sichuan, the tipping points already were relatively far to the left, for example at X_2 in figure 9, and the creation of Chongqing as an institutional growth pole led to many other tipping points to occur, allowing for the rise of private firms. In Guizhou, Hunan, and Shaanxi on the other hand, the shift occurred from for example X_3 to X , and the tipping points remained relatively difficult to reach, leading to only limited institutional change to occur. This not only explains why the rise of private firms and the benefit from Chongqing was relatively small in the three provinces, but it also shows that a province's initial position matters. Those provinces with most initial change and an already developed private sector were able to benefit most, whereas those with a hardly developed private sector could only benefit to a limited extent.

The above discussion explains why the benefits of Chongqing are unlikely to spread to hostile environments, but it has to be kept in mind that Shaanxi, Hunan, and Guizhou have tried to follow the examples of Sichuan and Hubei. Under pressure of the central government, the HRS was introduced, firms were allowed to register themselves, and the role of the state

in industrial output did decrease. So why have Shaanxi, Hunan, and Guizhou not been able to simply replicate the ‘pioneering provinces’ and create a vibrant ‘capitalism from below’? The answer is that as capitalism gained ground in all of China, the bottom-up dynamics lost its power.

Essential for the creation of capitalism through bottom-up processes are close-knit networks (Nee & Opper, 2012). For the reaching of tipping points, close-knit network are vital: it is through close collaboration that private firms can offset the inadequate formal environment and be successful in a transitioning economy. As identified in chapter 3, important for the functioning of such networks is that a strong punishment mechanism exists. Firms that are excluded from the network must have difficulties to survive, giving strong incentives to abide to the existing rules within the network and not cheat on others. In the case of early-reform China, this mechanism worked well. The government was highly hostile towards private firms, and without a network those firms would not have been able to survive. Nevertheless, as private firms became increasingly successful on the coast, the central government changed its policies. Private enterprises were allowed to register themselves in 1986, and the Company Law of 1994 allowed for further acknowledgement of private firms (Naughton, 2008). This change in policy was not local, but national. For example, private firms were allowed to register themselves in all of China (Veeck et al., 2011).

For the working of close-knit networks, this change in policy had far-flung consequences, as the punishment mechanism weakened. Before, if a firm were excluded from its network, it would inevitably perish. Now, a firm excluded from its network is able to survive, based on the formal rights government policies have given to private enterprises. Consequently, punishment through exclusion has become a much less severe punishment. As a result, inter-firm collaboration involves higher risks, and trust between firms decreases. Xu and Ma (2002) describe this phenomenon, and accordingly talk about a ‘trust crisis’ in China’s inter-firm supply chain. Whereas in the late 1970s and early 1980s informal agreements were the norm (Nee & Opper, 2012), the role of formal contracts and agreements has increased drastically (Xu & Ma, 2002). Not informal agreements, but contracts regulate the interactions between individual firms.

It is exactly this increasing importance of formal networks that can explain why Chongqing did not function as an institutional growth pole for Shaanxi, Hunan, and Guizhou. For formal contracts to function properly, an entity enforcing those contracts must exist, in China’s case most often a local government. Only then, trust between individual firms is sufficient to allow for inter-firm collaboration and for the successful rise of the private sector

as a whole. In Shaanxi, Hunan, and Guizhou, private firms had not yet been able to establish the required institutions needed for the efficient safeguarding of business contracts. Local governments were at least still critical of private firms, and courts had limited experience dealing with conflicts involving private firms (Xu & Ma, 2002; Naughton, 2008). As a result, contracts were less efficient in the provinces of Shaanxi, Hunan, and Guizhou. This not only makes collaboration harder, it makes it harder to reach a tipping point for institutional change too. In the Schelling diagram, a certain quantity of individuals decoupling from the norm was required before institutional change could occur. In an environment where contracts are essential but ill enforced, this required amount of decoupled individuals is difficult to reach, making for example X_2 in figure 9 much harder to reach in Shaanxi, Hunan, and Guizhou, than in Sichuan and Hubei. In this way, Chongqing did not only fail to benefit Shaanxi, Hunan, and Guizhou because of their relatively hostile environment to private firms, but also because of the weakening of inter-firm networks in a hybrid institutional situation.

In all, Chongqing could not function as an institutional growth pole in Shaanxi, Hunan, and Guizhou, as bottom-up dynamics were weaker in those provinces. The weakness of bottom-up developments is due to a) local governments that are more hostile to private firms, and b) weaker inter-firm collaboration and networks in a hybrid institutional environment. Especially the last point explains why decisions made by party officials in the early 1970s influences the fate of a province to this date. Once provinces decided to follow the example of the ‘pioneers’, China’s institutional environment was already too ‘capitalist’ for the bottom-up dynamics to come in full swing. The institutional path taken by for example Sichuan and Hubei was not available to Shaanxi, Hunan and Guizhou any more: they were too late, despite aiming for the same trajectory. This resembles the idea by Alston and Mueller (2016) mentioned earlier. Actors are inspired by the experiences of others, and copy their actions. However, they do not know whether the trajectory taken by the inspirer is still available, and might take a path that will only lead to disappointment. In central China, Shaanxi, Hunan, and Guizhou were inspired by the coastal provinces and by pioneers in the interior such as Hubei and Sichuan, but copying their strategy led to a disappointment: the private sector remains relatively weak, and Chongqing could not function as a growth pole. Instead, other paths of change should be found, allowing for the creation of capitalist institutions in those provinces.

