JEROEN KUILMAN

The Re-Emergence of Foreign Banks in Shanghai

An Ecological Analysis

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De her-opkomst van buitenlandse banken in Shanghai:
een ecologische analyse

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Abstract

The substantive purpose of this dissertation is to address three important theoretical areas within the field of organizational ecology, namely: 1) the re-emergence of organizational populations, 2) ecological interactions during the early stages of firm activity, and 3) the modeling of inter-population competition. It does so by examining the evolution of the foreign banking industry in Shanghai, which has been subject to a socio-political environment that for almost thirty years was inhospitable to foreign banks.

First, I examine the phenomenon of re-emerging organizational populations by modeling data on organizational foundings between 1847 and 2004. Studying such instances of re-emergence allow us to look at processes of legitimation and identity formation under atypical conditions, processes that are fundamental to our understanding of the evolution of organizational forms. The empirical analysis of the re-emerging foreign banking population in Shanghai after 1982 shows that a renewed legitimation phase did not take place after the population had been largely absent for almost three decades. The analysis, however, shows that organizational dynamics in an alternative social system, namely that of Hong Kong, are of paramount importance in explaining the pattern of re-emergence in Shanghai. These results thus suggest moving beyond the customary approach of studying organizational populations within a single social system to multiple social systems is important in understanding the evolution of organizational forms and their identity.

Second, I study the process by which a pre-producer or pre-operational entrant becomes fully operational, in particular how this likelihood depends on the density of other social actors in the environment of the potential entrant. The results indicate that the likelihood of foreign banks in Shanghai moving from the pre-entry phase -having a representative office- to the entry-phase -obtaining a branch license- is non-monotonically dependent on the number of fully operational organizations. Results

also show that there is a negative effect on the transition process of the number of other potential entrants, but this effect is only visible on a more limited geographical scale. In addition, the findings suggest that the potential entrant's magnitude of capabilities affect the likelihood of entry, while the nature of these capabilities seems to affect the timing of entry.

Third, in this dissertation I ecologically model inter-population competition. In line with a reversal of the 'resource partitioning' process such effects can be linked to decreasing concentration. However, an alternative explanation is provided by the notion of competitive exclusion. According to this principle, one population simply outcompetes another population by means of its size or numbers. Using event-history methods to analyze the time-to-profitability of the foreign banks in Shanghai, it is shown that - in this particular context - both explanations can be used to account for the sub-optimal performance of the foreign banks in Shanghai. These results suggest that in a transitioning economy such as China, the mass, density and concentration of the organizations occupying positions in the market center all respond in an interrelated manner to the transition process.

Taken together, these results reveal some of the intricacies of the Shanghai market and how these have affected the overall re-emergence of foreign banks in Shanghai.

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1

Introduction

In the last twenty-five years, Shanghai has experienced a rapid inflow of foreign banks. While only four 'quasi-foreign' banks were present in Shanghai in the early 1980s (banks such as the Hong Kong and Shanghai Banking Corporation (HSBC)), this number grew to over one hundred foreign banks after 1997. To many casual observers, this may not seem surprising given the fact that this city has been receiving the lion's share of foreign direct investment (FDI) in China and accounts for a large proportion of foreign trade, both of which increased substantially after China embarked on its open door policy in the early 1980s. In 2004 for instance, Shanghai, with a population of only 1.3 percent of China's total population and a land area of only 0.1 percent, accounted for more than ten percent of the total level of FDI in China with a similar share of China's total level of foreign trade, more than any other city in China. Foreign enterprises have also come to play an important role in Shanghai's local economy: foreign invested enterprises accounted for almost forty-eight percent of Shanghai's gross industrial output in 2003.

There are some interesting features however that warrant closer analysis of the rapid entry of foreign banks into Shanghai. One of these is that foreign direct investment and the inflow of foreign banks into Shanghai are certainly not new phenomena. The history of foreign banking in Shanghai dates back to 1847, when the first international bank established its presence in this city. Much later, in the 1920s and 1930s, Shanghai developed into one of Asia's main financial centers: Shanghai outcompeted other financial centers in the region such as Hong Kong, Singapore, and Tokyo. Shanghai's development as a financial center was stimulated by the founding of many modern-style Chinese banks along with industry associations and

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a stock exchange. Shanghai's main boulevard, the 'Bund', at the time housed a relatively large number of foreign financial institutions and was widely referred to as the 'Wallstreet of the Orient'. The city's industrial identity in this period became indelibly linked with banking and finance, and part of this identity may well have revived during the re-emergence of foreign banks in Shanghai.

Another interesting feature is that the long-established link between banking, on the one hand, and Shanghai on the other, is seemingly not translating itself into successful performance of individual foreign banks in Shanghai. As statistical data shows, foreign banks have only been able to capture a marginal share of the Chinese market (estimated at a meagre 1.2 percent at the end of 2002[1]). This seems to run counter to voices in *communis opinio* and contemporary popular press (e.g. Flannery 1997; Graham 2000; Yeh 1996) heralding the growth potential of Shanghai and China at large. In contrast, the evidence based on the analysis of foreign banks, as presented in this dissertation, points out some difficulties associated with market entry in this particular environment. Consider for instance the following findings.

- Chapter 4 shows that as more and more foreign banks set up operations in Shanghai, competition among them is intensifying. In fact, this is deterring the founding of new foreign banks in Shanghai: as the current 'carrying capacity' of the market seems to have been reached, the local market is getting increasingly crowded, making it less attractive for other banks to enter this market. In addition, as Chapter 6 shows, *extant* foreign banks in Shanghai also suffer from this crowded market as evidenced by their depressed profitability rate.

- Only a subset of the international banks that establish a presence in China, are allowed to generate profits in the local market. Foreign banks generally start their operations in Shanghai with a small representative office, which is only allowed by authorities to conduct non-profit oriented services, such as gathering market information. After a mandatory waiting time in China of at least two years, the bank may get access to the local market, but over the period from 1990 to 2004 less than thirty-three percent has succeeded in doing so (Chapter 5).

- As both the number and aggregate size of domestic banks increase, and these banks gradually move towards the peripheral areas of the market, domestic

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[1] *People's Bank of China's Quarterly Statistical Bulletin.*

banks increasingly engage in competition with foreign banks. The result of this increased competition between a growing population of domestic banks and the more peripheral foreign banks in this increasingly de-concentrated market is a depressed profitability rate of foreign banks in Shanghai (Chapter 6).

These findings suggest that, although the city has experienced rapid growth relative to other financial centers such as Hong Kong, the intricacies of the Shanghai market and the Chinese market at large might frequently be *underestimated*, leading to suboptimal performance of foreign banks.

1.1 Motivation

This dissertation is based on a project that grew from the ambition to apply the ecological framework (Hannan and Freeman 1977, 1989; Carroll and Hannan 2000) to organizational dynamics in a Chinese context. Doing so could matter in novel ways since, to date, only scant ecological research has been conducted in this particular environment (but see Kim and Delios 2003; Li, Yang, and Yue 2005; Krug and Pólos 2004). The value of this type of research not only lies in the generalizability of some of organizational ecology's earlier findings. More importantly, it also provides us with a unique opportunity to test some important theoretical issues (see below). This opportunity is unique given the idiosyncratic features of the Chinese business environment. China's modern history is characterized by continuous social and political change and its institutional environment has historically moved between extremes. For instance, while in the 1920s and 1930s, China proved to be a fertile ground for a variety of organizational forms, several decades later that same environment could be characterized as inhospitable to many of these forms. Today, diversity is again gradually increasing but with a degree of unpredictability and uncertainty incomparable to other transitional economies (Krug 2004; Krug and Pólos 2004). The combination of strong historical path dependencies, a relatively slow pace of deregulation, and the legacy of a fragile system of state-owned enterprises provides a setting that is exceptional relative to other settings studied before in organizational ecology.

Organizational ecology is a field of research that builds on insights from a variety of disciplines -economics, sociology, and biology- and has a strong demographic

character. Empirically, it concentrates on the modeling of the so-called vital rates of organizations, including founding rates and survival rates, using longitudinal data on populations of organizations. Theoretically, these modeling efforts help researchers to address such issues as the consequences of organizational change, the age and size dependence of organizational failure, the effect of the presence of competitors on organizational vital rates, and the evolution of organizational forms. The theoretical framework that forms the basis of these modeling efforts has earlier been applied to organizational populations in a wide range of transitioning economies, from newspapers in Bulgaria (Dobrev 1997) and construction companies in Russia (Suhomlinova 1999) to political parties in Hungary (Péli 1999), strengthening the confidence that organizational ecology can be applied in a Chinese context as well.

Why study banks? First of all, banks constitute a social form of great importance. Sociologists, ever since the earliest approaches to financial markets and money (Marx 1964; Simmel 1978; Weber 1978), have conceptualized banks as key intermediaries in a system of ongoing social interactions and exchange relations (Freeman, Audia, and MacGregor 2005; Keister 2002). In such a central position, banks are able to exert a strong influence on other organizational forms. As Uzzi (1999) notes, banks, through their social networks, influence the survival rates of other organizations and form a pivotal component in the process of economic growth. Second, banks play an important role in economic transition processes, processes that also characterize the empirical context presented here. Not surprisingly, studies in economic sociology that focus on the transitional economies of Eastern Europe and China have increasingly given attention to the dynamics of financial markets and the role of banks during the period of transition (for an overview see Keister 2002). The third reason for focusing on banks is based on programmatic considerations within the field of organizational ecology. So far, ecologists have studied banks in Denmark (Lomi 2000), Italy (Lomi 1995), the United States (Banaszak-Holl 1991; Barnett, Greve and Park 1994; Barron, West, and Hannan 1998; Li 2002; Park and Podolny 2000), Singapore (Carroll and Teo 1998), and Japan (Greve 2000, 2002; Han 1998). A single industry approach applied to multiple social systems using models that are replicable in a variety of countries adds cumulatively to a body of research in this area and is informative about the differences in institutional settings in which these banks operate. Such an approach would therefore also resonate with efforts to develop closer links between organizational ecology and institutional theory (e.g. Hannan, Pólos, and Carroll 2005; Pólos, Hannan, and Carroll 2002).

I have chosen to focus on *foreign* banks because of their particular social signif-
icance. Banks, when entering a new geographical market, bring with them ideas,
products and services from abroad and as such constitute an important social mech-
anism spanning across national borders (cf. Bigelow, Carroll, Seidel, and Tsai 1997;
Delacroix 2004; Han 1998; Hannan, Carroll, Dundon, and Torres 1995; Lomi 2000).
These cultural images and ideas can provide important seeds for social change: they
could induce change in the structure of incumbent organizations and organizational
forms, but in a more extreme case they also could give rise to the emergence of
new (hybrid) organizational forms[2]. It is clear that these processes are more likely
to take hold in places that are relatively hospitable to cultural images and ideas
from abroad, such as Shanghai. As Stinchcombe (1965, 147) notes, 'organizational
forms from abroad are most generally found in metropolises, where there is extensive
communication with other nations'.

Foreign banks as such can also be considered as a distinct organizational form in
China (cf. Hannan et al. 2005; Pólos et al. 2002). Foreign banks differ from native
banks in several important ways. From a legislative point of view, foreign banks
in China are governed by a different and more restrictive set of laws than those
that regulate the actions of local banks (Fu 1998). For instance, foreign banks have
largely been excluded from providing local currency services to domestic enterprises
in the private sector, and instead have mainly served multinational corporations (He
and Fan 2004). As a result of these different sets of regulations, the Chinese market
is highly segregated, and direct competition between foreign and local banks has
remained limited (but increasing, see Chapter 6). Foreign banks also differ from local
banks in terms of organizational structure, size (Wong and Wong 2001), corporate
governance and employment practices (He and Fan 2004, Lardy 1998). Furthermore,
accounts of the Shanghai banking sector, such as those found in histories of banking
in Shanghai (Ji 2003; Tamagna 1942) as well as in contemporary media reports,
invariably apply the categorization of foreign and local banks.

I have chosen to study these foreign banks from a city-level perspective, instead of
e.g. at the national level, because of the nature of the industry that will be studied:
in both retail banking and to a large extent in wholesale banking as well, consumers
of financial services most often opt for a bank whose office is located within rea-

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[2]In the context of Chinese banking, one hybrid ownership arrangement that is widely expected
to emerge in the future is a dinstinct class of privately owned local banks, that resemble the foreign
banks in China in terms of their corporate governance.

sonable distance. In other words, competition in this industry is a relatively local process when viewed at the local establishment level[3], and system boundaries can therefore be meaningfully specified at the city level. Not surprisingly, earlier ecological work has frequently adopted a city level perspective in analyses of banking populations (e.g. Greve 2000, 2002; Han 1998; Lomi 2000). The choice for a city-level perspective also seems to be appropriate given the empirical context. China's institutional environment is heterogeneous in the sense that subtle differences in banking regulations exist between cities and regions. This may be a consequence of the fact that politically, much decision making power is decentralized at the local government level. In addition, regions differ substantially in e.g. language, identity, and economic development. This has led Manion (1994) and Perry (1994) to conclude that China shows a high degree of fragmentation[4], that there is no locality that is "typical" of China and there are severe limits on the generalizability of the results stemming from only one such locality. Needless to say, that also goes for the present study in which I make no claim that a study on Shanghai's foreign banking sector is generalizable to China as a whole. However, given Shanghai's importance in finance and commerce and the fact that a large majority of the foreign banks are represented in this city, the findings do appear to be indicative for the overall dynamics and performance of foreign banks in China.

1.2 Major Theoretical Issues

The substantive purpose of this dissertation is to address various theoretical issues in organizational ecology (Hannan and Freeman 1977, 1989; Carroll and Hannan 2000), namely 1) the re-emergence of organizational populations, 2) ecological dynamics during the pre-entry stages, and 3) de-partitioning and competitive exclusion.

- *Re-Emergence of Organizational Populations.* One of organizational ecology's main theory fragments seeks to gain an understanding of the evolution of orga-

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[3]Of course, when viewed at a more general level, banks (as aggregates of local establishments) compete with each other in national or even global markets. Competition when seen in this perspective however still requires capturing shares of local markets (in particular when retail banking is concerned), and thus competition remains essentially local.

[4]Meyer (1992) and Meyer and Scott (1992a) examined the consequences of fragmentation on various aspects of the organizational system, such as e.g. the administrative burden, the level of integration within the system (Meyer 1992) and the legitimacy of local governments (Meyer and Scott 1992a).

nizational forms and their identity (Hannan et al. 2005; Pólos et al. 2002). Of particular interest here are the instances in which form-defined organizational populations re-emerge after having experienced a period of dormancy. These occasional instances of re-emergence allow us to closely examine processes of cognitive legitimation and identity perception, processes that are not only of importance to the re-emergence of populations, but also to the evolution of forms in general. Understanding the re-emergence of organizational populations is therefore one of the central concerns in this theory fragment. Previous studies that have sought to explain the re-emergence of organizational populations after a period of temporary discontinuity have focused on the local preservation of skills and knowledge (Hannan and Carroll 1992) or a locally preserved collective memory of the blueprints of that population (Dobrev 2001). This dissertation investigates an alternative, but not necessarily contradictory, explanation to the re-emergence of organizational populations, namely the continued preservation of the organizational form outside the society in which the period of dormancy takes place.

- *Ecological Dynamics during the Pre-Entry Stages.* Recently, organizational ecology has started to explore the dynamics that not yet fully established organizations are subject to prior to their entry into an organizational population (Carroll and Hannan 2000, 339–56; Carroll and Khessina 2005; Ruef 2006; Sørensen and Sorenson 2003). Known is that these pre-entry stages can have strong implications for the population into which these organizers seek entry (Carroll and Hannan 2000; Ruef 2006). On the level of the individual organization, ample evidence also suggests that pre-entry experiences shape subsequent (post-entry) performance (Carroll, Bigelow, Seidel, and Tsai 1996; Klepper 2002; Klepper and Simons 2000; Ruef 2006). Particular aspects of pre-entry activity have received scant attention however, such as issues related to the possible ecological interactions with both other organizers and established organizations, the duration dependence of the rate of entry into the population, and issues pertaining to the identity formation of individual organizers. This dissertation aims to address these issues by studying the early stages of foreign bank activity in Shanghai.

- *Reversed Resource Partitioning and Competitive Exclusion.* Organizational ecology offers at least two theoretical explanations for the observation that

one population is outcompeted by another population. The first is that the competing population can be described as a generalist type of population that is increasingly putting pressure on a specialist population by means of a shift in the position of these generalists in the resource space. This explanation fits the idea of a reversed process of resource partitioning as advanced by Dobrev (2000). The second explanation is rooted in the 'principle of competitive exclusion' (Gause 1934; Hannan and Freeman 1977, 942–943) and argues that one population will always be outcompeted by another in a similar resource environment (independent of shifts in the position of each of these populations in resource space). Both explanations will be examined by studying various features of the domestic banking population and their effects on the profitability rates of foreign banks in Shanghai.

1.3   A Reader's Guide

This dissertation proceeds by outlining the historical background to this study in *Chapter 2*. This historical background covers the period from 1847, when the first foreign bank was founded in Shanghai, to the end of the observation window, 2004. The three empirical chapters in this dissertation draw upon this historical background to various degrees, but still can be seen as essential reading as it provides an understanding of the complex empirical context, an empirical context that is characterized by a distinct institutional environment that throughout history had a strong bearing on the activities of foreign banks in Shanghai. In order to preserve readability throughout the dissertation, most technical details are set aside and instead discussed in a separate chapter, *Chapter 3*. For readers not interested in these technical details, skipping this chapter should not be problematic since the empirical chapters that follow are relatively self-contained.

As indicated, the main part of this thesis is formed by three empirical chapters. In *Chapter 4*, an analysis is presented of the founding rates of foreign banks in Shanghai over the full observation window (1847-2004). This chapter builds on the historical background in Chapter 2 and the methodology that is outlined in Chapter 3 (section 2). Then, in *Chapter 5*, the observation window is narrowed down by focusing on the period between 1982 and 2004, the period in which foreign banks returned to the city after an absence of almost thirty years. In particular, I study in this chapter how foreign banks made the transition from small representative offices

to fully established branches. The context of this chapter is presented in Section 4 of Chapter 2, the methodology (event history analysis) is presented in Chapter 3 (Section 3). A similar observation window and methodology is used in the final empirical chapter, *Chapter 6*, in which the likelihood is analyzed that a foreign bank in Shanghai will become profitable, as well as how their performance is affected by the dynamics of China's domestic banking industry.

Chapter 7 then summarizes the three empirical chapters of this dissertation as well as their main findings. It reflects on using the ecological approach in a Chinese context and comments on the generalizability of the findings. It also points out to some directions for future ecological research.

A final note on the terminology regarding founding and entry rates: a *founding* is defined here as the initial establishment of an office in Shanghai. The notion of *entry* is used here to denote entry into the population of fully established banks in Shanghai, i.e. banks that transition to the stage of providing a full range of banking services in Shanghai. Entry of this type usually takes place at a later point in time than the initial founding event: there normally is a time lag between the founding of a first office and the moment at which the bank starts to generate revenue. Using these definitions, founding rates are analyzed in Chapter 4, while in Chapter 5 the transition to the entry event is examined. Chapter 6 then analyses post-entry performance.

2

Foreign Banks in Shanghai, 1847-2004

The aim of this chapter is to provide a background that describes some of the significant historical events and developments that have affected foreign banks in Shanghai. I discuss these events and developments in the context of four distinct phases of foreign banking in Shanghai: (1) the British hegemony in financing foreign trade with China, 1847-1889; (2) the rise of international banking, 1890-1934; (3) decline and by and large disappearance of foreign banks from the Shanghai scene, 1935-1981; and (4) the re-emergence of foreign banks in Shanghai, 1982-2004.

2.1 British Monopoly

The first presence of foreign banks in Shanghai is generally seen to be a direct consequence of the Opium War (1839-1842) between China and Great Britain. This war started when China demanded an end to the British imports of opium, which had devastating effects on the Chinese population. Growing addiction, smuggling and official corruption led the Chinese to take active steps to cut off opium trade in June 1839. The British, who imported the goods mostly from their territories in India, retaliated to these attempts. British imperial forces started a series of attacks on the Chinese mainland, and finally defeated China. The war officially ended in the forced ratification of the Treaty of Nanking by the Chinese government on August 29, 1842. This treaty stipulated that the Chinese government had to -besides pay vast sums of war indemnities and exempt Westerners from Chinese law- open up

five coastal cities for foreign residence and trade. These so-called 'treaty ports' were Canton (Guangzhou), Amoy (Xiamen), Fuzhou, Ningbo, and Shanghai (with Hong Kong being ceded to Britain).

Shanghai opened for foreign trade in November 1843, and, like the other treaty ports, it experienced rapid economic growth. Shanghai was particularly successful since it had a favorable geographical position: easy access to large silk producing areas, while also some major tea plantations were within close distance of the city (McElderry 1976). Additionally, the city is situated at the mouth of the Yangtze River and in this way it was in the position to benefit from the increase in shipping between the upstream provinces and the delta region (Bergère 1996). Later, Shanghai's position as a trading hub was further enhanced due to the internal disruptions that China experienced between 1850 and 1865, most notably the Taiping Rebellion[1]. These disruptions closed off many of the other treaty ports from the resources in their hinterland, but the hostilities did not spread to the city of Shanghai. As a result, treaty ports such as Canton saw its trade in silk and tea decline and largely diverting to Shanghai, leading to ever greater exports in these commodities through Shanghai's port (McElderry 1976).

In the midst of the increase of trade, foreign banks were essentially needed to function as a mediator between Chinese and foreign merchants, to finance the imports and exports of these foreign firms, and to provide foreign currency exchange (Tamagna 1942). The first foreign bank that was founded in Shanghai was the Oriental Banking Corporation in early 1847[2]. This British chartered bank established itself on Shanghai's left riverbank, which became known as the Bund. This boulevard, part of the so-called 'International Settlement' in which foreign firms enjoyed extraterritorial rights, later housed many other local and foreign banks as well as other financial institutions. In 1854, the Mercantile Bank of India, London, and China joined the Oriental Banking Corporation as it also established a branch office in Shanghai. Later, on April 3, 1865, one of the most prominent and largest foreign

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[1]The Taiping Rebellion was one of the largest peasant upheavals in Chinese history, directed at the educated Confucian elite. Twenty million Chinese died as a result of this Rebellion. See also Feuerwerker (1975), Kuhn (1978), and Nee and Peck (1975).

[2]Among historians there seems to be little consensus regarding the founding year of this bank in Shanghai. Authors such as Cheng (2003), McElderry (1976), and Tamagna (1942) claim its branch office was opened in 1848. Others, such as Hong, Wang, and Li (2003) and Ji (2003) point out 1847 as the starting year. Here I follow the latter, based on Ji's (2003) convincing source and argumentation. Moreover, the year 1847 is mentioned by two museums in Shanghai (the Bank History Museum and the Bund History Museum) as the year of establishment.
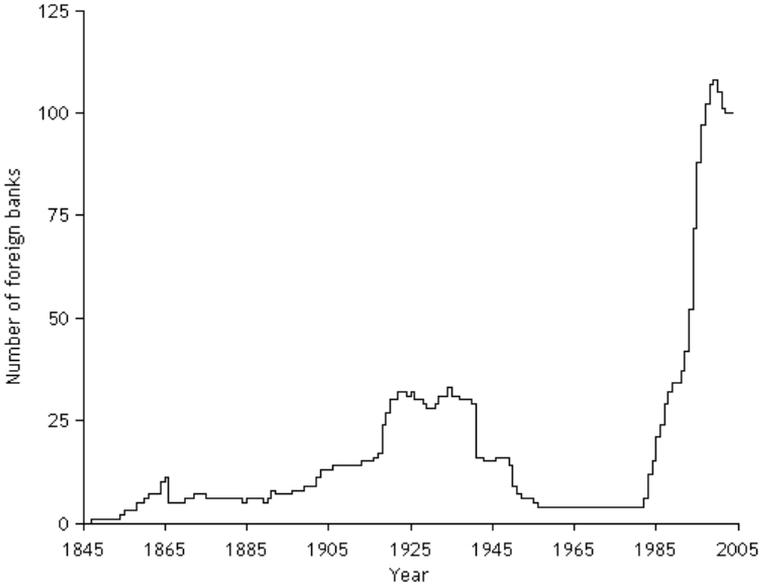
Figure 2.1: *Number of foreign banks in Shanghai, 1847-2004. Totals are for December 31 of each year.*

banks in Shanghai's financial history was founded: the Hong Kong and Shanghai Banking Corporation (HSBC). By the end of 1865, the number of foreign banks in Shanghai totaled eleven (see Figure 2.1), of which ten had British origins.

In 1866, these banks were hit hard by a financial crisis that erupted outside China, namely in London. This crisis was due to excessive speculation in shares of limited liability companies. The so-called 'Overend-Gurney Crisis' (named after the company that took a leading but disputable role in this speculation boom) led to widespread failures within and outside banking circles. Compared to merely domestically operating British banks, British banks with office overseas were particularly vulnerable since the panics caused by the Overend-Gurney Crisis also led to runs on the branches of these banks worldwide (Baster 1929). In Shanghai, the offices of such banks as the Agra and Masterman's Bank, the Bank of India, and the Commercial Bank of India were closed down as a result of heavy losses (see also Figure 2.2). Of these banks, only the Agra and Masterman's Bank was able to re-establish
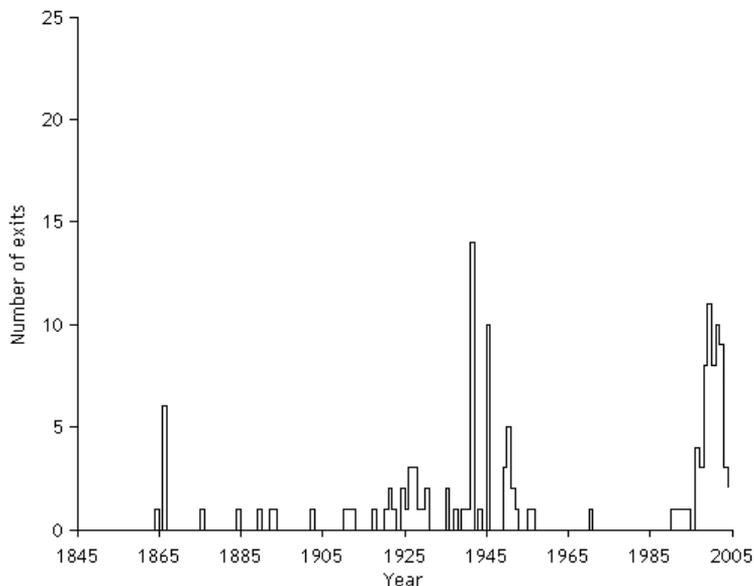
Figure 2.2: *Number of exits of foreign banks in Shanghai (including failures of joint venture banks, and exits resulting from mergers and acquisitions), 1847-2004.*

itself after the crisis. In May 1870, it re-opened in Shanghai under the name Agra Bank. The Deutsche Bank opened its first office in Shanghai in 1872, however this venture did not appear to be very successful. Silver prices declined sharply in the mid 1870s, and unfortunately the East-Asian offices of the Deutsche Bank (another office existed in Yokohama) mainly had their corporate assets in silver. In 1875, the Shanghai and Yokohama offices of this bank were closed down.

From 1873 to 1884, Shanghai did not experience any new foundings. In this period, existing banks did seek further expansion throughout China[3] (Tamagna 1942). In 1885, Shanghai's first foreign bank, the Oriental Banking Corporation, re-established itself in Shanghai as the New Oriental Banking Corporation, after it failed a year earlier.

In the last decade of the nineteenth century, the hegemony of British foreign

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[3]For instance, the Hong Kong and Shanghai Banking Corporation also opened offices in Xiamen (1873), in Fuzhou (1877), and in Tianjin (1881).

banks slowly started to erode. Towards the turn of the century, the British banks dominance became increasingly challenged by competition from banks from other nations. A new phase in Shanghai's financial history was preluded by the entry of a consortium bank representing German interests (among the stakeholders was the earlier mentioned Deutsche Bank). This bank, the Deutsch-Asiatische Bank, officially opened its headquarters in Shanghai on January 2, 1890. Later, in 1893, also a Japanese bank (the Yokohama Specie Bank) established a branch office in Shanghai and with the creation of the Russo-Chinese Bank in 1896, the first foreign-Chinese jointly owned bank was founded.

2.2 Expansion of International Banking

From only five foreign banks in 1889, the number of banks grew to thirteen banks in 1903. The gradual expansion of international financial institutions at the end of the nineteenth century was driven by several factors. First, China's trade with other nations through its ports increased substantially. For instance, China's foreign trade with the United States went from a tonnage of 22,000 in 1890 to a tonnage of 131,000 in 1900, and to 289,000 tons in 1910. Its trade with Japan increased from 219,000 tons in 1890 to a tonnage of 751,000 in 1900, and further increased to 2,655,000 tons in 1910. Other countries experienced a similar growth in their trade with China (Hsiao 1974). In the midst of this growth in trade, banks became important devices in organizing and financing trade at the local level. Second, foreign banks also increasingly moved into a new line of business, which was financing government projects. The number of such projects increased substantially at the end of the nineteenth century. They included setting up a railway and a telecommunications infrastructure, and were part of an effort by the Chinese government to modernize and strengthen the national economy. Since China at the time lacked a well developed internal capital market, foreign banks were in the position to play a pivotal role in providing the Chinese government with loans[4]. A particularly large expansion in the number of loans to the Chinese government by the foreign banks came after the Chinese-Japanese War ended in 1894. China was defeated by Japan and forced to pay heavy war indemnities. For this, they also turned to foreign banks (Cheng 2003). As a consequence of these factors, financiers in countries other than

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[4]This contrasts with, for instance, the modernization of Japan, which was largely financed by a domestic government debt market, modeled after successful Western models (Han 1998).

Britain increasingly experienced the disadvantages of not having a direct presence in Shanghai, such as a lack of local information (Jones 1993). Previously, countries that traded with China did so through British merchant banks, but there was an increasing need to reduce this relative dependency. This pushed banks from other nations towards setting up their own branch offices in China and building up direct ties.

Although the business of foreign banks was affected by several social and political events that took place over time, these events did not threaten their existence. For instance, foreign bank failures did not increase substantially as a result of the Revolution in 1911 and subsequent change of regime, i.e. the founding of the Republic of China. Also during the First World War, the number of foreign banks in Shanghai remained relatively stable (although the assets of the Deutsch-Asiatische Bank were frozen in 1917, as China joined the allies). After the First World War however, some European banks had to take a step back. Pre-occupied with post-war reconstruction, these banks retrenched or reduced their financial interests in China by channeling funds to their home country. Nevertheless, the number of foreign banks increased steadily in the post-war period. This growth however was largely due to the arrival of 'new foreign financial powers' (Ji 2003, 141-63): most notably new American and Japanese banks. These banks basically moved into the void left by the European banks. In 1918 alone, seven banks established a presence in Shanghai, two of which were from the United States (the American Express Company and the American Oriental Banking Corporation) and three from Japan (the Bank of Chosen, the Exchange Bank of China and the Shanghai Bank) (see also Figure 2.3).

In the following years, Shanghai experienced a period that is sometimes referred to as its 'golden age' (Ji 2003). In this period, Shanghai gained a reputation among multinational banks as a center of international finance. Not only by the prosperity of the ever increasing number of foreign banks present in the city, but also through the rapid development of modern local banks and other financial institutions, such as stock exchange markets. Shanghai's Bund, which housed many of the foreign banks, became known in this golden age as the 'Wall Street of the Orient'. By the end of 1934, the number of foreign banks reached its preliminary maximum of 33. For comparison, alternative financial centers such as Singapore (21 'full-license' banks in 1934, many of which were foreign banks, see Carroll and Hannan (2000, 23)) and Hong Kong (17 foreign banks, excluding banks from mainland China) hosted a much lower number of foreign banks. About Hong Kong, Jones (1992, 407) states that the
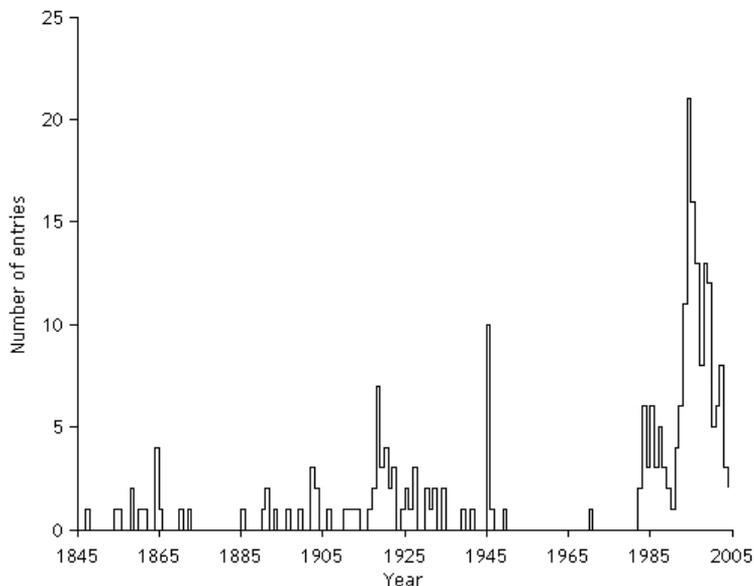
Figure 2.3: *Number of entries of foreign banks in Shanghai (including joint venture banks, and banks arising from mergers and acquisitions), 1847-2004.*

city 'was essentially a smaller version of Shanghai throughout the interwar years'. However, starting in the mid-1930s, the position of Shanghai as a major finance and trading hub slowly started to erode.

2.3 Demise of Foreign Banks

Numerous factors contributed to the decline of Shanghai's role in international finance. Starting in 1935, there was a currency crisis that resulted from shortages in the supply of silver. Responding to this crisis, monetary reforms were introduced by the nationalist government: among others, the silver standard was to be abandoned and the issuing of bank notes was to become the sole right of three government banks (i.e. the Central Bank of China, the Bank of China, and the Bank of Communications). This implied a *de facto* shift in financial power from foreign banks, many of which issued their own notes, to the nationalist government. In addition,

as a result of the abandoning of the silver standard, banks also had to hand over their silver supplies to the government. Foreign banks which previously had almost autonomously operated in the Chinese financial market, now found themselves in a position of 'subordinate dependence' (Tamagna 1942, 119). The onset of the Sino-Japanese War in 1937 (and the subsequent occupation of substantial parts of China by the Japanese), did not have immediate consequences for the presence of foreign banks in Shanghai, although their financing activities were hampered by a decrease in trade flows. Protected by the extraterritorial rights of the International Settlement, they continued their banking activities in e.g. currency exchange. In the meantime the Japanese, attempting to gain more control over China's financial system, expanded their financial interests in the occupied territories. In May 1939, the Japanese-supported Hua Hsing Bank was established. Later, in January 1941, also the Central Reserve Bank of China was founded. Both the Hua Hsing Bank and the Central Reserve Bank of China issued their own banknotes and were instrumental in financing the expenditures of Japanese armed forces in China.

The immunity of foreign banks in the International Settlement lasted until December 1940 when, immediately after the Japanese attack on Pearl Harbor, Japanese military forces entered the settlement. Japanese aggressors took control of American, Belgian, British, and Dutch banks in Shanghai and turned them over to Japanese banks, such as the Yokohama Specie Bank, for liquidation. Banks of friendly or neutral nationalities (French, German and Italian banks) continued to operate, together with the Japanese banks, albeit on a more limited scale (Tamagna 1942). However, the end of the Second World War led to the closing down and confiscation of all Japanese and Japanese-supported banks (Ji 2003). Among them were the Central Reserve Bank of China, the Yokohama Specie Bank, and the Deutsch-Asiatische Bank. In total, ten foreign banks had to close their banking facilities in Shanghai in 1945. On the other hand, foreign banks originating from other countries (of which the branches had been liquidated at the end of 1940) started to re-open their branches in Shanghai again, which more than made up for the decline in the total number of foreign banks in Shanghai. Initially, these foreign banks hoped they could rapidly restore their banking business including their elaborate networks of branches they previously maintained in mainland China. However, after it appeared that a new Civil War (1946-1949) between the Communists and the Nationalists was spreading across the country, and that the Communists would win the Civil War, these hopes were soon gone. The Civil War was accompanied by economic and

financial chaos and heavy inflationary pressure troubled the banking business in China. For September 1947, Chang (1958) even reported a wholesale price index of 4,635,700, with the first half of the year 1937 indexed at 100. As a result of these adverse circumstances, foreign banks were never able to fully recover from the turbulence generated by the Second World War even though they were able to restore their presence.

The Communists seized formal power on October 1, 1949, and this event preluded the end of the presence of foreign banks. An adverse economic environment combined with a socio-political environment in which foreign banks were seen as agents of western imperialism, led to the final demise of international banking activities in the city. In the years that followed, foreign banks disbanded their operations one by one. American banks, such as Chase Bank and the National City Bank of New York, were among the first to shut down their operations at the end of 1950, because of the tensions generated by the Korean War. A United Nations trade embargo imposed on China in May 1951 worsened the economic climate for the remaining foreign banks in Shanghai. Banks such as the Nederlandsche Handel-Maatschappij, the Banque Belge pour l'Etranger, and the Banque de l'Indochine all closed their branches.

In the end (i.e. by the mid-1950s), only four 'quasi-foreign' banks were left in Shanghai. From Hong Kong these were: HSBC, the Bank of East Asia, and the Chartered Bank of India, Australia, and China (later to become Standard Chartered). The Overseas Chinese Banking Corporation, incorporated in Singapore, also decided to remain active in Shanghai[5]. These four banks were granted a special legal status and were only permitted to provide the financial services as the government determined was necessary for China's national economic development (MacCormac 1993), in practice this resulted in a small routine business in inward remittances and export bills. As these banks kept operating, China moved into a phase of economic isolationism.

The Sino-Japanese War, the Civil War, and several financial crises all had left a definite mark on Shanghai. Shanghai had lost its glory as an international financial

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[5]But even if these quasi-foreign banks wanted to leave they ran into severe difficulties. This is shown most clearly by the experiences of the Hong Kong and Shanghai Banking Corporation. For this bank it appeared to be problematic to sell its local assets and withdraw its funds from the Chinese mainland. After years of negotiation, the Chinese authorities eventually confiscated HSBC's prominent building on the Bund, but insisted that the branch itself remained active in Shanghai. Its staff therefore moved into rented premises where it continued its (limited) business activities (Collis 1965).

center and became an industrial city under heavy state control. As a result, many of its financial functions shifted to alternative financial centers, in particular Hong Kong. It was especially this city that took over Shanghai's position in the late 1950s as the main international trade and financial center in the Far East (Schenk 2001; Tian 1996).

2.4   Re-emergence of Foreign Banks

Starting in 1978, a series of steps were taken that ended China's period of economic isolationism: a new reform program[6] was introduced during the Third Plenum of the Eleventh Central Committee of the Chinese Communist Party in December of that year. The new reform policy had the aim of stimulating economic growth and to improve living standards, and included the opening up of the national economy to foreign trade and investment[7]. The part of the reform program with respect to foreign trade and investment became known as the so-called open-door policy. Within this open-door policy, particular emphasis was put on the role of foreign financial institutions. Foreign banks were in essence needed to channel funds to China in order to stimulate economic development, but also to promote reform of the financial system and to foster China's economic and financial relationships with other countries (Lees and Liaw 1996).

In 1980, the first foreign banks started to open so-called representative offices[8] in China. These foreign banks, however, initially focused on expansion in cities other than Shanghai. Beijing, for instance, attracted many representative offices in the early 1980s. The main reason for these foreign banks to establish a presence in Beijing was that relevant organizations, such as regulatory commissions and the Bank of China, were all headquartered in this city. Establishing a representative office in Beijing proved to be more efficient in, for example, liaison activities. However, the most important locations for foreign banks were the four Special Economic Zones (SEZs) in Southern China. The central government had provided opportunities for receiving foreign investment in these selected areas, three of which were in

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[6]For a detailed account of various aspects of the reform program, see Qian (2000).

[7]Although the original plans made at the December 1978 meeting made no mention of foreign investment and trade, it was announced a few days later following their publication by senior party leader Li Xiannian (Shirk 1994).

[8]For a detailed description of the activities of representative offices of foreign banks see Chapter 5.

Guangdong and one in Fujian province. These SEZs were granted more autonomy, support in infrastructure, and tax incentives. Foreign investment projects in these areas grew rapidly in number.

With the central government's choice for the SEZs as the main recipients of foreign investment in the 1980s, Shanghai was put at a relative disadvantage. Tian (1996) notes that one of main reasons for not having included Shanghai in the initial implementation of the open-door policy was the fear of political instability. In the previous decades, Shanghai had become a heavy contributor to the central government's tax revenues (eighty-five percent of its local revenue was remitted to the central government in the period 1958-82) and a failure of the reform policy in Shanghai would greatly upset the national budget.

Nevertheless, Shanghai did see some considerable growth in the 1980s, most notably in the development of its financial functions. First of all, also Shanghai experienced the founding of new foreign banks for the first time since 1949. In December 1982, the Banque Nationale de Paris and the Bank of Tokyo established representative offices in the city. In April 1984, the number of foundings experienced a new impetus by the fact that Shanghai, along with fourteen other coastal cities, was 'opened' for foreign investment. Shanghai also started to strengthen its financial system in other areas. In 1986, an interbank lending market was established and in 1988, a forex swapping market was introduced. By 1989, the number of foreign banks in Shanghai even reached 34, a figure that exceeded the highest number of foreign banks in the period before 1949 (as indicated, 33 foreign banks had a presence in Shanghai by the end of 1934).