6.4. Implications

An important implication from the above discussion is that the institutional circumstances of the receiving provinces matter just as much as the growth pole itself. Chongqing could successfully function as an institutional growth pole in Hubei and Sichuan because its institutional structure was relatively alike: all provinces had significant decreases in government power, and all provinces had relatively strong private firms. Consequently, it is important that the institutional setting in the periphery is not too different from the setting in the growth pole itself. The potential success of an institutional growth pole is thus severely limited by the institutional make-up of the receiving provinces. To successfully support regional economic growth, an institutional growth pole must not only support the ‘right’ institutions, it must also do so in a right environment.

This environment heavily depends on choices made in the past. Historically, the three non-benefiting provinces made choices that harmed their transition towards a capitalist system, and the consequences of those choices can be felt until today. What is most illuminating about the cases of Shaanxi, Hunan, and Guizhou however is that development paths are very much time specific. Sichuan and Hubei chose for capitalist-like policies, and benefitted from this decision through strong bottom-up dynamics. When Shaanxi, Hunan, and Guizhou tried to copy this development path, it was not an option anymore: the bottom-up dynamics had weakened. Instead, latecomers have to figure out their own way of achieving institutional change, both in and outside of China.

With its focus on the rise of private firms through an institutional growth pole, this paper looked at a context unique to economies transitioning from a communist to a capitalist system. Still, its findings can be applied to a broader setting of developing countries. In any developing country, institutional growth poles can be used to foster economic growth, and in any developing country the same criteria holds: an institutional growth pole can only be successful if the receiving province has a similar institutional make-up as the growth pole. In recent years, the ‘China model’ has been applied to Africa, with its heavy focus on growth poles through for example urban-biased growth or through the creation of special economic zones. Although the rise of private firms is an irrelevant topic for capitalist Africa, institutional change is not: institutions influencing governance, corruption, and trust need to change if the continent wants to be successful. In this way, African institutional growth poles can be a source of institutional change. Nevertheless, this can only be the case if the growth poles are not too far removed from the institutional reality in other parts of the country. Only

in this way, a multitude of tipping points can be reached, and only in this way institutional change can include the whole country or region.

The results also have significant consequences for Chongqing as a growth pole. Although it positively influenced the rise of private firms in two of its neighbouring provinces, it did not function as such for the whole region – despite this being the goal of the central government. As a result, the creation of Chongqing as an institutional growth pole can only be seen as a mixed success. Moreover, with its limited ability to create institutional change, the ‘China model’ as implemented in Chongqing cannot simply regenerate the east coast’s success. Institutional change and the rise of private firms was an essential aspect of the coastal economic miracle, and without the full inclusion of these dynamics it remains to be seen whether China’s interior will be able to catch up.

6.5. Further Research

This paper is one of the first to consider institutional growth poles, and many opportunities for further research exist. First of all, it would be interesting to see whether the dynamics of an institutional growth pole can be identified in a non-Chinese context. China is not only large, but also has a regionally varied institutional environment – making it a unique test case for institutional growth poles. However, institutional growth poles might exist in other countries too, albeit on a smaller scale. In Ethiopia, Addis Ababa has seen heavy investments by Chinese firms, transforming the city and its institutions. The question remains however whether other parts of the country benefit too. In developed countries, institutional growth poles could exist too: America’s Silicon Valley could have influenced the institutions and political discourse in the whole state of California. Secondly and related to this, further research needs to be done in a non-communist context. The institutional transition from a communist to a capitalist economy is severe, and the dynamics in a less severe transition might be different. In the context of a transition economy, tipping points are difficult to reach due to the stark differences between the two economic systems. In a more unified institutional environment requiring less change, tipping points can be easier to reach, and the working of an institutional growth pole could be even stronger. Lastly, research needs to be done on how to translate understandings on institutional growth poles into policy. In order to do so, it must be understood how large the differences between centre and periphery can be. Would a unified ‘capitalist’ system be sufficient, or are more requirements needed? Related to this is how to deal with a large gap between centre and periphery: does the growth pole have to adapt (i.e. lower) its standards or not? In the case of Chongqing, the aim of creating

capitalism in China's interior might have been too ambitious, and instead the goal could have been to create a more hybrid form of capitalism. Understanding those questions through further research is important. Only then, the 'China model' can be truly useful – in Chongqing, and beyond.

7. References

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