Several limitations on entering China's financial markets however became visible after the Tiananmen Square uprising in June 1989 (MacCormac 1993). Foreign banks adopted a wait-and-see attitude towards the Chinese market and new developments progressed with great caution. The earlier boom in the entry of new foreign banks (in the form of new representative offices) came to a halt. Moreover, the austerity program[9](1989-1991) put in place after the Tiananmen Square uprising led to loan defaults, and foreign banks that had already opened branches elsewhere in China found themselves in a position in which collecting debts or enforcing guarantees was difficult (MacCormac 1993). The aftermath of the Tiananmen Square

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[9]This austerity program was introduced to prevent the economy from overheating. In this period, the Chinese government also attempted to re-centralize investment and financial powers (Weingast, Qian, and Montinola 1995).

incident did turn out positively for the economic development of Shanghai. The
central government wanted to show to the outside world that China was still open
for investments and was continuing its reforms (Gold 1991). This accelerated the
implementation of existing plans for a new development zone for trade and finance
in Shanghai, more specifically in the sub-district Lujiazui (part of the suburban
Pudong area in the east of Shanghai). This new financial zone was announced in
1990 and opened the possibility for foreign banks to open branch offices[10]. In ad-
dition to this initiative, other ways were explored to further enhance Shanghai's
economic development. Investments were made in physical infrastructure (e.g. a
ring road bypassing the city center, public transportation, gas and water works)
and overall modernization. Financial institutions were also set up in Shanghai. For
instance, in December 1990, the Shanghai Stock Exchange re-opened for business,
stimulating the growth of China's financial market. The events in 1990 heralded a
period of rapid economic growth.

Since 1991, Shanghai's annual growth rates in gross domestic product (GDP)
have generally started to exceed the national average: GDP growth rates reached
fourteen to fifteen percent per year between 1992 and 1995. Foreign direct in-
vestment (FDI) figures also improved substantially. In 1995, Shanghai became the
second largest region in China for attracting FDI (after the province Guangdong)
(Tian 1996). This improved economic climate, together with a thriving real estate
market and a more attractive capital market, led to a further increase in the number
of foreign banks in the 1990s. From 34 foreign banks that were present in Shanghai
in 1990, this number increased to a total of 108 foreign banks by the end of 1999[11].
In the midst of this renewed growth, Shanghai was able to regain its status as main-
land China's main financial center, the position it had earlier occupied in the 1920s
and 1930s (Lees and Liaw 1996).

Despite the increase in the number of foreign banks, their share of the Chinese
financial market remained small; this market share has in fact decreased in the
late 1990s, from 2.5 percent in 1996 to 2 percent in 2000 and 1.2 percent at the

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[10]Branch offices, in contrast to representative offices, are allowed to engage in profit-making
operations, such as the granting of loans. By allowing foreign banks to open branch offices in the
city, the local government created a source of working capital and funds for the development of
Pudong. For more on branch offices and how these differ from representative offices, see Chapter 5.

[11]A wave of mergers and acquisitions in the global banking industry, most notable among Japanese
financial institutions, was among the main factors that caused the number of foreign banks to decline
after 1999.

Table 2.1: *Deregulation of the foreign banking industry in Shanghai, 1980-2006.*

Date	Event	Business scope implications
Oct. 30, 1980	Representative offices permitted	Foreign banks are allowed to: - liaison with the Bank of China - give advice to foreign firms in China - develop business with Chinese commercial and trade organizations.
Dec. 1990	Upgrading to branch possible	Foreign banks are allowed to engage in profit-making operations but prohibited to accept deposits or make loans to private domestic enterprises and Chinese individuals. Also restricted to foreign currency transactions.
Dec. 31, 1996	Local currency licenses	Foreign banks can obtain a local currency license provided that they have been profitable for two consecutive years.
Dec. 17, 2001	WTO entry China	Selected foreign banks are allowed to expand their foreign currency business to all institutions and individuals within Chinese territory.
Dec. 17, 2003	Two years after WTO entry	Foreign banks with a local currency license are allowed to lend to and accept deposits from private domestic enterprises.
Dec. 17, 2006	Five years after WTO entry	Foreign banks with a local currency license are allowed to lend to and accept deposits from Chinese citizens. Private banking is also permitted.

end of 2002[12]. To a large extent this is a result of the restrictions that foreign banks have faced in the Chinese market. Foreign banks have throughout China's reform era mainly been permitted to provide foreign currency services to non-Chinese individuals and enterprises, i.e. foreign corporations and joint-ventures in China. Despite the fact that this potential customer base itself is rapidly growing, this has not resulted in a larger market share for foreign banks. Foreign banks thus appear to be merely peripheral players in a market that is practically dominated by large, state-owned domestic banks.

However, further deregulation of the banking system (see Table 2.1) following China's accession to the World Trade Organization (WTO) in December 2001, is generally expected to have a substantial impact on the position of foreign banks. The accession of China to the WTO was conditional upon lifting several constraints.

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[12]*PBOC Quarterly Statistical Bulletin.*

Among others, China was to allow foreign banks to provide local currency services to local enterprises by the end of 2003, and to Chinese citizens by the end of 2006 (i.e. five years after WTO accession). Lifting these restrictions is likely to lead to a more liberalized and competitive financial market in Shanghai.

3

Data and Methods

This chapter introduces the data and methods used in this dissertation. After explaining the data sources, I discuss the two types of statistical methods utilized: event-count and event-history models (in Sections 3.2 and 3.3 respectively). This chapter also introduces a new measure of size-localization in Section 3.4, a measure that will be used in Chapter 5. It concludes with the techniques for model estimation and comparison.

3.1   Primary Data Sources

Data on the history of foreign banks in Shanghai were drawn from a variety of publications, publications that not only differ in organizational coverage, but also in temporal coverage. In general, there were two types of publications in terms of their temporal coverage: those on the pre-1949 period and those sources that were helpful in mapping the post-1978 period. Unfortunately, no consistent source was available that covered all banks in both periods. (Indeed, the list provided in the Appendix is likely to be the first effort in this direction.) For the pre-1949 period, two sources were particularly helpful: Tamagna (1942) and Hong et al. (2003). The precision of the dates reported in these publications and the limited extent to which additional banks were found in alternative sources such as Ji (2003) and in various local archives in Shanghai, provided considerable confidence in the low degree of underinclusion of the data. This confidence was strengthened by the historical trajectory of banks in Singapore (Carroll and Hannan 2000, 23) which evolved with a strikingly similar pattern prior to 1949, but in somewhat lower numbers. For the

post-1978 period, *The Bankers' Almanac* was used to compile a first 'master list' of all foreign banks. Although *The Bankers' Almanac* is a very comprehensive source, the method of determining the timing of entry by the first listing in *The Bankers' Almanac* at times proved to yield inaccurate dates: sometimes the first listing in *The Bankers' Almanac* was delayed by one or two years. For this reason, the full master list was checked by running through articles in *Lexis-Nexis* and individual banks' annual reports. In Chapter 4, I contrast the historical evolution of foreign banking in Shanghai with the evolution of foreign banks in Hong Kong. For this purpose, various local archives were consulted, including the Hong Kong Companies Registry and those of the Hong Kong Monetary Authority (HKMA). The most valuable sources appeared to be the HKMA's annual reports (since 1993), reports of the Office of the Commissioner of Banking (1987-1992), and several listings such as those published in *Hong Kong Banking* (1985) and the *Far Eastern Economic Review* (starting in 1960). Jones (1965a, 1965b) provided detailed information on the early history of foreign banks in Hong Kong. As in the case of Shanghai, the degree of underinclusion is likely to be low[1].

Coding efforts of the data revealed that not all foreign banks that were identified to have operated in Shanghai (or in Hong Kong) at one time or another, started as completely new ventures. Occasionally, a parent bank of an already existing venture experienced an ownership change, for instance through a merger or acquisition (coded as "2" in the Appendix), and subsequently changed its name. Although sometimes the motivation for such ownership changes is to gain access to particular markets and resources, it is unlikely that a majority of such changes are motivated by specific local market conditions in Shanghai and are therefore considered to be irrelevant to our analyses. For this reason, in Chapter 4, I only took into account those banks that started with completely new ventures. This included the limited number of joint venture banks (coded as "3" in the Appendix). Joint venture banks are by all standards seen as foreign banks: they fall under the regulations for foreign banks, and are treated as foreign banks in histories of banking in Hong Kong and Shanghai (Ji 2003; Jones 1965b; Tamagna 1942). This treatment of joint-venture banks is ex-

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[1]The annual reports of the HKMA and, before that, those of the Commissioner of Banking include every single bank in Hong Kong as this is the overarching regulatory institution. For the early history of banking in Hong Kong, the list of banks in the then larger financial center Shanghai was used as a reference: banks listed as having a presence in Shanghai but that were not included in the preliminary list for Hong Kong (based on *Hong Kong Banking* (1985), Jones (1965a, 1965b) and the *Far Eastern Economic Review*) were double-checked, and generated very few missing cases.

tended to the two other empirical chapters, Chapters 5 and 6. Exploratory analyses did not yield notably different outcomes when joint venture banks were excluded from the analysis.

In Chapter 5, the likelihood that a bank obtained a branch license is analyzed. Data on the year in which a foreign bank received a branch license were drawn from several editions of the *PBOC Quarterly Statistical Bulletin* and was cross-checked against and validated by means of the annual reports of these foreign banks.

Chapter 6 required data on the first profitable year. Data on the first year of profitability in Shanghai were obtained using a source not often used in ecological research: personal interviews[2]. Personal interviewing has the advantage that one can probe with additional questions and gather supplemental information through observation (Cooper and Schindler 1998). The nature of the data needed facilitated the effectiveness of the interviewing technique: the first year of profitability is a rather objective measure, about which respondents were not reluctant to report (in contrast to the exact amount of profits). This resulted in a reasonably high coverage: data on the first year of profitability could be secured for 41 out of the 48 foreign banks (85 percent) that were allowed to generate profits[3].

3.2 Analysis of Founding Rates

In Chapter 4, I analyze the founding rate of foreign banks in Shanghai (and the parallel development in Hong Kong). Such an analysis of foundings typically makes use of 'count data' (Barron 1992), i.e. data which represents counts of the number of founding events within pre-defined periods of time. Count data has several properties. Besides non-negativity and the fact that only natural numbers are relevant, in aggregated form it also tends to follow a distribution that is heavily skewed to the right. Visual inspection of the data used in Chapter 4 confirms that all these

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[2]The reasons being that 1) the studied firms are too numerous, making the effort time and cost-intensive or 2) many firms have usually already failed prior to the time at which the research is conducted. Here both reasons do not apply since the population is of manageable size (N=48) and nearly all foreign banks that were in the position to generate profits (that operated in the form of a branch office) survived up to the period of the interviews (September-December 2003).

[3]Of course, it is not known to what extent these missing seven banks alter the results reported in Chapter 6. However, a possible selection bias (in terms of performance) should be mitigated by the fact that the number of missing banks is relatively low and these banks are reasonably diverse in terms of e.g. country-of-origin, international experience, and size. In this respect they do not appear to be 'outliers' compared to the banks that were included in the study.

conditions are satisfied. The Poisson regression is generally treated in ecological studies as one of the main options in analyzing count data representing founding events (see for applications e.g. Freeman and Lomi (1994), Li (2002), Lomi (2000), Mezias and Mezias (2000), Ranger-Moore, Banaszak-Holl, and Hannan (1991), and Wade (1996)). The Poisson probability plot for y number of foundings is:

$$Pr\{Y_t = y_t\} = \frac{e^{-\lambda_t \tau} \lambda_t \tau^{y_t}}{y_t!} \qquad (3.1)$$

Given the nature of the available data (in a substantial number of cases only the year is known), events counts are aggregated by the year and, hence, τ is set equal to 1. The mean and variance are then both λ, typically specified to be:

$$\lambda_t = exp(\beta' \mathbf{x}_t) \qquad (3.2)$$

where $\beta' \mathbf{x}_t$ is a vector of coefficients (β) and covariates ($\mathbf{x}$). However, it must be noted that the assumption of equal mean and variance often has appeared to be problematic in previous studies on organizational foundings. More specifically, the variance may exceed the mean, which implies *overdispersion*. Overdispersion might arise from unobserved heterogeneity in the data or from time dependence in the rate (the Poisson process assumes the rate λ to be constant within an observation period with a length of τ (Barron 1992)). In order to cope with possible overdispersion, the negative binomial model is used here as an alternative to the Poisson model. In this particular model, the variance follows a different specification:

$$Var(y_t) = \lambda_t(1 + \alpha \lambda_t) \qquad (3.3)$$

If dispersion parameter α is equal to 0, then the negative binomial model is reduced to a Poisson model, indicating that the latter is nested in the negative binomial model. If α is (close to) 0, the Poisson model is always preferred given the fewer number of parameters it uses. The models that are estimated here show, in most cases, no sign of overdispersion. In models that do show overdispersion, the value of α is reported, indicating that a negative binomial regression is used.

3.3 Analysis of Transition and Profitability Rates

In Chapters 5 and 6, the level of analysis shifts from the population-level to the organization-level as the empirical analyses make use of 'event-history' data rather than aggregated event-count data. Event-history analysis (e.g., Allison 1984; Tuma and Hannan 1984; Yamaguchi 1991) is suitable to analyze the probability that a particular event takes place, taking into account the time span prior to the possible event. Organizational ecologists have frequently used this method in modeling organizational mortality. This is an approach which in principle assumes two 'states' (Carroll and Hannan 2000): in ecological parlance the organization is either alive or dead. The analytical approach in other words focuses on how the hazard of a transition to the state of mortality (i.e. the mortality hazard) depends on a set of independent variables. Occasionally, ecologists have also used event history analysis to model other important events such as, in the case of biotechnology companies, the likelihood of an Initial Public Offering (Stuart and Sorenson 2003), the likelihood of commencing organizational operation (Carroll and Hannan 2000, 339–56; Ruef 2006; Schoonhoven, Eisenhardt, and Lyman 1990; Sørensen and Sorenson 2003), or the likelihood that a next founding event takes place (Han 1998; Haveman, Rao, and Paruchuri 2004).

Chapter 5 focuses on the change in two other 'states' that foreign banks have used in the period from 1990 to 2004: the transition from the state of the representative office to the 'state' of becoming a foreign branch, the latter of which is allowed to provide a fuller range of banking services. In order to gain insight into what drives this shift from representative office to branch office, event history analysis was thus applied, with the issuing of the branch license as the event. The transition rate from representative office to branch office was defined as the probability that a foreign bank opens a branch office in Shanghai at (or shortly after) time t, given that it has maintained a representative office in the city up to time t.

$$r_i(t) = \lim_{\Delta t \downarrow 0} \frac{Pr(Branch\ in\ Shanghai(t+\Delta t)|Rep.\ office\ in\ Shanghai(t))}{\Delta t} \qquad (3.4)$$

Since one of the issues investigated in Chapter 5 is how this transition rate depends on the duration of the time spent as a representative office, it was imperative that no functional form for this transition rate be chosen in advance. Instead, I

first relied on piece-wise exponential specifications which have the characteristic
that the transition rate can vary between pre-defined period segments, but remains
constant within each period segment. In this way, no strong assumptions were
made about the shape of the transition rate, which in principle could be anything.
Once, however, the piece-wise exponential specification pointed in the direction of
a particular shape, the performance of the model could be improved by seeking
a (parametric) specification that captured this particular shape. The piece-wise
exponential model has the general form

$$\ln r_i(t) = \alpha_p + \beta' \mathbf{x}_{it} \qquad\qquad p = 1, ..., P \qquad\qquad (3.5)$$

where $\ln r_i(t)$ is the transition rate; $\beta' \mathbf{x}_{it}$ is a vector of coefficients (β) and
covariates ($\mathbf{x}$) and α is a constant that is allowed to vary between pre-selected
periods p. The piece-wise exponential specification was implemented by adding a
user-defined routine (stpiece) to the statistical package STATA (Sørensen 1999).

After experimenting with several alternatives, the following division appeared to
produce the sharpest results: $\langle\,0,2]$, $\langle\,2,4]$, $\langle\,4,7]$, $\langle\,7,11]$, and periods longer than 11
years. Table 3.1 depicts the results from this model, as well as for other (parametric)
models such as the lognormal model,

$$r_i(t) = \frac{\frac{1}{t} exp[-\frac{(logt)^2}{2\sigma^2}]}{\sigma\sqrt{2\pi} - \int_0^t \frac{1}{u} exp[-\frac{(logu)^2}{2\sigma^2}]du} \qquad\qquad (3.6)$$

the log-logistic model,

$$r_i(t) = \alpha t^{\gamma-1}(1 + \frac{\alpha t^\gamma}{\gamma})^{-1} \qquad\qquad (3.7)$$

and the Gompertz model (Tuma and Hannan 1984, 220–231).

$$r_i(t) = \theta e^{\gamma t} \qquad\qquad (3.8)$$

Akaike's (1974) Information Criterion (AIC) was used to compare these different
(non-nested) models. The AIC value takes into account the Log Likelihood ($\ln L$),
number of covariates (k; here 0) used in each model, and the number of model-
specific parameters (c). The AIC value is equal to -2 $\ln L$ + 2($k+c$), where, in
principle, the model with the lowest AIC value is preferred.

The piece-wise exponential model shows that the duration dependence is in-

Table 3.1: *Duration dependence of the transition rate using various specifications[a].*

	Piece-wise exponential[b]	Lognormal	Log-logistic	Gompertz
$0 < u \leq 2$	-4.816**			
	(0.707)			
$2 < u \leq 4$	-3.059**			
	(0.316)			
$4 < u \leq 7$	-2.829**			
	(0.277)			
$7 < u \leq 11$	-2.516**			
	(0.277)			
$u > 11$	-2.833**			
	(0.577)			
γ			0.432**	0.120**
			(0.054)	(0.035)
σ		0.760*		
		(0.087)		
Constant		2.467**	2.449**	-3.750**
		(0.106)	(0.097)	(0.279)
Log-likelihood	-86.05	-81.24	-82.31	-88.91
Number of parameters	4	2	2	2
AIC Value[b]	180.10	166.48	168.62	181.82

Significance levels :   † : 10%   ∗ : 5%   ∗∗ : 1%
[a] Standard errors are in parentheses.
[b] u refers to the length of the organizing period, measured in years.

deed non-monotonic and inversely U-shaped, in line with previous studies on this transition rate (Carroll and Hannan 2000; Schoonhoven et al. 1990). The transition rate appeared to rise rapidly in the early years, after which it slowly declines. It is therefore not surprising that the lognormal specification (which assumes this specific shape if parameter $\sigma < 1$) improved greatly over the piecewise-exponential model, giving a lower AIC value (166.48 vs. 180.1). The pattern also persisted in the log-logistic specification, but this model seems to perform slightly worse than the lognormal version. The Gompertz model, which cannot handle this non-monotonic, inverted U-shaped form of the transition rate, did not improve over the log-logistic and lognormal specifications with an AIC value of 181.82. To test hypotheses 5.1 and 5.2 (which only involve an investigation into the duration dependence of the rate), the transition rate was therefore estimated by means of the lognormal specification. In terms of model building, however, we reverted to the piece-wise exponential specification because we were predominantly interested in the transition rate itself rather

than the waiting time to setting up a branch (for an example of this type of study see Schoonhoven et al. (1990)). This has also been the focus of other studies of pre-entry dynamics (Carroll and Hannan 2000; Ruef 2006; Sørensen and Sorenson 2003). Studying the waiting time as a dependent variable is better served by 'accelerated failure time' (AFT) models such as the lognormal and log-logistic specifications[4].

In Chapter 6, the focus then shifts to branch offices only and the likelihood that these branches will reach the state of profitability.

$$\mu_i(t) = \lim_{\Delta t \downarrow 0} \frac{Pr(Profitable(t + \Delta t)|Not\ profitable(t))}{\Delta t} \tag{3.9}$$

I focused on the likelihood of profitability as a performance measure instead of the more conventional mortality rates because not many foreign banks in Shanghai have failed during the span of the observation window. Table 3.2 depicts the results for various functional forms of the profitability rate: two specifications discussed above (the Gompertz model and the piece-wise exponential specification) plus the Weibull model. The Weibull model has the following specification:

$$\mu_i(t) = \theta \rho t^{\rho - 1} \tag{3.10}$$

The Weibull model yielded the sharpest results as evidenced by the lowest AIC value (69.32), and was therefore used in subsequent analyses.

3.4 Size-Localization Measure

In Chapter 5, one variable is used that deserves further elaboration. This variable describes the distance in size between a focal organization and its competitors. This measure is constructed in order to make inferences about the possible size-localized nature of processes that are related to interactions between social actors, such as competition and legitimation. In previous studies, a number of measures have been developed to weight the effects of competition and legitimation by size. This study took as a starting point a measure developed by Banaszak-Holl (1991), who, in her study of the historical development of the Manhattan banking industry, focused on the inverse of distance: nearness. (For a measure focusing on distance, see Hannan,

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[4]The dependent variables in both types of models are closely related, however. Shorter waiting time to market entry is associated with a higher transition rate. Estimates of coefficients and their statistical significance using various models were found to be comparable in exploratory analyses.

Table 3.2: *Duration dependence of the profitability rate using various specifications[a].*

	Piece-wise exponential[b]	Weibull	Gompertz
$0 < u \leq 2$	-1.922**		
	(0.289)		
$2 < u \leq 3$	-0.659*		
	(0.258)		
$3 < u \leq 5$	-0.965**		
	(0.354)		
$u > 5$	-1.099*		
	(0.447)		
γ			0.267**
			(0.067)
ρ		2.054**	
		(0.233)	
Constant		-2.896**	-2.049**
		(0.413)	(0.280)
Log-likelihood	-40.21	-32.66	-39.20
Number of parameters	3	2	2
AIC Value[b]	86.42	69.32	80.40

Significance levels :   † : 10%   ∗ : 5%   ∗∗ : 1%
[a] Standard errors are in parentheses.
[b] u refers to the length of time the bank has not achieved profitability, measured in years.

Ranger-Moore, and Banaszak-Holl (1990) or Carroll and Hannan (2000).) This nearness measure, based on the difference in size S between an organization i and its competitor j, is constructed as follows:

$$Nearness_{it} = \sum_{j:j \neq i} (1 + 0.1|S_{it} - S_{jt}|)^{-1} \tag{3.11}$$

Although Banaszak-Holl's (1991) measure offers several advantages[5] over the distance measure initially proposed by Hannan et al. (1990), a disadvantage is that a very small difference between the size of organization j and the size of organization i is translated into substantially lower $Nearness_{it}$ between these organizations , while a subsequent increase in the difference between S_{it} and S_{jt} decrease $Nearness_{it}$ only to a lesser extent (Figure 3.1, left panel).

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[5]As Banaszak-Holl (1991) notes, one of the problems of the 'traditional' measure of distance, D_{it}, is that it makes use of an arbitrary size window in which organizations near the limit of the size window, but within the window, contribute heavily to the value of D_{it}, but those organizations
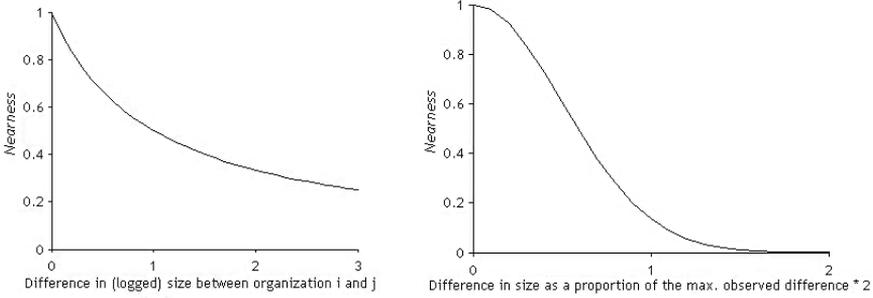
Figure 3.1: *Measures of size-localization: Banaszak-Holl (1991, left) and an alternative measure used in Chapter 5 (right).*

This effect is theoretically undesirable since, in the conceptualization of, for instance, size localized legitimation, it implies that a very small difference in size between organization i and j can be equated with a substantially lower level of cognitive legitimation of these organizations towards each other compared to the case in which i and j are of equal size. It seems unlikely that organizations which differ only marginally in size would have such a low likelihood of recognizing each other, so an alternative measure was developed for this study which takes into account the idea that very small differences in size between organizations i and j induce relatively little change in the value of $Nearness_{it}$, compared to the case in which i and j would be of equal size (Figure 3.1, right panel). This measure is a Gaussian function of the distance between S_{it} and S_{jt}.

$$Nearness_{it} = \sum_{j:j\neq i} exp(-(\delta\frac{|S_{it} - S_{jt}|}{max(S_{it} - S_{jt})})^2) \qquad (3.12)$$

Parameter δ in this analysis was set equal to 2, since this yields a nearness of almost zero as the difference in size between i and j approaches its maximum, meaning that, in terms of size, organization i is not near to its competitors at all. (Alternative parameterizations ($\delta = 1.5$ and $\delta = 2.5$) were tested and did not change the statistical significance of the final results.)

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just outside the window (and thus of very similar size) contribute nothing to D_{it}.

3.5 Model Estimation and Comparison

To estimate the (logistic) models presented in this dissertation, the Maximum Likelihood (ML) method is used. Through this method, the likelihood of a particular outcome y is calculated based on an assumed distribution of that outcome and a combination of a set of model parameters, θ. These model parameters are then optimized through an iterative procedure for the product of individual observations i.

$$\prod_{i=1}^{n} L(\theta|y) \tag{3.13}$$

As Carroll and Hannan (2000, 127-133) demonstrate, in both event-history as well as in event-count models, the ML estimates takes the form of the well-known *occurrence/exposure ratio* from classical actuarial mathematics, i.e. the ratio of the number of times an event occurs and the length of time the unit(s) of analysis has been exposed to the 'risk' that the event occurs.

The (nested) models were compared using a test statistic based on the work of Haberman (1977) which parallels the likelihood ratio test of a restricted model specification (S_2) against a less restricted specification (S_1). Haberman (1977) shows that the analogy holds even if the event count is small.

$$-2[\ln L(S_2) - \ln L(S_1)] \sim \chi^2 \tag{3.14}$$

This statistic has an asymptotic chi-square distribution with degrees of freedom equal to the difference in the number of restrictions (i.e. variables) between S_1 and S_2.

4

Re-emergence after a Period of Dormancy

This chapter examines the process by which foreign banks re-entered the Shanghai market during the period from 1982 to 2004. Previous studies that have sought to explain the re-emergence of an organizational population after a period of temporary discontinuity have focused on the local preservation of skills and knowledge or a locally preserved collective memory of the blueprints of the organizational form to which the population pertains. This chapter takes a different approach and investigates alternative explanations for the re-emergence of an organizational population from the perspective of the organizational form's continued preservation outside the society in which the period of dormancy takes place. Failing to find supporting evidence for a process of re-legitimation among the re-emerging foreign banks in Shanghai, it is argued that much of the re-emergence instead can be explained by legitimacy spillovers and niche expansion of the broader multinational banking community outside mainland China, as represented in such places as Hong Kong.

4.1   Periods of Dormancy

Contemporary organization theory has thus far depicted industrial evolution mainly as a process of birth, growth, maturity, decline (Gort and Klepper 1982; Klepper and Graddy 1990), and - under some conditions - resurgence (Carroll 1985; Hannan 1997; Ruef 2004b). Occasionally however, we encounter industries that temporarily go extinct, remain in dormancy for some years, and re-surface at a later stage

(sometimes quite rapidly). The causes for such discontinuities in the evolution of organizational populations may vary. In some cases, unfavorable regulations might temporarily repress particular populations, and a re-emergence might then occur when the regulation is lifted. In other cases, a change in the regime of a country might lead to the temporary extinction of whole sets of organizational populations. Totalitarian regimes might for instance prove unfavorable to many political parties, labor unions or various social movement organizations[1].

Examples of ecological studies that have described such periods of temporary dormancy are those of American breweries and wineries (Carroll and Swaminathan 1991; Delacroix, Swaminathan, and Solt 1989; Hannan and Carroll 1992), and of the Bulgarian newspaper industry (Dobrev 2001). Starting with the former, the evolution of American breweries and wineries experienced a period, known as the national Prohibition, in which many breweries were forced to suspend operations or to move to other lines of business. During this Prohibition, which lasted from 1920 to 1933, the production and sale of alcohol was forbidden as a result of the Volstead Act. The number of breweries and wineries dropped to zero, but the annulment of the act caused the populations of breweries and wineries to re-emerge. Noteworthy is that after the Prohibition (at least in case of the breweries), the number of organizations also went back to the trend line that it was following prior to the Prohibition (Swaminathan and Carroll 1995). According to Hannan and Carroll (1992), many individuals still possessed the skills necessary for brewing and wine making, which made a relatively rapid re-emergence of these organizational forms possible. As soon as 1934, the number of wineries in California alone (where the majority of U.S. wineries are located) reached a high of 804 (Delacroix et al. 1989). By the same year, the number of breweries in the U.S. reached 926 (Swaminathan and Carroll 1995). In the Bulgarian newspaper industry, as described by Dobrev (2001) most independent commercial newspapers were forced to disband when Bulgaria became part of the Soviet Bloc in 1948. This was a result of the fact that the communist party obtained the legal authority to publish, sell and distribute newspapers, and as such it caused a severe censorship on free press. More than forty years later, the population of independent newspapers started to re-emerge again after the crumbling of the 'iron curtain' and the formal legalization of anti-communist opposition

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[1]Of course, the effects of such unfavorable regulations and regimes may extend beyond the domain of organizations. Other social forms might experience periods of dormancy as well. Becker (1982, 185–191) for instance discusses how these processes take hold on forms of art.

in December of 1989. Virtually non-existent in the state socialist era, an expanding population of independent newspapers caused the total number of Bulgarian newspapers to exceed the count of 500 in the second half of 1991 (Dobrev 1997)[2].

In this chapter, I analyze the full history of foreign banks in Shanghai, a population that experienced a discontinuity of more than 30 years in the second half of the twentieth century. The period of dormancy, of course, started not long after the Communist Party came to power in October 1949, and China moved into a phase of economic isolationism. This situation lasted until the early 1980s, when the foreign banking form (rapidly) re-established itself in Shanghai. Within a few years (as soon as 1989), the number of foreign banks exceeded the previous historical high of 33 foreign banks (reached in 1934) and ten years later, in 1999, the number of foreign banks in Shanghai reached a preliminary maximum of 108 foreign banks. How can we possibly account for the speed at which the re-emergence of an organizational population, as it happened here, takes place? The occurrence of such phases of dormancy requires a theoretical mechanism that is able to account for such periods of discontinuity, that can explain the patterns of re-emergence after such periods, and that can be used effectively in empirical analyses. But with a few exceptions (Dobrev 2001; Hannan and Carroll 1992) little attention has been paid to providing such a theoretical foundation. Existing studies, making use of organizational ecology's theory of density dependence (Hannan and Carroll 1992) have focused on whether or not a renewed growth of local legitimation takes place, but alternative explanations are lacking. This study points out to legitimacy spillovers (Bigelow et al. 1997; Delacroix 2004; Han 1998; Hannan et al. 1995; Lomi 2000) but also introduces another ecological theory fragment to the analysis of re-emergence, namely niche width theory (Freeman and Hannan 1983; Hannan, Carroll, and Pólos 2003; Hannan and Freeman 1977; McPherson 1983; Péli 1997), by arguing that periods of dormancy might be caused by processes of niche contraction and expansion of the broader organizational form. When a population in one society moves into a phase of dormancy, the broader form withdraws itself from that society, but it may return

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[2]Other studies have also pointed out to periods of dormancy. For instance, Carroll and Delacroix' (1982) analysis of the Argentinean newspaper industry shows that there was a phase in the early history of the industry in which temporarily no newspaper organizations existed. This period lasted roughly 2.5 years (between 1807 and 1810) and started after the first two entrants of the then newly emerging Argentinean newspaper industry failed. A similar situation arose in the early history of American national labor unions, between 1837 and 1843 (Hannan and Freeman 1989). I interpret these 'gaps' however as discontinuities in the initial emergence of the form, rather than as instances of *re*-emergence.

by means of expansion. In doing so, the form follows the ecological 'principle of allocation' (cf. Levins 1968; Hannan et al. 2003; Hannan and Freeman 1977, 1989; Péli 1997). Before outlining this perspective however, I will first review existing theoretical interpretations.

4.2   Theoretical Interpretations

Only two known studies have attempted to explicitly analyze the re-emergence of organizations after a period of dormancy. These are Hannan and Carroll (1992, 47 and 164–167) for breweries after the Prohibition, and Dobrev (2001) for independent newspapers after the legalization of anti-communist opposition. Both studies use arguments based on the theory of density dependence. Density dependence theory (as articulated in more detail by Hannan and Carroll (1992)) assumes, among others, an inverted U-shaped relationship between density (defined as the number of organizations in a population, typically denoted by N) and the founding rate of new entrants into that population (λ_t). Increases in density when the number of organizations is low facilitates the growth of cognitive legitimation (the social recognition of that group of organizations), which in turn increases the founding rate. However, with the increase in density, also competition increases at an increasing rate, leading to a decline in the founding rate at higher levels of density. The inverted U-shaped effect of density on the founding rate that results from the processes of legitimation and competition is typically estimated in empirical analyses as follows:

$$\lambda_t = l_t exp(\alpha N_t + \beta N_t^2) \tag{4.1}$$

Where $\alpha > 0$ and $\beta < 0$ and where l_t is the combined effect of other covariates. As this model suggests, the theory of density dependence in principle does not distinguish between emergence and re-emergence as historical time and periods of dormancy are not accounted for. Accordingly, Hannan and Carroll (1992) note that one of the implications of this theory is that, directly after the period of dormancy (when the density of the potentially re-emerging population is still low), the theoretical framework implies low levels of competition and low levels of legitimation. It is especially the latter that can be subject to discussion. Is cognitive legitimation indeed low for a population that experienced a phase of dormancy, such as the breweries after the national Prohibition compared to the legitimation breweries had prior

to the Prohibition[3]? Hannan and Carroll (1992) indeed fail to find support for a re-
newed growth in legitimation among breweries after the Prohibition, which suggests
that legitimation did not weaken substantially during the Prohibition. They note
that the organizational form for producing beer was still well-known to potential
investors and consumers. Instead, they conclude that the main legitimation phase
took place in the early (pre-dormancy) history of the population. This result sug-
gests that, at least when periods of dormancy are reasonably short, complete and full
histories of organizational populations need to be analyzed in order to capture the
full effects of legitimation. Only if the period of dormancy is long enough, a renewed
legitimation phase might be necessary, and density dependence in the founding rate
can then be found by studying the post-dormancy period only.

Dobrev (2001), in his analysis of Bulgarian newspapers, indeed does consider
the possibility that a renewed legitimation phase took place after the somewhat
longer period of dormancy that affected the newspaper industry. He analyzes the
re-emergence process in more detail by studying the founding rate which in general
reaches a maximum at a density of

$$N_\lambda^* = -\frac{\alpha}{2\beta} \tag{4.2}$$

which is basically the point at which competition comes to have a stronger bear-
ing on the founding rate. This point is generally seen as the threshold at which
already a reasonable extent of legitimation can be assumed. How this threshold, N_λ^*,
is reached is of main interest to Dobrev (2001). Dobrev's formal analysis is based
on a comparison between legitimation processes in two periods: the pre-dormancy
period (p_1) and the post-dormancy period (p_2), the latter of which in fact experi-
ences a process of what Dobrev (2001) refers to as *re-legitimation*. As he argues,
re-legitimation requires fewer organizations in p_2 compared to legitimation in p_1.

$$N_{\lambda,p_1}^* > N_{\lambda,p_2}^* \tag{4.3}$$

Additionally, the time in which the maximum founding rate in both periods were
reached ($T(N_\lambda^*)$) should be shorter in p_2 than in p_1.

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[3]Hannan (1997) provides an alternative theoretical rationale (and analytical solution) for this
phenomenon by arguing that legitimation remains "sticky", i.e. it does not decline easily once it
has achieved a substantial level.

$$T(N^*_{\lambda,p_1}) > T(N^*_{\lambda,p_2}) \tag{4.4}$$

What is the intuition behind these assertions? Dobrev (2001) notes that some of the newly founded independent commercial newspapers seem to have had predecessors in the era before 1948. These newspapers made reference to their founding year on the top of their front pages, and as such they made an 'important, albeit purely symbolic, attempt to infer legitimacy from an organizational form that had left its lasting mark on the collective memory' (Dobrev 2001, 439). A possible presence of such a collective memory of the blueprints of the earlier pre-dormancy population was supported by the observation that the re-emergence of independent commercial newspapers indeed took place in a much shorter time span: while in the late nineteenth century, several decades were needed before newspapers were considered a taken for granted aspect of the social and economic environment, in the 1990s this process only took a few months. The collective memory in such a case is basically invoked and revitalized, building on the legacy and recollection of the past (Dobrev 2001).

In short, Dobrev's (2001) explanation mainly focuses on the local preservation of a collective memory that facilitated the (rapid) re-legitimation of the organizational form, while Hannan and Carroll (1992) focus on the local preservation of knowledge and skills. However, in an alternative (although not necessarily contradictory) view, the re-emergence of an organizational population can be seen as a product of processes in a broader, *non-local* environment (Carroll and Teo 1998). This view takes into account the continued presence of the organizational form in other societies. I will elaborate on this perspective below.

4.3   Non-local Persistence of Forms

Organizational populations occasionally disappear from particular societies, most often due to unfavorable regulations, policies and regimes. Such regulations, policies and regimes can make the environment for particular organizational populations (temporarily) inhospitable. However, these populations are part of organizational forms that typically operate in a broader environment (Hannan and Freeman 1977; Hannan et al. 1995; Pólos, Hannan, and Carroll 2002). The organizational form, defined as a socially coded identity that applies to a set of organizations (cf. Pólos

et al. 2002), might be able to survive in other, possibly neighboring societies. The period of dormancy lasts until the society that was temporarily inhospitable to an organizational form changes its regulatory environment and makes conditions more favorable. This could lead to the return of the organizational form previously banned from that society. In principle, an organizational form can move back to such societies either by

1. *ideas and cultural images* describing the form and which may stimulate the founding of new organizations pertaining to that form, or

2. *extant organizations* (members of the form) which were previously active outside that society.

The first of these two mechanisms builds on the idea that a form that applies to (populations of) organizations operates on a broader geographical scale. Populations have features that they share with populations in alternative social systems, and the diffusion of the form is facilitated by the fact that the codes describing these forms, e.g. cultural images, information or ideas, can easily flow beyond geographical boundaries (Bigelow et al. 1997; Delacroix 2004; Han 1998; Hannan et al. 1995; Lomi 2000). For example, Hannan et al. (1995) describe how the codes pertaining to the automobile form diffused among several European countries in the late nineteenth century, giving rise to local populations of automobile producers in each of these countries. According to Hannan et al. (2005), this possibility becomes increasingly likely. They note that the possibility that a cultural code gets maintained[4] in one part of a system and made available to other parts seems especially likely in a globalized world with rapid mass communications and pervasive information technology, suggesting that contemporary forms are less likely to disappear than earlier ones. The legitimacy of the organizational form in one social system may thus help to give rise to new populations elsewhere, and international legitimacy spillovers may thus be a first mechanism by which a population can re-emerge.

The second mechanism is that the population in an alternative social system *itself* expands into a social system that previously could be characterized as being inhospitable to the organizational form. Building on ideas from organizational niche

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[4]Maintaining such codes in other societies could either be through the instantiation in organizations, or alternatively in a collective memory of social actors in another society (in line with Dobrev (2001)).

width theory (Freeman and Hannan 1983; Hannan et al. 2003; Hannan and Freeman 1977; McPherson 1983; Péli 1997), the perspective is taken that multinationals can loosely be defined as a set of 'generalists' in the sense that they operate in multiple environments and occupy a broad geographical niche[5]. Being able to cope with variations in resources drawn from diverse environments, adversity in one environment does not necessarily lead to the demise of the complete range of multinational activities: other environments might still offer sufficient opportunities for a reasonable 'fitness'.

Niche width theory has suggested that this form of adaptation to diverse environments follows the 'principle of allocation'. According to this principle, organizations have a fixed amount of adaptive capacity (cf. Levins 1968; see also Hannan et al. 2003; Hannan and Freeman 1977, 1989; Péli 1997). If this principle of allocation indeed applies, then a discontinuity in one environment simply leads to the allocation of attention elsewhere. The generalist in such cases is more likely to invest its available resources (possibly arising from excess capacity) in other locations. However, when conditions become more hospitable again, generalists might decide to re-allocate their attention to that environment, causing the re-emergence of a local population.

Empirical evidence has shown that, *ceteris paribus*, generalist (broad niche) organizations are indeed more likely to expand and contract their niches compared to specialist (narrow niche) organizations (Dobrev, Kim, and Carroll 2002b; Kim, Dobrev, and Solari 2003; Sorenson, McEvily, Ren, and Roy 2005). For instance, Kim et al. (2003) studied, among others, the effect of niche width (measured in terms of the range of engine sizes produced) on niche expansion among Italian automobile manufacturers between 1896 and 1981. They find that the greater the size of the niche, the higher the probability of expanding the existing niche. Similarly, Dobrev et al. (2002b), in a study on US automobile producers, find that the probability of entering a new market segment increases with niche width. Sorenson et al. (2005) even argue that the higher rates of expansion among broad niche, generalist organizations is innate to these firms: generalists have the built-in tendency to continuously expand to new market segments. According to this perspective, niche

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[5]Even among organizational ecologists there exists a lack of consensus on proper definitions of generalism and specialism, ranging from product range to the diversity of routines used by a firm. For this reason, Hannan et al. (2003), in their formal model of the organizational niche, drop all reference to these terms. The lack of consensus is not problematic here, since I use the notion only in a metaphorical sense.

expansion (and possibly also contraction) are seen as a behavioral trait of generalist organizations.

The joint process of, on the one hand, an international legitimacy spillover related to the form in question, and on the other hand and expansion of the population of form members (after an earlier niche contraction), leads to the following prediction:

Hypothesis 4.1. *The rate at which organizations are founded in a social system that was previously inhospitable to these organizations, has a positive relationship with the number of organizations of the same form in a neighboring social system.*

In order to apply these ideas to the case of the re-emerging foreign banks in Shanghai, an alternative social system needed to be selected that is 1) located just outside the society of which Shanghai is a part 2) that is representative for the multinational banking community at large and 3) absorbed many of the foreign banks when Shanghai itself experienced a period of dormancy. Given these requirements, I opted for Hong Kong[6]. A parallel analysis of the evolution of banking in Hong Kong is likely to shed light on some of the dynamics described above, and allows us to get a fuller understanding of the (historical) factors that have influenced the re-emergence of banking in Shanghai.

4.4 Hong Kong *versus* Shanghai

Figure 4.1 shows the historical trajectories of foreign banks in Hong Kong as well as in Shanghai. Among others, this figure shows that, in the 1920s and the early 1930s, the number of foreign banks in Shanghai initially exceeded the number of foreign banks in Hong Kong. Shanghai was in this period a major center of international trade and finance and played a pivotal role in the East Asian region. This period was characterized by rapid economic development and became known as Shanghai's

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[6]Why choose Hong Kong over alternatives such as Singapore and Tokyo? I opted for Hong Kong because of its relative closer geographical proximity to Shanghai, its sheer location adjacent to mainland China, and its historical importance as a financial center in serving the Chinese market. Not surprisingly, the (competitive) relationship between Hong Kong and Shanghai is widely discussed in the literature (e.g. Jao 1997, 1998, 2004; Meyer 2004; Schenk 2001). Schenk (2003) even argues that an analysis of Shanghai's financial history is incomplete without reference to Hong Kong as a rival financial center. An additional reason is that Hong Kong outcompetes both Singapore and Tokyo in terms of the number of foreign banks it hosts, and therefore may be more representative for the international banking community at large. According to figures provided by Jao (1997), the number of foreign banks in Hong Kong was more than the *combined* number of foreign banks in Tokyo and Singapore in the mid-1990s.
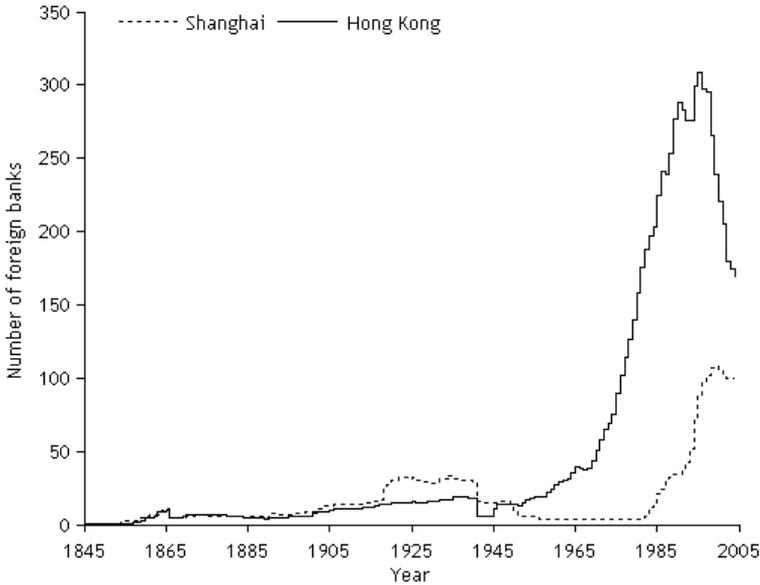
Figure 4.1: *Number of foreign banks in Hong Kong vs. Shanghai, 1845-2004 (the counts of foreign banks in Hong Kong exclude banks from mainland China).*

'golden age' (Ji 2003). At that time, Hong Kong 'was essentially a smaller version of Shanghai' (Jones 1992, 407). As outlined in Chapter 2, Shanghai lost its position as East Asia's main financial center in the late 1930s and 1940s due to a variety of reasons. A currency crisis in 1935 was among the first indicators of the declining role of foreign banks in Shanghai. The Sino-Japanese War that started in 1937 also troubled the banking business, and with the onset of the Pacific War in late 1941, many foreign banks in Shanghai ceased operations (in particular those banks originating from Allied countries had to withdraw from Japanese-controlled Shanghai). After this war, a Civil War (1945-1949) erupted in China which, together with high inflation, created little new business opportunities for those foreign banks that were able to return to Shanghai after 1945. In October 1949, the Civil War ended and China came under Communist Party rule. The new regime was, at best, unfavorable to the presence of the remaining foreign banks in China. Foreign banks were in these years seen as agents of western imperialism. By 1956, only four 'quasi-foreign' banks

were left in Shanghai (i.e. HSBC, the Bank of East Asia, the Chartered Bank of India, Australia, and China, and the Overseas Chinese Banking Corporation). By this time, Shanghai had already lost its eminent position as Asia's main financial center.

The main beneficiary of the dismantling of Shanghai was Hong Kong (Jones 1992; Wong 1988). During the Civil War, Hong Kong -as a British Crown Colony-remained 'free' from the hostilities in mainland China. This was one of the reasons why Hong Kong experienced an inflow of both capital and labor. Schenk (2001) notes that between 100 and 150 Shanghai businessmen had moved to Hong Kong by November 1946. Many of these entrepreneurs, part of Shanghai's economic elite, decided to continue their businesses in Hong Kong. These entrepreneurs, such as the cotton spinners described by Wong (1988, 50–53), formerly relied on Shanghai's financial system, but now were in the need of capital to rebuild their business in Hong Kong. For this they turned to the foreign banks in Hong Kong. With the growing economic activity and the increasing need for financial services, Hong Kong grew in importance. In 1947, the China Association reported to the British Secretary of State for the colonies that 'Hong Kong is now a far more important place than it was before the war, as its functions as an entrepot and port of transshipment for the foreign trade of China have greatly increased owing to the conditions prevailing in Shanghai and elsewhere in China' (Schenk 2001, 19–20). The end of the civil war in China only strengthened Hong Kong's position as a center for international finance. Hong Kong at that time offered several advantages, of which the most important were a relatively stable social and political system, as well as economic freedom. Although the number of foreign banks did not increase substantially in the 1950s, 'to regard this as a reliable indicator of banking development is misleading' (Jao 1973, 18). Instead Jao (1973) claims that the 1950s was a period of phenomenal growth. Foreign banks in Hong Kong started to expand their operations by increasing the number of branches throughout the city, a trend which also domestic banks followed (see Figure 4.2 which shows the general branch/bank ratio in Hong Kong). Later in the 1960s, the sheer number of foreign banks in Hong Kong also started to increase.

In the early 1980s, when China embarked on its open-door policy, ending China's period of economic isolationism, many of the foreign banks that were present in Hong Kong also opened an office in Shanghai. Closer inspection of the available
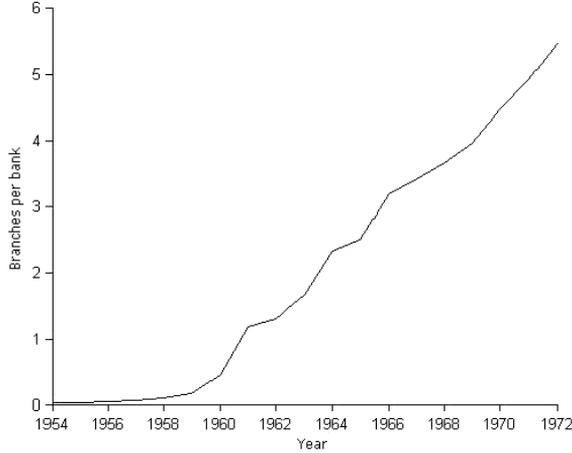
Figure 4.2: *Number of sub-branches per bank in Hong Kong, 1954-1972 (adapted from Jao (1973)).*

data reveals that, out of the 127 foreign banks[7] that entered Shanghai in the period between 1982 and 2004, 108 foreign banks previously also had a presence in Hong Kong, roughly equal to *85 percent*. The increased importance assigned to Shanghai by these foreign banks in Hong Kong, also becomes evident by the fact that Shanghai became home to an increasing number of China headquarters. For instance, Citibank's China headquarters was relocated from Hong Kong to Shanghai in 1993. In 1999, another leading bank, HSBC, moved its corporate headquarters for China from Hong Kong to Shanghai. Although in both cases, the Hong Kong offices retained their importance as headquarters for the broader Asia-Pacific area, these shifts illustrate a clear shift in the allocation of attention of foreign banks. Figure 4.3 shows the number of bank foundings in Shanghai over the 1982-2004 time span. Striking is again that a large majority of the foreign banks founded in Shanghai also had a previous presence in Hong Kong, as illustrated by the black- and grey-colored bars. It also becomes evident that until the middle of the 1990s, not a single bank moved into the Shanghai market without first having an office in Hong Kong. Additionally, Figure 4.3 points out that some foreign banks (n=15; black-colored bars) also had a presence in Shanghai's pre-dormancy period. All of these banks had a

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[7]This figure excludes locally incorporated Hong Kong banks.
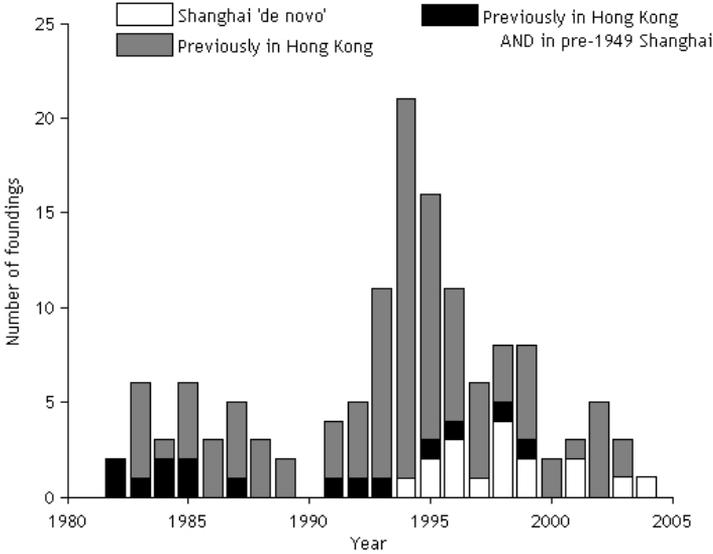
Figure 4.3: *Number of foreign banks founded in Shanghai (by origin), 1982-2004.*

previous presence in Hong Kong before they returned to Shanghai and, interestingly enough, a majority of these banks were able to be among the first batch of foreign banks that returned to Shanghai (although also some of these banks entered later in the 1990s).

The main argument here is that the nearby presence of many foreign banks in Hong Kong should explain at least part of the rapid re-emergence and increase in the number of foreign banks in Shanghai. In ecological parlance, the multinational banking community experienced a niche contraction in the late 1940s and early 1950s (i.e. China became excluded from the feasible set for multinational banks), and, instead, allocated their attention to Hong Kong. The contraction was not reversed until the early 1980s when conditions in China became more favorable again. A niche expansion phase took place, by which multinational banks regained their positions in mainland China. It must be noted however that this was a niche expansion that was not accompanied by the abandonment of the position in Hong Kong: many international banks remained active in Hong Kong, but merely started

to shift their attention to mainland China. In addition, banks moving into Shanghai may have benefited from the high degree of legitimacy that foreign banks had in Hong Kong. This legitimacy may have spilled over to mainland China, making it easier for foreign banks to start ventures there as well.

This theoretical interpretation will be tested using data on both the historical development of Hong Kong and Shanghai. Analytically, the chapter proceeds as follows. In a first step, an attempt is made to replicate the findings of Dobrev (2001) by looking only at the city that experienced a phase of dormancy, Shanghai. Dobrev's (2001) study is chosen as a starting point since that context resembles the empirical context presented here both in terms of the cause of the period of dormancy (state socialism) as well as in the length of period of dormancy. Then, in a second step, the main alternative financial center to Shanghai (i.e. Hong Kong) is included in order to investigate how the presence of foreign banks in this city affected the re-emergence of foreign banks in Shanghai.

4.5   Variables

The main dependent variable in the first analytical step is the founding rate[8] of foreign banks in Shanghai. As mentioned in Chapter 3, only new ventures of foreign banks are included in the analyses; 'new' ventures that result from a merger or an acquisition are not. This brings the total number of founding events to 211, with 134 foundings taking place in the period from 1982 to 2004.

The main variables of interest are the density measures, i.e. variables that represent the number of foreign banks in both Shanghai as well as in Hong Kong. In line with density dependence theory (Hannan and Carroll 1992) and equation 4.1, density measures are accompanied by a second order, squared version to account for non-monotonic effects and all variables are lagged one year. For both populations studied, I have also tested interaction effects with first and second order effects of the time since the founding of the population's first organization (cf. Hannan 1997), however adding these interaction effects did not significantly improve the models and were therefore omitted. For the analysis of bank foundings in Shanghai after 1982, also the number of domestic banks in Shanghai was included as an alternative

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[8]The method of analyzing founding rates in order to get insight into the process of form emergence has earlier been adopted by McKendrick, Jaffee, Carroll, and Khessina (2003) in a study of disk array producers between 1986 and 1998.

source of legitimacy from which foreign banks may have benefited, in addition to that possibly generated by foreign banks in Hong Kong. The population of domestic banks in Shanghai may have signaled the legitimacy of banking in this particular location, in turn facilitating the entry of foreign banks into Shanghai. Aside from the density measures, the following covariates are included in the empirical analysis:

Period Effects. Since obtaining consistent and reliable statistics over the full range of the observation window proved to be a sheer impossible effort in this specific context, I relied on period effects in capturing the more significant environmental changes affecting foreign banks. In line with previous analyses of e.g. Banaszak-Holl (1991) and Hannan et al. (1995), overlapping period effects were used in order to create a piece-wise constant model in historical time. In this specification, the baseline founding rate is basically the sum of the constant term and the effect of a particular period plus all previous periods (Hannan et al. 1995). The first period starts with the onset of the observation window, 1847. In this year, the first foreign bank in Shanghai was founded, the British chartered Oriental Banking Corporation. This event preluded a period in which British banks maintained a dominant position on the Shanghai financial market. The second period starts with the founding of one of the first non-British banks, the Deutsch-Asiatische Bank in 1890, after which also banks from other nations rapidly started to enter the Shanghai scene (introducing more competition in the market). The third period starts after the First World War in 1918, when Shanghai started to become an international center for commerce and finance. The fourth period starts in 1935, when an economic crisis disrupted the financial market and (as mentioned above) new monetary reforms changed the position of foreign banks. As indicated, it was in this period that Shanghai started to lose its position as the main financial center of East Asia. In the analysis for the (post-dormancy) period from 1982 to 2004, I used an additional period effect ranging from 1998 to 2004. This period effect was added to account for the consequences of two important events that took place during 1997: 1) Hong Kong lost its status as a British Crown Colony and became part of the People's Republic of China as of July 1, 1997, and 2) the Asian Crisis took place which disrupted the entire region, in particular Hong Kong. Unfortunately, there is no way to disentangle these two events in the empirical analyses.

End of World War II. As described in Chapter 2, at the end of the Second World War, foreign banks (other than the Japanese or Japanese-supported banks) re-opened their offices in Shanghai. In total, twelve foreign banks started their

operations in 1945, all of which were also active prior to the war. To control for this
'artificially' high number of new entrants, a dummy variable was added for the year
1945.

Lagged Foundings. The number of foundings in the previous year was also added
to the models, since many previous studies (e.g. Carroll and Huo 1988; Delacroix
and Carroll 1983; Delacroix and Solt 1988; Hannan et al. 1995; Hannan and Freeman
1989; Mezias and Mezias 2000; Ranger-Moore et al. 1991; Sørensen and Sorenson
2003) have found evidence of positive contagion: founding events in one period
stimulate the founding rate in a subsequent period. Occasionally, these studies
have also found that the effect of lagged foundings is inversely U-shaped: too many
foundings in a previous period in such cases actually reduces the rate of founding.
To test this possibility, also a squared version of lagged foundings was added.

Population Age. Population age was defined as the time in years since the found-
ing of the first foreign bank (the Oriental Banking Corporation) in Shanghai in 1847.
This variable is used in order to capture general temporal trends in the founding
rate of foreign banks.

Foreign Trade. Since a majority of the foreign banks in Shanghai have been
merchant banks, the total value of foreign trade through Shanghai (imports and
exports, in USD 10 billion) was included as an indicator of the 'carrying capacity'
of the local market. Expected is that the more foreign trade will pass through
Shanghai, the more foundings of foreign banks will take place. Figures on foreign
trade were adapted from the *Shanghai Statistical Yearbook* and were lagged one year.

The analysis of the founding rate of foreign banks in Hong Kong in the second
analytical step (for which I counted 530 founding events), basically used the same
set of variables, but with two slight modifications: First, the period effect that starts
in 1918 was omitted since Hong Kong did not experience a 'golden age' (Ji 2003) to
the extent that Shanghai did. Second, I added two period effects for Hong Kong:
one to mark the Communist Party rule in mainland China since 1949 (a proxy
for the period of dormancy for foreign banks in Shanghai) and one to mark the
years following 1980 in which economic reforms first allowed foreign banks to set up
operations on China territory again (a proxy for the end of the period of dormancy).
Table 4.1 summarizes the variables used[9].

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[9]Multicollinearity can lead to potential problems in estimating models, however as McKendrick
et al. (2003, 78) note, this is not a problem when statistically significant support is found with
collinear data, as is the case here.

Table 4.1: *Descriptive statistics and correlations[a].*

Variable	Mean	SD	Min.	Max.	Correlations			
Shanghai, 1847-1948					(1)	(2)	(3)	
(1) Density SH	13.03	10.05	0	33				
(2) Lagged Foundings	0.75	1.51	0	11	.27			
(3) Population Age	50.5	29.58	0	101	.83	.26		
(4) End of WW II	0.01	0.10	0	1	.01	-.05	.16	
Shanghai, 1982-2004					(5)	(6)	(7)	(8)
(5) Trade	2.34	2.77	0.39	11.24				
(6) Density SH	57.48	38.46	4	108	.73			
(7) Density HK	243.78	44.18	174	309	-.38	.20		
(8) Lagged Foundings	5.78	5.02	0	21	-.04	.37	.54	
(9) Domestic Banks	9	4.68	3	15	.77	.89	.11	.30
Hong Kong, 1845-2004					(10)	(11)	(12)	(13)
(10) Density HK	50.64	84.63	0	309				
(11) Lagged Foundings	3.3	6.25	0	35	.84			
(12) Population Age	79.5	46.33	0	159	.72	.63		
(13) End of WW II	0.01	0.08	0	1	-.04	-.04	.04	
(14) Density SH	17.65	23.45	0	108	.67	.34	.53	-.01

[a] Period effects are omitted from this table; correlations beyond +/- .25, .52, and .20, respectively, are significant at the 1 percent level.

4.6 Results

Table 4.2 presents the results of the analysis of founding rates of banks in Shanghai between 1847 and 1948, i.e. the pre-dormancy period. The period effects in Table 4.2 show that, as expected, both period 2 and 3 saw a substantially higher founding rate compared to the first period (1847-1889). Of all periods, period 4 (1935-1948) experienced the lowest founding rate, which is interpreted as a reflection of the decline of Shanghai's importance in international finance and trade. A closer inspection of the data reveals that, between 1935 and 1948, there were only three new foreign banks in Shanghai (aside from the twelve foreign banks that re-opened their office after the end of the Second World War, for which a dummy variable was added).

Surprisingly, no effect was found for lagged foundings. Omitting the quadratic version did not significantly alter the results. Increasing the lag (here one year) also did not improve the models. Population age negatively influenced the founding rate of foreign banks. Apparently, the activities of international banks with respect to entry into Shanghai declined as the local industry matured. Model 2 then includes the density variables. This model improves significantly over model 1 (Haberman's

Table 4.2: *ML estimates of effects on the founding rate of foreign banks in Shanghai, 1847-1948[a].*

Variable	Model 1	Model 2
Period 2 (1890-1948)	1.972*	2.263**
	(0.771)	(0.859)
Period 3 (1918-1948)	1.746**	2.886**
	(0.566)	(0.646)
Period 4 (1935-1948)	-1.653*	-1.476[†]
	(0.749)	(0.867)
End of WW II	4.242**	3.682**
	(0.795)	(0.733)
Lagged Foundings	0.005	-0.169
	(0.189)	(0.208)
(Lagged Foundings)^2 /10	0.137	0.205
	(0.222)	(0.237)
Population Age	-0.035*	-0.063*
	(0.017)	(0.028)
Density SH		0.247[†]
		(0.131)
(Density SH)^2 /100		-0.685*
		(0.280)
Constant	-0.486	-0.891[†]
	(0.404)	(0.456)
Obs. (number of years)	102	102
Log-likelihood	-99.68	-95.45
LR $\chi^2_{(d.f.)}$	42.50$_{(7)}$	50.96$_{(9)}$
Haberman's χ^2		8.46*(vs. 1)
Dispersion parameter[b] α	n.s.	n.s.

Significance levels :   † : 10%   ∗ : 5%   ∗∗ : 1%
[a] Standard errors are in parentheses.
[b] n.s.=not significant, i.e. Poisson models are used.

χ^2= 8.46; Δd.f.=2; p<.05). The effect of density on the entry rate of foreign banks is non-monotonic and inversely U-shaped. N^*_{λ,p_1}, the density at which the multiplier of the founding rate is at its highest level, is 18, a density which historically was first reached in the year 1918 (which coincides roughly with the onset of Shanghai's 'golden age'. Thus, the analysis suggest that the 'legitimation phase' (i.e. $T(N^*_{\lambda,p_1})$) took approximately 71 years[10].

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[10]Legitimation can be interpreted here both as the social recognition of the foreign banking population among the Shanghainese, but, given the long legitimation phase, it is more likely that legitimation here denotes social recognition of Shanghai as a suitable location for international finance. The idea that a location also forms an important object of legitimation has recently been

Table 4.3: *ML estimates of effects on the founding rate of foreign banks in Shanghai, 1982-2004[a].*

Variable	Model 3	Model 4	Model 5	Model 6	Model 7
Foreign Trade	-0.204[†]	-0.234*	-0.230*	-0.128	-0.198
	(0.111)	(0.099)	(0.098)	(0.136)	(0.137)
Period Effect (1998-2004)	-0.271	0.197	0.373	0.569	0.993
	(0.553)	(0.467)	(0.561)	(0.598)	(0.622)
Lagged Foundings	0.082	0.103	0.108	0.130[†]	0.150*
	(0.088)	(0.073)	(0.073)	(0.077)	(0.077)
(Lagged Foundings)^2 /10	-0.011	-0.006	-0.009	-0.016	-0.027
	(0.036)	(0.028)	(0.029)	(0.030)	(0.030)
Domestic Bank Density	0.105	0.382**	0.340**	0.347**	0.431**
	(0.072)	(0.102)	(0.124)	(0.106)	(0.114)
Density SH		-0.039**	-0.023	-0.045**	-0.057**
		(0.012)	(0.029)	(0.013)	(0.015)
(Density SH)^2 /100			0.010		
			(0.017)		
Density HK				-0.006	-0.074[†]
				(0.005)	0.043
(Density HK)^2 /100					0.017[†]
					(0.009)
Constant	0.802*	0.258**	0.156	-0.895*	8.263[†]
	(0.357)	(0.333)	(0.381)	(1.172)	(4.962)
Obs. (number of years)	23	23	23	23	23
Log-likelihood	-54.22	-50.46	-50.28	-49.92	-48.19
LR $\chi^2_{(d.f.)}$	17.98$_{(5)}$	25.50$_{(6)}$	25.85$_{(7)}$	26.58$_{(7)}$	30.04$_{(8)}$
Haberman's χ^2 (vs. 3)		7.52**	7.88*	8.60*	12.06**
Dispersion parameter[b] α	0.10*	n.s.	n.s.	n.s.	n.s.

Significance levels : † : 10% ∗ : 5% ∗∗ : 1%
[a] Standard errors are in parentheses.
[b] n.s.=not significant, i.e. Poisson models are used.

Table 4.3 presents the results for the more contemporaneous, post-dormancy period. The estimate for the effect of foreign trade, surprisingly enough, does not show the expected positive impact[11]. On the one hand, this finding would suggest

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advanced by Romanelli and Khessina (2005), who introduce the notion of a *regional industrial identity*. In this context, the point at which N^*_{λ, p_1} is reached may be seen as the point at which the Shanghai region gains an identity as a financial center. The relevant 'audience' in this case may then be *(potential) entrants*, i.e. organizations in the international banking community (cf. Li et al. 2005).

[11]This finding seems to be in line with a finding of Leung, Young, and Rigby (2003), who were unable to find effects of the extent of home country foreign direct investment (FDI) on the profitability of foreign banks in Shanghai.

that, with respect to Shanghai, foreign banks have not been showing the 'client-following behavior' that seems to be typical of financial institutions (Grosse and Goldberg 1991; Nigh, Cho, and Krishnan 1986). On the other hand, the negative sign of the coefficient could also point out to a case in which foreign banks entered in anticipation of a future increase in foreign trade (or FDI)[12].

The key variables however are again the density measures. Adding a first-order density measure significantly improves the model (Model 4 vs. 3: Haberman's $\chi^2=$ 7.52; Δd.f.=1; $p<.01$). Model 5, in which a second-order density measure is added, does not improve over model 4, and the effect of the two density measures becomes statistically insignificant. The main effect of density on the founding rate therefore seems to be negative, suggesting that only competition is driving the founding rate. Surprisingly, no evidence is found for a process of (re-)legitimation. Apparently, legitimation of the presence of foreign banks in Shanghai did not decline enough during the period of dormancy to make a renewed legitimation phase necessary. Whereas studies such as Dobrev (2001) for Bulgarian newspapers find strong evidence for non-monotonic density dependence after a period of dormancy, for the case of foreign banks returning to Shanghai no such effect is found. Hence, the analytical strategy used here to replicate the findings of Dobrev (2001) for this particular context fails.

What, if any, is the effect of banking activity in Hong Kong on the re-emergence of foreign banking in Shanghai? Model 7 expands on model 4 by including a first- and second-order density measure of foreign banks in Hong Kong. Adding these variables yields an interesting picture. While the effect of density in Shanghai remains of competitive nature, the effect of density in Hong Kong appears to be non-monotonic with N_λ^* equal to 218, which falls well within the observed range. Increases in density of foreign banks in Hong Kong up to this point seem to delay the re-emergence of foreign banking in Shanghai initially. But when the number of foreign banks in Hong Kong passes a threshold (N_λ^* exceeds 218 banks), which it did during much of the late 1980s and 1990s, attention instead seems to be allocated to Shanghai, providing evidence for the 'niche expansion hypothesis'. This niche expansion seems to be driven here by crowding in the existing niche (Hong Kong), a mechanism earlier described by Dobrev et al. (2002b) and Kim et al. (2003). According to Dobrev et al. (2002b), tightly packed niches not only lead to elevated failure rates (as many

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[12]Thanks to Arjen van Witteloostuijn for pointing to this possibility.

existing ecological studies suggest) but also to changes in position and the search for new markets. This may explain what drove foreign banks in Hong Kong to set up offices in Shanghai: increases in density in Hong Kong initially may have signaled the growing importance of this city to foreign banks (leaving them to temporarily allocate less attention to Shanghai). When density exceeded a threshold, crowding in Hong Kong became too intense leading these foreign banks to explore alternative markets. In doing so, they have opted for Shanghai, a still legitimate location for foreign banks (as the previous analyses in this chapter have suggested) and one that became part of the feasible set of suitable locations after its period of dormancy ended in the early 1980s. An alternative interpretation would be that legitimacy spillovers led to the re-emergence of foreign banking in Shanghai, but if this were true in this context, it would probably have generated a positive relationship between the density in Hong Kong and the founding rate in Shanghai throughout the post-dormancy period. The fact that this was not found casts doubts on the validity of the explanation in this particular context.

Can we also observe the process and consequences of niche *contraction* from the perspective of foreign banks in Hong Kong after the onset of Shanghai's period of dormancy? Table 4.5 reports the results for the analyses of founding rates of foreign banks in Hong Kong (1845-2004). Models 8 to 10 shows that in the period 1949-1979, the founding rate was substantially higher compared to previous periods. This is interpreted as evidence for the assertion that Hong Kong's growing role in international finance was to a large extent driven by mainland China's period of economic isolationism. In this period, many multinational banks may have seen Hong Kong as the main alternative to setting up a branch in China itself. Models 9 and 10 also shows that in the period from 1980 to 1997 the founding rate was significantly lower in comparison with the previous period, suggesting that the elevated level of foundings did not persist during mainland China's reform era. Adding the density variables improves model fit (Model 9 vs. 8: Haberman's χ^2=9.04; Δd.f.=2; p<.05), and the effect on the founding rate is inversely U-shaped, cf. the theory of density of dependence (Hannan and Carroll 1992). This suggests that the elevated founding rate in the period 1949-1979 occurred *independent of density dependent patterns.* Models 10 to 12 experiment with a 'mirror image' model that investigates how density in Shanghai was related to the founding rate of foreign banks in Hong Kong. The relationship seemed to depend to a large extent on the observation window chosen. Over the full window (model 10), no relationship was found between

Table 4.4: *ML estimates of effects on the founding rate of foreign banks in Hong Kong, 1845-2004[a].*

Variable	Model 8	Model 9	Model 10	Model 11 pre-1949	Model 12 post-1982
Period 2 (1890-2004)	-0.535	0.420	0.283	2.299*	
	(0.593)	(0.681)	(0.699)	(1.057)	
Period 3 (1935-2004)	-0.773	-0.013	-0.108	1.520	
	(0.589)	(0.636)	(0.651)	(1.090)	
Period 4 (1949-2004)	1.403**	1.452**	1.275*		
	(0.541)	(0.541)	(0.591)		
Period 5 (1980-2004)	0.063	-0.814*	-0.827*		
	(0.269)	(0.397)	(0.394)		
Period 6 (1998-2004)	-0.593†	-0.610*	-0.269		-0.271
	(0.321)	(0.301)	(0.555)		(0.546)
End of WW II	3.264**	3.366**	3.273**	3.981**	
	(0.724)	(0.685)	(0.694)	(1.158)	
Lagged Foundings	0.189**	0.080†	0.071	0.083	-0.098
	(0.035)	(0.048)	(0.049)	(0.358)	(0.071)
(Lagged Foundings)^2 /10	-0.043**	-0.016	-0.014	0.448	0.027
	(0.009)	(0.013)	(0.013)	(0.493)	(0.018)
Population Age	0.018†	-0.006	-0.001	-0.082**	-0.084
	(0.010)	(0.013)	(0.015)	(0.032)	(0.060)
Density HK		0.027**	0.025**	0.324†	0.086*
		(0.009)	(0.009)	(0.193)	(0.033)
(Density HK)^2 /100		-0.006**	-0.005*	-2.493*	-0.017*
		(0.002)	(0.008)	(1.118)	(0.007)
Density SH			-0.005	0.192**	0.004
			(0.008)	(0.074)	(0.011)
Constant	-1.724**	-1.258**	-1.326**	-1.405*	4.716
	(0.373)	(0.385)	(0.401)	(0.601)	(8.514)
Obs. (number of years)	160	160	160	104	23
Log-likelihood	-227.88	-223.36	-223.10	-71.77	-67.90
LR $\chi^2_{(d.f.)}$	195.22$_{(9)}$	204.25$_{(11)}$	204.78$_{(12)}$	35.08$_{(9)}$	21.51$_{(7)}$
Haberman's χ^2(vs. 8)		9.04*	9.56*		
Dispersion parameter[b] α	0.17**	0.13**	0.12**	n.s.	0.09**

Significance levels :   † : 10%   * : 5%   ** : 1%
[a] Standard errors are in parentheses.
[b] n.s.=not significant, i.e. Poisson models are used.

the number of banks in Shanghai and the rate of founding in Hong Kong. When the window was narrowed down to the pre-1949 period, a period in which Shanghai appeared to be a larger financial center than Hong Kong, there was a positive relationship between density in Shanghai and the rate of founding in Hong Kong. For

the more contemporary reform era in China (1982-2004) again no relationship was found. These tests with the mirror image model suggest that the relative position of these financial centers might matter in the degree to which cross-density effects are found on founding rates in these centers: in the pre-1949 Shanghai was the dominant financial center in the East-Asian region, being larger than other financial centers such as Hong Kong. In the post-1982 era, these roles were reversed and Hong Kong was more dominant. Therefore the organizational dynamics in Hong Kong were more likely to affect Shanghai in this later period, than the other way around.

Among the control variables, there is also a notable tendency for the founding rate of foreign banks in Hong Kong to be substantially lower in the period from 1998 to 2004 compared to previous periods. It is difficult however to attribute this to a single underlying cause. On the one hand, it may be that the observed depressed founding rates are a consequence of the 1997/1998 Asian crisis. On the other hand, there might be a relation with the fact that Hong Kong since 1997 is no longer a British Crown Colony as it became part of China again. With the methods used here it is hard to control for both potential causes separately. Closer contextual analysis might however be able to sort out these effects, and could form an interesting area for future research.

4.7 Discussion

Previous studies that have sought to explain the re-emergence of organizational forms after a period of dormancy have focused on the local preservation of skills and knowledge (Hannan and Carroll 1992) or on the revitalization of a locally preserved collective memory of the blueprints of the organizational form (Dobrev 2001). This chapter investigated an alternative explanation to the re-emergence of organizational forms, namely the continued preservation of the organizational form outside the society in which the period of dormancy takes place. It is shown here that, in case of the re-emergence of foreign banking in Shanghai, the multinational banking community outside mainland China -as represented in Hong Kong-, indeed played an important role in stimulating the entry of banks into the city.

The explanation that the form survives outside the society in which a period of dormancy takes place is not necessarily at odds with Dobrev's (2001) account. The continued existence of a social form in other societies might well complement a local preservation of a collective memory (Carroll and Teo 1998; Hannan et al. 2005).

Consider for instance a passage in Becker's (1982) seminal work on the sociology of art. Here Becker discusses how certain forms of literature are (temporarily) banned from a society.

> "In states which do not act against the artist directly, the most complete form of censorship is the total destruction of the works the government finds offensive. The modern archetype of such action is book burning, even though that actually destroys, not the work itself, but only some copies of it; the work will continue to exist in areas the government has no jurisdiction over, *notably other countries with different political systems and aims.* (Ray Bradbury's 'Fahrenheit 451' considers the more extreme case in which every physical copy has been destroyed by an implacable and efficient regime; even there *the work continues to exist by being recorded in people's memories.*)" (Becker 1982, 186; emphasis added).

As Becker (1982) points out, the form might both continue to exist in other countries, as well as within the society in which the form is banned, through a collective memory. But although they are possibly complementary, these mechanisms may however produce different outcomes when they operate in isolation. Forms that have continued to exist in other societies through the instantiation in existing organizations have been subject to continuous processes of code selection: as Hannan et al. (2005) describe, the codes describing the organizational form are subject to continuous change due to interactions between the behavior of members of the form and the relevant audiences. In contrast, a form that re-emerges on the basis of a locally preserved collective memory does so by using ideas or images that became imprinted (cf. Stinchcombe 1965) at the onset of the period of dormancy. These ideas and images reflect the organizational form at the time before its demise. Since these ideas and images are likely to become fixed in people's minds (or in written records), they do not change substantially during the dormancy period since these codes are not subject to strong selection pressures (although some elements of the form identity might fade as time passes). When the form then re-emerges an identity may be re-constructed with codes that previously applied to the pre-dormancy form[13].

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[13]In a sense, this resembles the process described in the immigration literature where instead of

One of the more surprising findings of this study was that no new phase of legitimation phase took place in this empirical context. While Dobrev (2001), but also Windzio (2003) in a study of several industries in former East Germany, found strong evidence for curvi-linear density dependent patterns in post-socialist settings, no such effects are found here. Why would this be the case? One explanation could be that the length of the period of dormancy was simply not long enough to wipe out the legitimacy of a presence of foreign banks in Shanghai. A period of roughly 30 years (against approximately 40 years of state socialism in Eastern Europe) might be too short to erase the cognitive legitimacy of Shanghai's prominent position in international finance. An alternative, more plausible, explanation is that the identity of Shanghai as a financial center may have been more actively preserved compared to the case of Bulgarian newspapers that has been described by Dobrev (2001). Active preservation by local audiences in Shanghai is evident from the high degree of awareness among the Shanghainese of their financial history (Gamble 2003). But also the multinational banking community outside China, in particular in Hong Kong, may have actively preserved Shanghai's identity as a financial center. This multinational banking community, throughout China's phase of economic isolationism, retained a keen interest in this large market and remembered the historical importance of Shanghai in international finance. This preserved identity may have been so strong that no re-legitimation or revitalization of a collective memory was needed for foreign banks to return to Shanghai. Two other types of banks may have helped to preserve or enhance the legitimacy of Shanghai as a location for international finance. On the one hand, the analyses showed that the number of domestic banks was positively related to the founding rate of foreign banks in Shanghai. Domestic banks thus may have enhanced the legitimacy of Shanghai as a financial center. On the other hand, there is a small subset of foreign banks so far not discussed in this chapter in terms of the possible legitimacy they have generated. These are the four quasi-foreign banks that remained active during Shanghai's period of dormancy (albeit on a very limited scale). Although including these banks explicitly in the analysis was not possible (due to a lack of variance over time), these banks may well have played a role as well in preserving the legitimacy of banking in this market.

This study took a sociological perspective to provide an account for the re-

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a temporal discontinuity there is a spatial discontinuity. Immigrants in such cases build a collective identity in a host country based on a cultural repertoire brought from their home country (Nee and Nee 1973; Portes and Sensenbrenner 1993).

emergence of organizational populations. A seemingly related perspective draws from the international business literature to explain such phenomena. Ghoshal and Bartlett (1990) for instance develop the notion of the multinational as an interorganizational network of geographically dispersed affiliates. Adaptation to changing market conditions may occur at the affiliate level, independent of other affiliates. Such a notion implicitly implies that a multinational corporation may decide to withdraw its subsidiary from an inhospitable market but restore its operations at a later stage. However, this and other interpretations in the international business literature are mainly on the level of the individual organization, while this study seeks to advance a macro, population-level account.

Of course, this study also has its limitations. One of them may be that this study relied on Hong Kong as the sole indicator of movements of the broader organizational form. Indeed, a more complete picture might emerge when also other nearby financial centers are included in the analyses, such as Singapore and Tokyo. However, it deserves mention that, as indicated earlier, Hong Kong is currently the largest international financial center in the region and if any city captured the effects of Shanghai's period of dormancy, it is certainly Hong Kong. It is also doubted that the results could be replicated if large financial centers elsewhere in the world were to be selected for this study, instead of Hong Kong. All international banks have a presence in Hong Kong anyway, one may argue, and these banks are also present elsewhere. Such an argument would overlook the many regional banks that are present in even the largest financial centers. A review of the historical trajectories of banks in New York (Barron, West, and Hannan 1998) suggest that, in contrast to the number of banks in Hong Kong, the number of financial institutions such as credit unions and savings banks has in fact been declining throughout the post-World War period. The same goes for commercial banks until the 1970s, before it rebounded in the 1980s. The only type of financial institution that saw an increase comparable to the increase in the number of banks in Hong Kong are the mutual funds, but this organizational form started at a much later stage than the banking industry in Hong Kong. Each of the trajectories displayed by Barron et al. (1998) shows a unique historical pattern different from the one observed for Hong Kong, and the densities that underlie these pattern will surely not have the same relationship with the rate of bank foundings in Shanghai that the bank density in Hong Kong has.

In conclusion, let me emphasize that this study relied on counts of the num-

ber of organizations as an approximation for the degree of legitimacy that might spillover to other social systems. Future research however may take a closer look, with more direct measures, at the cultural images and ideas that flow beyond geographical boundaries (cf. Han 1998; Hannan et al. 1995; Bigelow et al. 1997; Lomi 2000; Delacroix 2004). Since these cultural images and ideas may give rise to the re-establishment of (form-defined) populations in previously dormant markets, studying how these processes, possibly together with the movement of extant organizations as studied here, could lead to the re-emergence of an organizational form in a particular society might be of great sociological importance and therefore warrants further investigation. In addition, such an analysis would resonate with recent efforts in organizational ecology to understand the evolution of social forms and their identity (Hannan et al. 2005; Pólos et al. 2002).

5

Waiting Times and Pre-Entry Activity

In Chapter 4, I argued that much of the re-emergence of foreign banking in Shanghai could be explained by a broadening and expansion of the niche of multinational banks, a niche that came to include Shanghai after reforms were set in motion in China in 1978. By shifting attention to the newly opened possibilities in China, foreign banks had to start generating appeal for their products and services. Hannan et al. (2005) point out that after niche expansion, it normally takes some time to generate actual appeal, and that waiting times are common before one can become a fully established member of a population. The pre-entry phases that arise from such waiting times, and the ecological dynamics that characterize such phases, are examined more closely in this chapter[1].

5.1   Why Study Pre-Entry Activity?

The view that ecological dynamics, defined as competitive and legitimating interactions among social actors, occur not only within established organizational populations but also affect organizers seeking to gain entry into these populations is increasingly recognized by organization theorists (Carroll and Hannan 2000, 339-356; Carroll and Khessina 2005; Ruef 2006; Sørensen and Sorenson 2003). This shift in focus to the stages that pre-date entry into an organizational population is de-

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[1]This chapter draws from joint work with Jiatao Li of the Hong Kong University of Science and Technology.

fendable on the grounds that several studies have shown that pre-entry experiences shape the subsequent success of individual firms (Carroll et al. 1996; Helfat and Lieberman 2002; Klepper 2002; Klepper and Simons 2000; Ruef 2006). One possible explanation is that organizations are imprinted by their environment during the early stages of firm activity (Stinchcombe 1965; Carroll and Hannan 1989) and subsequently find it hard to deviate from these initial patterns (Hannan and Freeman 1984). On a macro-level, there are clear ramifications of the length of pre-entry phases. Ruef (2006) shows by simulating population trajectories under various conditions that lengthy organizing periods can cause instability in the form of 'boom and bust cycles', i.e. periods in which the population grows rapidly followed by a shakeout. In growing populations, organizers may fail to recognize (the potentially many) others in the same process, underestimating the true level of competition they will encounter when they have become fully operational (Ruef 2006).

The study of the pre-operational phase brings a fresh perspective to the analysis of organizational founding. A large majority of studies in the field of organizational ecology have treated founding attempts as single events which occur within an undefined pool of potential entrepreneurs. Unlike failure rate studies, the not yet fully established organization cannot be identified and cannot be meaningfully represented in the analysis in terms of its characteristics. By decomposing the founding rate into its component parts, i.e. the organizing attempt and subsequent entry into the population, such an analysis becomes possible (Carroll and Khessina 2005). The organizing attempt and subsequent entry constitute two separate events that each have received considerable empirical attention, but overall, still 'very little is known what happens in between an organizing attempt and an actual founding' (Carroll and Khessina 2005, 159), in particular when it comes to the question of how the ecological processes that are active during the pre-entry phase affect the likelihood of entering an organizational population (for recent exceptions see Carroll and Hannan 2000; Ruef 2006; Sørensen and Sorenson 2003). A study was thus designed to further develop and extend this line of inquiry by taking into account (1) the emerging organization's characteristics (scant research in this area has predominantly investigated environmental effects), and (2) weighted effects of social actors in the competitive environment. In order to illuminate the nature of these potential effects, we applied an ecological model to predict a social actor's likelihood of moving from pre-entry activity to becoming a fully established member of a population (a likelihood which is also referred to as the 'transition rate' or the rate of entry

into the population of operational organizations). We found that this rate depends on the presence of other potential entrants, but also on the presence of already established organizations. Our findings are informative not only for those studying organizational founding patterns, but also for those interested in the early process of identity formation. After investigating the effect of the geographical location of other potential entrants, as well as the effect of relative sizes and countries of origin, we have drawn inferences about the strength of these competitors' identities and their impact on a social actor's decision to enter the population.

The empirical analysis in the chapter makes use of the fact that foreign banks seeking entry into the Chinese market experience a mandatory pre-entry stage in the form of establishing a 'representative office' first, before the bank can start to provide revenue generating banking services. This provides observable events to mark the start of organizing activities and the start of actual operations. In this study, successful entry into the population was defined as a successful application for branch bank status (after which it becomes possible to generate revenue, cf. Jovanovic (2004)), rather than the initial establishment of a representative office. In what follows, the time a bank spends between these events is interpreted as waiting time before the transition (cf. Hannan et al. 2005; Jovanovic 2004; Schoonhoven et al. 1990).

5.2 Theoretical Background

This study was designed to analyze the ecological process by which social actors (which we refer to as organizers) seek entry into a broader population or community. Organizers can generally be either *de novo* entrepreneurs, or *de alio* organizations that originate from other geographical markets or industries and have to go through a protracted pre-entry stage because the resources required in the new population are essentially different from those used in the previous one (Helfat and Lieberman 2002; Jovanovic 2004). One example of an industry that has seen both *de alio* and *de novo* entrants (in these studies referred to as pre-producers) is the U.S. automobile industry (Carroll et al. 1996; Carroll and Hannan 2000, 339-356). Both *de alio* and *de novo* organizers have attempted to launch automobile production in the U.S., and both are likely to have gone through organizing periods of various lengths prior

to their entry into the industry[2]. The *de alio* organizations in this case came from
related industries ranging from engine manufacturing to manufacturers of carriages
and bicycles (Carroll et al. 1996).

Although with respect to pre-entry activities, *de alio* and *de novo* organizers
are likely to differ in terms of resources and capabilities (Carroll et al. 1996; Helfat
and Lieberman 2002; Klepper 2002; Klepper and Simons 2000), we argue that there
is an underlying pre-entry process that applies to both types. The core features
of this process are, first, that there is, in principle, a non-zero waiting time for
organizers prior to their entry into a population. A waiting time, defined as the
length of the organizing period (also referred to as the gestation period (Hannan
and Freeman 1989)), is used by the organizer to accumulate resources, to build up
external ties with relevant actors, and to generate appeal for certain products or
services (Hannan et al. 2005). Since many of these activities seem hard to avoid
prior to the commencement of operations, the assumption of a minimum waiting
time seems reasonable (Hannan et al. 2005). Empirical studies show that waiting
times can be of considerable length. Ruef (2006) for example, who analyzed the
founding of medical schools in the U.S. between 1766 and 1930, reports an average
waiting time (between the announcement of the school and operational startup) of
about two years, but with individual waiting times varying between a few months
and as much as twenty-six years. Schoonhoven et al. (1990) report waiting times
for semiconductor firms (between the start of organizing activities and first product
shipment) from one month up to more than four years (with a mean duration of
almost two years).

A second, related feature of the typical pre-entry process is that there are a
number of other organizers engaged in the process at the same time, of which only
a subset can enter. Due to restrictions, possibly arising from limits on the carrying
capacity of the market, only a limited number of the pool of organizers normally will
be able to reach the operational stage. In their study of automobile pre-producers,
Carroll and Hannan (2000) showed that indeed many aspiring automobile manufac-
turers failed prior to commencing production: of the 3,845 automobile pre-producers
that were identified as having been involved in organizing efforts between 1885 and

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[2]In contrast to the empirical context analyzed here, Carroll and Hannan's (2000) data did not
allow for the measurement of the preproduction efforts of de alio, established firms. As they note
(p. 349), 'new enterprises more likely get noticed when they undertake visible preproduction.
Established firms in other industries can likely conceal their automobile preproduction efforts'.

1981, only 11 percent succeeded in making the transition to production (Carroll and Hannan 2000). Based on the first core feature of this pre-entry process, which is in essence a type of Darwinian 'variation with selective retention' model on the pre-entry level, theoretical arguments will be presented relating the length of the waiting time to the likelihood of becoming a fully established organization. Based on the second feature, specific hypotheses will be developed concerning the interaction with other organizers during pre-entry activity and how these interactions influence the likelihood of entry into the population.

This study has focused on *de alio* organizations only, given the lack of attention these types of organizers have received in previous empirical studies and given the relative ease of observing characteristics of the emerging organization (and to study effects associated with these characteristics). With very few exceptions[3], most of the growing number of foreign banks in Shanghai went through the process described above, thereby qualifying this population as an excellent opportunity to study pre-entry activity (cf. Carroll and Hannan 2000, 345). Local banking regulations stipulate that in principle foreign banks wishing to enter the Chinese market need to start their operations in China as so-called representative offices. Such offices were considered for the purposes of this study to be the equivalent of organizers. Such representative offices are generally small in terms of office space and number of employees (often not more than five) and they require a relatively small amount of investment by the parent bank. Representative offices are sanctioned to engage in consulting, liaison, market research, and other non-profit activities. As their name suggests, they represent their parent bank abroad.

After having operated a representative office in China for some time, a foreign bank may decide to apply for full branch status offering trade services. Local regulators may then issue a license if the bank meets certain requirements. The two most important of these minimum requirements are:

- That the bank must have had total assets of no less than USD 20 billion with a capital-adequacy ratio of no less than 8 percent at the end of the year before the application was made.

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[3]Four 'quasi-foreign' banks (HSBC, the Overseas Chinese Banking Corporation, Standard Chartered, and the Bank of East Asia) had, throughout China's socialist era, already operated as branch offices in the city (albeit on a limited scale from 1949 until the reforms) but had to re-apply for new licenses under the new regulations.

- That the bank must have maintained a representative office in China for at least two years[4].

The intent of this two tier (representative office-branch office) system, from the perspective of local regulators, is two-fold. On the one hand it ensures that only committed and financially healthy foreign banks are allowed to actually provide financial services in the Chinese market. On the other hand, it protects the local banking sector from too much competition from foreign banks. By gradually allowing foreign banks to integrate into China's financial market, local regulators hope to promote financial reform of the domestic banking sector (Lees and Liaw 1996). From a foreign bank's perspective, despite the fact that it requires a substantial increase in commitment and investment (Chang 1995; Johanson and Vahlne 1977), there is a clear incentive to become a member of the population of foreign banks allowed to operate branches. Branch offices are allowed to offer a wide range of banking services - accepting deposits, making loans, extending trade services, and in some cases, underwriting securities offerings - hence, the branch offices are allowed to generate profits. This explains why firms are willing to operate unprofitable representative offices for periods which can sometimes be protracted. From an analytical angle, the transition from a representative office to a branch thus matters substantially, since the shift in the mode of operation also means that the foreign bank becomes subject to a whole new set of market forces, such as price competition. A foreign bank that obtains a branch license also has to start tapping into broader parts of the labor market, as differently skilled employees have to be hired.

5.3 Hypotheses

Duration Dependence

How does the likelihood that an organizer achieves organizational startup vary over the length of the organizing period? Studies on the 'liability of newness' (a term coined by Stinchcombe (1965)) suggest that organizers face some typical problems associated with new venture formation (such as difficulties establishing ties with relevant external actors or problems in learning new roles for those within the emerging organization), but that they will increasingly be able to overcome these

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[4]Prior to 1994, when the Regulations for the Administration of Foreign Investment Financial Institutions were introduced, the length of this 'probation period' was three years (Fu 1998).

difficulties as time passes. Numerous empirical studies show that as organizers proceed through the organizing period, their survival chances increase and bottlenecks are broken (see Aldrich (1999) or Carroll and Hannan (2000, 288)). As an organizer gradually overcomes these problems, the liability of newness erodes, and the likelihood of successful entry increases[5]. Ruef's (2006) study of initial organizing among medical schools indeed found that the probability of entry was substantially higher later in the organizing period (over two years) compared to the early stages (less than two years).

However, studies which have examined the pattern of duration dependence more extensively have consistently found that the likelihood of entry drops at later stages in the organizing period (Carroll and Hannan 2000; Schoonhoven et al. 1990). Carroll and Hannan (2000), for instance, report a clear peak in the pattern of duration dependence after approximately six years. Schoonhoven et al. (1990), in a study of semiconductor firms between 1978 and 1985, found a similar inverted U-shaped effect of the waiting time, but here the peak occurred after two and a half years. Reasons why the likelihood of entry declines at later stages may include limited foresight in the design of organizational structures and strategies (Hannan and Freeman 1989, 122). These issues are often decided upon at the beginning of organizing period with the aim of being well aligned with the environment at the time of the actual founding event. However, which organizational structure and strategy will be most effective at that time becomes more difficult to predict as the length of the organizing period increases. As a result, the probability of a successful transition from organizing activities to the operational stage might decline as the organizing period becomes too lengthy. These arguments lead us to expect (as a baseline) an inverted U-shaped relationship between the length of the waiting time and the likelihood of entry into the organizational population. However, instead of aiming to replicate earlier findings, this study was designed to extend those findings by looking at firm-level differences in terms of capabilities. Helfat and Lieberman's (2002) review of the literature related to pre-entry capabilities suggests that the magnitude and nature of pre-entry capabilities strongly influence the likelihood of entry. A greater magnitude of pre-entry capabilities enhances an organizer's chances of successfully entering a population, but it also encourages more positive evaluations by external parties or 'audiences' (Hannan et al. 2005; Hsu and Hannan 2005; Philips

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[5]The liability of newness may of course extend well after the founding event; see Ruef (2006) for a graphical representation of a pre- and post-founding negative age dependence of failure rates.

and Zuckerman 2001; Zuckerman 1999), which in turn could facilitate successful entry. In an international context, multinational experience and the ability to cope with diverse and complex environments are likely to be among the most relevant organizational capabilities determining success in entering new geographical markets and populations. Multinational experience from previous investments, if transferable, should lead to a higher likelihood of entering new markets. Chang (1995) for instance showed, in his study of the international expansion of Japanese electronics firms, that past international investments are more likely to give rise to subsequent investments suggesting that experiences from earlier investments matter. Hence, we posit that

Hypothesis 5.1. *In an international context, a higher rate of entry will be observed over the duration of the organizing period for organizers that have more multinational experience.*

Helfat and Lieberman (2002) also make a distinction between generalized and specialized capabilities. Specialized firm capabilities are defined as those that are specific to particular settings and only useful in a limited number of environments. Generalized capabilities, in contrast, can be applied more broadly. Helfat and Lieberman (2002) posit that organizers with specialized capabilities are more likely to successfully enter markets in which the required capabilities are similar. In a similar vein, Carroll et al.'s (1996) findings show that, for the automobile industry, producers that originated from related industries (bicycle and carriage manufacturing) were more likely to be successful than those from less related industries. Furthermore, Zuckerman, Kim, Ukanwa, and von Rittmann (2003) also suggest that specialized capabilities (or at least a social identity reflecting these capabilities) are favored by audience members in the early pre-entry stages. In an international context, if we view the degree of multinationality of an organization as a capability relevant to determining the probability of successful entry into a population, then the locus of multinationality should reflect the degree to which these capabilities are specialized. Organizations that have built up multinational experience in the region in which they aim to enter a new population can be seen as having specialized capabilities, whereas those that have gained multinational experience on a more global scale can be seen as having more generalized capabilities. A pattern that displays the relationship between the length of the waiting time and the likelihood of entry would then be expected to reflect differences between firms with regional and worldwide

multinational experience.

Hypothesis 5.2. *In a international context, a higher rate of entry will be observed over the duration of the organizing period for organizers that have more regional multinational experience.*

<div align="center">Ecological Dynamics</div>

Aside from characteristics pertaining to the organizers, factors stemming from the competitive environment also appear to be of considerable importance in influencing entry into a population. During the organizing period, two types of competitors are likely to influence the likelihood of entry: other organizers and already established, operating organizations. In predicting the effect of the presence of the number of operational organizations we follow the logic of density dependence theory (Hannan and Carroll 1992). According to this theory, two important processes influence new organizational foundings[6]: competition and (constitutive) legitimation. When a particular organizational form is perceived as legitimate (in the sense that it is seen as a taken-for-granted aspect of the institutional environment (Meyer and Scott 1992b)), this greatly facilitates founding an organization pertaining to that form (Hannan and Carroll 1992). Legitimation has its strongest effect on organizational founding when the number of organizations is low. Competition, in contrast, is more dominant when the number of operational organizations in the market is high and has exceeded a threshold (Hannan and Carroll 1992). Competition in such cases deters entry, because it signals a scarcity of resources and decreased opportunities to potential founders[7].

Similarly, in a pre-entry context, it is likely that organizers are positively influenced to attempt entry by initial increases in the number of fully established organizations. The fact that some organizers have made the transition to an operating organization has a contagious, legitimating effect on other organizers and, based on this feedback, they are more likely to make the transition as well (Greve 1995; Lee and Pennings 2002). If, however, too many organizers decide to enter a

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[6]This theory has also been applied to organizational growth and mortality rates (Carroll and Hannan 2000, 216-222).

[7]An exception to this is the phenomenon of 'resource partitioning' in which two seemingly opposing trends occur simultaneously: 1) intense scale-based competition among incumbent organizations, and 2) the proliferation of many small organizations. See also Carroll (1985) or Carroll, Dobrev and Swaminathan (2002).

population (i.e. the number of operating organizations exceeds a threshold) then
the probability of organizers attempting to achieve operational startup will decline.
With the prospect of intense competition, an increased proportion of organizers will
refrain from following their peers into the operational stage. Hence, it is expected
that the impact of the number of operational organizations on the likelihood of entry
will show an inverted U-shaped pattern. While density dependence theories have
received widespread support in firm founding studies (for an overview see Carroll
and Hannan 2000), previous studies on pre-entry ecological dynamics so far show
mixed evidence for and against this parallel prediction. Schoonhoven et al. (1990)
found that higher numbers of established organizations actually shortened waiting
times before entry into a market. Ruef (2006) also found positive effects of the
number of operational organizations on the likelihood of entry. In contrast, Carroll
and Hannan (2000) found only a negative (and second-order) effect of automobile
producer density, similar to the findings of Sørensen and Sorenson (2003) who, based
on a study of organizing activities in television broadcasting between 1965 and 1987,
also found strong negative effects of the presence of organizations that had already
made the transition. In fact, as Sørensen and Sorenson (2003) show in their analysis,
potential founders frequently underestimate these effects when they evaluate oppor-
tunities and start their initial organizing efforts. Despite this somewhat inconclusive
evidence, we posit:

Hypothesis 5.3. *The number of organizations in a population has an inverted U-
shaped relationship with the organizer's rate of entry into that population.*

It is expected that a similar inverted U-shaped pattern would hold for the effect
of the number of organizers that simultaneously try to establish operational organi-
zations. With initial increases in the number of peers, being a candidate to enter a
particular population would be legitimized. This should lead external constituents
to make more resources available, increasing the likelihood that an organizer will
be able to establish a fully operational organization. When organizers become too
numerous however, the effect of other organizers on the likelihood of entry is in-
stead likely to be dominated by competition. As the number of organizers increases,
more of the resources that are needed to establish an operating organization will
already be claimed by others. This increase in diffuse competition (Hannan and
Carroll 1992) causes supplies of suitable locations, employees, potential customers
and other resources to become exhausted. As the number of organizers increases it

will therefore become increasingly difficult to move from the pre-operational stage to the operational stage. The only study which has investigated the effect of other organizers is that of Carroll and Hannan (2000). In their study of automobile pre-producers, they argued that the transition from potential to operating automobile producer depended to a large extent on the presence of other pre-producers who were engaged in initial organizing, and that this effect had an inverted U-shaped pattern. As the number of other organizers increased, the likelihood of achieving operational startup increased initially, but with a higher number of organizers this likelihood was negatively affected.

Hypothesis 5.4. *The number of organizers seeking to gain entry into a population has an inverted U-shaped relationship with the rate of entry into that population.*

Proximity

Ecological interactions between both organizers and operational organizations are likely to have a clear spatial component. Competition, for instance, is particularly strong when organizations are located in close geographical proximity. Organizations located in close proximity are more likely to serve the same set of customers, and more likely to draw on the same set of suppliers and labor. As the distance between organizations increases, competition between these organizations will generally tend to decrease. Legitimation has similar spatial constraints. Although the legitimation process has a tendency to operate more widely than competition (Bigelow et al. 1997; Delacroix 2004; Han 1998; Hannan et al. 1995; Lomi 2000), the relative strength of legitimation still seems to be higher on smaller geographical scales. Organizations located close by might be more visible, and thus have greater impact on opportunity perceptions and entry decisions. Organizations located in close proximity also provide a potential entrant with more opportunities to acquire knowledge and resources through local networks (Sorenson and Audia 2000). So as the distance between a potential entrant and a set of organizations decreases, the likelihood of founding an organization of that type will increase. Spatial proximity has frequently appeared to matter in testing density dependence (e.g. Baum and Mezias 1992; Carroll and Wade 1991; Greve 2002; Lomi 1995). Whereas non-monotonic patterns have been found on a variety of scales, these patterns often appear to be stronger within closely bounded areas. Greve (2002), for instance, who studied entries in the Tokyo banking industry between 1894 and 1936, found strong

non-monotonic effects of density in specific areas (wards and counties) within the Tokyo prefecture, signaling both processes of legitimation and competition. These processes were weaker however for more distant areas. When the effects of density were estimated for neighboring areas, the same non-monotonic pattern showed up, but both its first and second order effect (reflecting legitimation and competition) appeared to be substantially lower in magnitude. Similarly, in a pre-entry context, the effects proposed in Hypotheses 5.3 and 5.4 might be expected to be stronger when measured on a more limited geographical scale.

Hypothesis 5.5. *The organizer's rate of entry into a population will have a stronger relationship with the number of operational organizations in the same geographical area compared to those in other areas.*

Hypothesis 5.6. *The organizer's rate of entry into a population will have a stronger relationship with the number of other organizers in the same geographical area compared to those in other areas.*

Mimetic Entry

So far, we have implicitly assumed that the likelihood that organizers enter a population depends on the total number of organizations in their environment regardless of the features of those organizations. Cognitive approaches to strategy (e.g. Greve 1995; Porac and Thomas 1990; Weick 1979), however, point out that social actors label and make sense of their environment by forming cognitive categories, and that these actors will be more likely to respond to the actions and feedback of those in the same category as themselves. Organizations that are in an organizer's reference group should therefore be more likely to affect the likelihood that the organizer enters the population than those that are outside that reference group. Building on this principle, a well-established finding in organization theory is that interactions among organizations tend to be localized on a size dimension, i.e. organizations tend to interact most intensely with those organizations that are similar in size (e.g. Banaszak-Holl 1991; Baum and Mezias 1992; Han 1998; Hannan et al. 1990; Lee and Pennings 2002; Ranger-Moore, Beckenridge, and Jones 1995). It has also been suggested that similarity in size can induce mimetic behavior, as organizations are more susceptible to market feedback about those organizations in their size class (Haveman 1993a; Lee and Pennings 2002). For instance, Lee and Pennings (2002) found strong mimetic patterns among similar-size organizations in

their study of the adoption of a new form of organization in the Dutch accounting industry between 1925 and 1990. They found that the percentage of organizations that had adopted the new organizational form stimulated subsequent adoptions among similar-sized organizations. These mimetic patterns not only apply to incumbent organizations in a population, but can also explain a potential entrant's likelihood of entering (Haveman 1993a). Haveman (1993a) has argued that operational organizations in a market that are similar in size to a potential entrant will more strongly legitimate that market than those that are less similar. The presence of similar sized organizations signals the feasibility of organizations of that size competing in the market, encouraging the entry of organizations in that size class. However, when too many similar size organizations are operating in a market, competition will tend to decrease the likelihood that new organizations in that size class will seek to enter (Haveman 1993a). Organizations of similar size are likely to have similar strategies and structures, and as a consequence to draw on similar sets of resources (Carroll and Hannan 2000). Competition among many similar sized organizations may therefore be particularly intense, and so too will be its detrimental effects (Banaszak-Holl 1991; Baum and Mezias 1992; Han 1998; Hannan et al. 1990; Ranger-Moore et al. 1995). In a pre-entry context, if too many organizations of a similar size move from an organizing phase into the operational phase, other organizers from that same size class may refrain from following. Combining these arguments, it is expected that the organizers' likelihood of entry will first increase and then decrease with the number of similar size organizations.

Hypothesis 5.7. *The number of similar size organizations already in operation will have an inverted U-shaped relationship with the organizer's rate of entry.*

Aside from size as a determinant of the relevant reference group, the region-of-origin might be another dimension along which competitive and mimetic effects are localized as, in an international context, organizations seem to be perceptually focused on their peers from the same home region (cf. Guillén 2002; Yiu and Makino 2002). Organizations from the same home region may form distinct communities in which actors mutually recognize each other's presence and actions. Organizations that originate from the same region are therefore more likely to be in the same cognitive category and mimic each other's behavior. But again, this happens only up to a certain extent (Haveman 1993a): if too many organizations from a particular home region move from organizing into operation, other organizers from that same
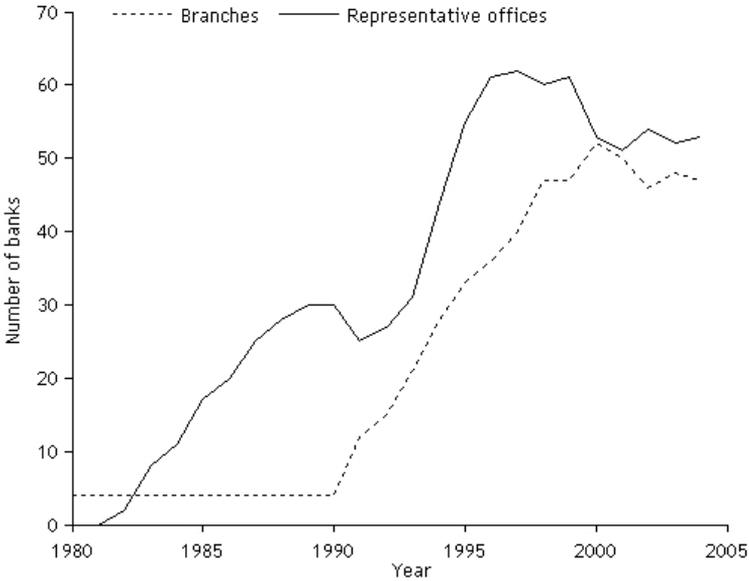
Figure 5.1: *Number of representative offices and branches of foreign banks in Shanghai, 1982-2004. Totals are for December 31 of each year.*

home region may refrain from following.

Hypothesis 5.8. *The number of operational organizations from the same home region has an inverted U-shaped relationship with the organizer's rate of entry.*

5.4   Empirical Context and Variables

Figure 5.1 depicts the historical trajectory of both representative offices and bank branches in Shanghai. As this figure shows, the number of both representative offices and foreign branches in Shanghai grew rapidly for 20 years from the early 1980s. In December 1982, the Banque Nationale de Paris and the Bank of Tokyo were among the first to establish representative offices in Shanghai. By the end of 1988, the total number of foreign banks in Shanghai had already reached 32.

The rise in the number of representative offices in Shanghai, however, came to a standstill in 1990 and even decreased in 1991. This decrease may be attributed to

two causes. First, limitations on entering China's financial markets became visible after the Tiananmen Square uprising in June 1989. Foreign banks, for their part, adopted a wait-and-see attitude towards the Chinese market and new developments progressed with great caution (MacCormac 1993). As a result, the earlier boom in new representative offices came to a halt. Second, in the early 1990s it first became possible for foreign banks in Shanghai to 'upgrade' their operations to the status of branch office. In other words, the decrease in the number of representative offices in this period is partly complementary to the increase in the number of branches. At first, the granting of licenses was rather experimental. Banks were chosen based on a mixture of economic, political and historical motives. Favored were the quasi-foreign banks, i.e. HSBC, the Overseas Chinese Banking Corporation, Standard Chartered and the Bank of East Asia, which had maintained a continuous presence in Shanghai since the Communist Party seized power in 1949, but also banks such as Citibank that had left the city shortly after the change of regime but had a long history in the city before 1949. These banks were given branch permissions as early as 1990 and 1991. Soon, however, the process of applying for licenses became more formalized and mechanistic, so that in principle, every foreign bank meeting the requirements was eligible to apply and equally likely to receive a branch license. It took banks on average four and a half years to establish a branch, with variations from about one year[8] up to thirteen years (right-censored cases (n=53) and endings without achieving branch status[9] (n=31) not included). Despite the relatively long waiting times (compared to those reported by Carroll and Hannan (2000), Ruef (2006), and Schoonhoven et al. (1990)) the number of candidates for a branch license (i.e. representative offices) as well as the number of branch licensees continued to increase in the mid-1990s, mainly due to an improved economic climate in terms of rapid growth in gross domestic product, a thriving real estate market, and a more attractive capital market. A wave of mergers and acquisitions, most notable among

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[8]Banks that were able to upgrade to branch status after one year may have fulfilled part of the mandatory waiting time requirement by means of a representative office elsewhere in China. Assumed here is that these banks started preparing for the status upgrade only after they came to be located in Shanghai with a representative office. This assumption is based on our interpretation of the initiation of this event as a signal of the intent to set up a branch at a later stage. So for these banks (n=13) the start of a representative office in Shanghai was coded as the start of the organizing period.

[9]The substantial proportion of endings, of which 16 banks dropped out of the market altogether, moderates possible concerns over a selection bias in that only those banks that will transition anyway might establish an office in the first place.

Japanese financial institutions, was among the main factors that caused a drop in the number of branch licensees during the last years of our observation window.

In order to model the transition from representative office to foreign branch, a number of variables are introduced. Hypotheses 5.1 and 5.2 required measures related to the magnitude and nature of *multinationality*. For this reason, we counted the total number of foreign countries in which the parent organization had establishments (cf. Youssef 1975). This was done on two levels: 1) the number of countries in which the bank operated worldwide and 2) the number of countries in East Asia in which the bank had a presence. These variables could be further classified as either high or low (using the mean as a cut-off point). The result was that banks could be categorized in a two by two matrix: banks had either a low regional and low worldwide presence (462 'bank-year' observations), a high regional presence but a low worldwide presence (54 observations), a high degree of multinationality worldwide, but little experience in East Asia (82 observations), or both regional and worldwide experience (300 observations). Transition rates were then calculated for the four categories[10]. In subsequent transition rate models only the extent of multinationality worldwide was included for reasons of parsimony.

A second set of variables were *density* measures. Density was a time-varying covariate specified for both representative offices and branch offices, and on the city level and the district level. The city of Shanghai is divided in several administrative districts, of which (after investigating the address information in *The Bankers' Almanac*) nine were found to host foreign banks[11]. The effect of the presence of other representative offices and foreign branches in the *same district* as well as in *other districts* on the rate of transition to branch office was tested. Similarly, in order to test Hypothesis 5.8, the effect of the density of bank branches from the *same home region*, as well as from *other regions* was evaluated. Home region was defined in terms of the following areas: Japan, Middle East, the rest of Asia, Europe, North America, South America, Africa, and Australia. In each of these analyses, the density measure was a simple count of offices or branches. All density measures were lagged one year in the modeling. Some density tests were accompanied by a second order term in order to capture any non-monotonic patterns, but when mod-

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[10]The lognormal model appeared to be the superior functional form for each of these subcategories.

[11]These districts are the four central districts of Luwan, Nanshi, Huangpu, and Jingan; the urban districts of Hongkow, Yangpu, Xuhui, and Changning; and the suburban district Pudong.

eling these density effects we avoided testing them concurrently with other sets of quadratic terms to avoid multicollinearity (cf. Hannan et al. 1995; McKendrick et al. 2003; Sørensen and Sorenson 2003; Sorenson and Audia 2000). A measure of size effects was constructed based on the *nearness* between the size of an organizer and the sizes of the organizations already operating. This nearness variable showed a high value for a particular representative office if its parent bank was similar in size to the banks already maintaining a branch office anywhere in Shanghai. (For details on this measure of size localization, see Chapter 3.) Size, which was also included separately to capture the parent bank's capacity to provide its affiliate in Shanghai with the necessary funds, was approximated by the parent bank's total assets. The size of the parent organization was used rather than the size of the affiliate in Shanghai as (particularly in this stage of the development of the financial sector in Shanghai) the foreign affiliates were far from self-sufficient. It is easy to imagine that larger banks might experience lower political and economic entry barriers and will find it easier to upgrade their offices to branch status (cf. Haveman 1993b; Haveman and Nonnemaker 2000). The logarithm of total assets was used in order to normalize its distribution. To control for possible spatial heterogeneity across districts in Shanghai, the methods of Greve (2000, 2002) were applied by including a dummy variable reflecting the centrality of the district. The distinction between *urban districts*, the suburban district *Pudong*, and the central districts (the latter being the benchmark in the models) appeared to capture much of this heterogeneity while remaining parsimonious in adding degrees of freedom. To control for possible temporal heterogeneity in the transition rate, a variable was created describing the *timing of initial entry* into Shanghai[12], where initial entry refers to the setting up of a representative office. This variable was coded from 0 for foreign banks which established a representative office in Shanghai in 1982, up to 22 for banks which first established a representative office in 2004. To capture additional temporal variations in the transition rate, the three month Eurodollar *interest rate* was included. It might be expected that higher interest rates would make it more attractive to establish a branch office. Both types of variables have earlier been used by Leung et al. (2003) in a study of the profitability of foreign banks in Shanghai.

On the local market level, three variables were used. The first was the annual figure for the total value of *trade of the foreign bank's home country with China*. The

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[12] A second-order effect of a squared term was investigated but it did not appear to be statistically significant, so this term was therefore omitted.

data were taken from various editions of the *Direction of Trade Statistics Yearbook* of the International Monetary Fund. Although no exact information was available on the customer bases of the parent firms, it was assumed that in moving into China banks were responding, at least in part, to the needs of their existing customers, in particular those from their home country (cf. Martin, Mitchell and Swaminathan 1995; Martin, Swaminathan and Mitchell 1998), and that these activities would also influence the bank in establishing a full branch. Including this measure of trade also served as a crude approximation of the market's carrying capacity (Hannan and Carroll 1992), which should be relevant to density dependence.

Another dummy variable was created to account for the foreign banks which had obtained *licenses in 1990 and 1991*. These were the first two years in which obtaining a branch license was possible. As pointed out earlier, in this initial phase the procedure for granting such licenses was less formal. Since Sørensen and Sorenson (2003) found a statistically significant negative effect of the number of *transitions in the previous year* (in contrast to the findings of Carroll and Hannan (2000) or Ruef (2006) who tried similar measures), a variable was added to represent this as well.

Three control variables in the form of period effects were added to the dataset (which included all foreign banks in Shanghai), in order to account for the periods in which each bank was factually not 'at risk' of obtaining a branch license. One of these period effects related to the condition that a bank had to have maintained a representative office in China for two years before it could upgrade to a branch office (three years prior to 1994). So a bank was not 'at risk' to make the transition in its first years, during this probationary period. Since event history analysis focuses on time at risk, these first years were coded with a dummy variable. A second control added to the dataset concerned the capital requirements. According to the local regulations, foreign banks needed to be capitalized with at least USD 20 billion in order to obtain a branch license, and to have a minimum capital adequacy ratio of 8 percent. The years in which parent banks failed to meet these requirements were also coded with a dummy variable. In addition to these two controls, a third control was added to reflect the period in which setting up a branch office was not yet possible, i.e. the period between 1982 and 1989. This dummy variable is intended to mitigate left censoring problems, such as sample selection bias. All variables are summarized in Table 5.1.

A distinct class of banks included those which already had branches in China or which met the minimum waiting time requirement by maintaining a representative

Table 5.1: Descriptive statistics and correlations[a].

Variable	Mean	SD	Min.	Max.	Correlations					
					(1)	(2)	(3)	(4)	(5)	(6)
(1) Multinationality	17.53	15.54	1	69						
(2) Size (in bln USD)[b]	138.61	144.41	1.14	1248.26	.58					
(3) Pudong	0.13	0.34	0	1	-.17	.11				
(4) Urban Districts	0.23	0.42	0	1	-.25	-.05	-.21			
(5) Entry Timing	11.97	5.35	0	22	-.33	-.29	.39	.28		
(6) Interest Rate	5.42	2.32	1.14	16.79	.28	.13	-.25	-.18	-.52	
(7) Lagged Transitions	2.94	2.55	0	11	-.10	-.02	-.08	.14	.17	-.23
(8) Period Effect 1990/91	0.06	0.24	0	1	.30	.15	-.10	-.13	-.32	.37
(9) Home Country Trade	2.76	3.10	0.01	13.36	-.40	-.15	.06	.32	.21	-.36
(10) Left Censoring	0.16	0.36	0	1	.27	.12	-.17	-.23	-.53	.57
(11) Size Requirement	0.14	0.35	0	1	-.31	-.73	.18	-.09	.24	-.12
(12) Waiting Time	0.10	0.31	0	1	.15	-.18	.06	.06	.27	-.13
(13) Bra.Off. (City)	30.38	17.66	4	52	-.40	-.25	.37	.27	.73	-.60
(14) Rep. Off. (City)	44.50	16.15	0	62	-.38	-.22	.26	.29	.67	-.49
(15) Branch Off. (Dis.)	6.82	12.12	0	45	-.22	-.16	.92	-.16	.44	-.31
(16) Rep. Off. (Dis.)	10.98	6.03	0	24	-.20	-.04	.20	.25	.10	-.09
(17) Bra. Off. (Oth. Dis.)	23.56	16.62	4	52	-.26	-.15	-.28	.41	.46	-.42
(18) Rep. Off. (Oth. Dis.)	33.53	15.85	0	62	-.31	-.20	.19	.20	.64	-.47
(19) Nearness	21.44	14.14	0	41.10	-.35	.12	.36	.29	.71	-.62
(20) Bra. (Same Reg.)	8.00	6.65	0	20	-.18	.07	.30	.14	.50	-.42
(21) Bra. (Other Reg.)	22.38	13.89	2	52	-.42	-.28	.33	.28	.69	-.57

	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
(8)	-.29													
(9)	.03	-.14												
(10)	-.50	.42	-.24											
(11)	.05	-.10	-.05	-.16										
(12)	.15	-.09	-.04	-.15	.11									
(13)	.20	-.39	.40	-.65	.22	.05								
(14)	.31	-.39	.32	-.69	.21	.05	.89							
(15)	-.02	-.15	.09	-.24	.20	-.09	.43	.31						
(16)	-.01	-.01	.23	-.12	-.02	-.07	.15	.24	.36					
(17)	.22	-.31	.35	-.51	.09	-.01	.75	.72	-.28	-.11				
(18)	.32	-.39	.24	-.66	.22	.08	.85	.93	.18	-.14	.77			
(19)	.21	-.39	.41	-.66	-.09	.03	.89	.80	.41	.15	.74	.83		
(20)	.19	-.29	.01	-.48	.18	.01	.70	.64	.34	.13	.49	.60	.68	
(21)	.16	-.35	.50	-.59	.20	.06	.94	.82	.38	.13	.72	.79	.83	.41

[a] N of bank-year observations=889; correlations beyond +/- .09 are significant at the 1 percent level.
[b] Correlations reported for size are those based on the logged version.

office for two years elsewhere in China. They could then set up a branch office in
Shanghai without first having had a representative office in the city. These banks
have been omitted from the analysis, since the length of their organizing period could
not be objectively recorded, and because attempting to include them would have
compromised some variables. (For example, if some banks have no prior presence in
one of Shanghai's districts, densities at this level cannot be calculated.) Additional

sensitivity analyses not reported here suggest that omitting these banks did not substantially bias the results[13].

The final dataset contained 899 bank-year observations, including 125 individual banks 'at risk' of transition, of which 41 banks (or 32.8 percent) made the transition to branch office before the end of the observation window.

5.5   Results

Figure 5.2 plots the duration dependence of the transition rate from representative office to branch office for banks with different types and magnitude of multinationality. Banks which had high degrees of both regional and worldwide multinational experience clearly had higher chances of setting up a branch office compared to banks which scored low on both items. This provides support for Hypothesis 5.1, which predicted that organizations with better developed capabilities would have an overall higher transition rate over the duration of the organizing period. Hypothesis 5.2, however, which stated that organizations with a tendency towards more specialized capabilities would also see this reflected in an overall higher transition rate, was not supported. Banks which scored high on worldwide multinational experience, but had little East Asian experience did not have higher overall transition rates than those which had a large presence in the region but not necessarily worldwide: both curves appear intertwined. What is striking, however, is that the transition rate of banks with regional experience peaked much earlier that of banks with experience outside the region: the transition rate for the first group peaked at around 9 years, while the latter group peaked at around 15 years. Taken together, these findings suggest that the magnitude of an organization's capabilities mainly predicted the *likelihood* of entry, while the nature of those capabilities predicted the *timing* of entry.

Table 5.2 reports the influence of the model's covariates on the transition rate. In line with Hypothesis 5.3, the size of the branch office population appears to have

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[13]We followed the methods of Carroll and Hannan (2000, 349) in re-estimating the models with supplemental data attaching pre-entry spells to each bank that was able to establish a branch without first having had a representative office in Shanghai. Given the structure of the dataset (spells are split in annual pieces), a pre-entry phase of one year was assumed for each of these banks (n=11). Results of these tests are available on request from the author. They showed that the coefficients of the variables of interest were only marginally affected in terms of magnitude and statistical significance.
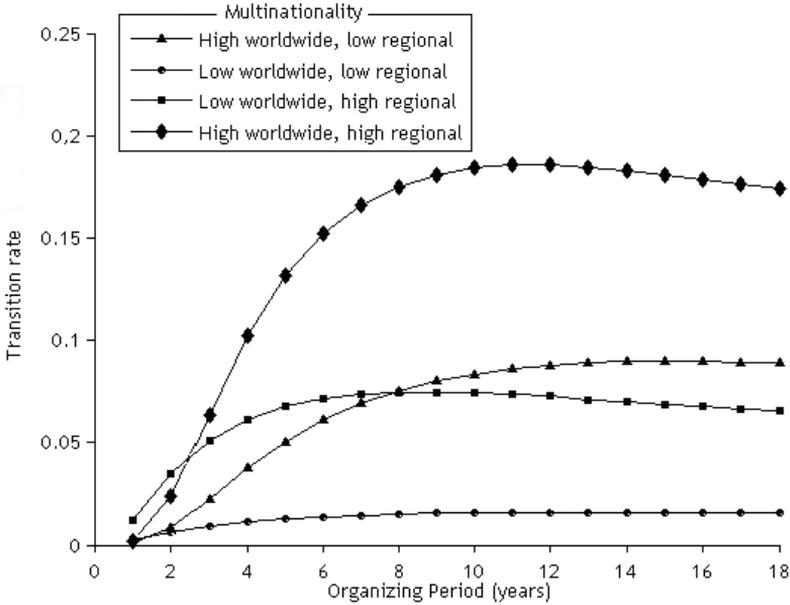
Figure 5.2: *Transition rate from representative office to branch office, dependent on the duration of the organizing period and the extent of multinationality.*

been strongly related to an individual bank's decision to upgrade to a branch office. Furthermore, the relationship was, as predicted, inverse U-shaped, as shown by the positive first-order effect and the negative second-order effect. Below a particular threshold (N^*=22, falling well within the observed range), the number of branch offices induced other foreign banks to start a branch office as well; beyond that threshold the transition rate declined. In contrast with the prediction of Hypothesis 5.4, no non-monotonic density dependent effects are evident for the number of representative offices at the city level (model 3). A model which tested for a linear effect of the number of representative offices at the city level (not reported here) also did not display density dependence. The decision to upgrade to a branch office was seemingly unrelated to the total number of representative offices in Shanghai. In order to test Hypothesis 5.5, density was also measured at the district level (models 4 to 7). Again, an inverted U-shaped relationship was found between the number of branches and the transition rate. The size of the first-order relationship with branch

density was found to be somewhat less strong on the district level than on the city level. In contrast, the second-order relationship with branch density was somewhat stronger.

A comparison between the coefficients related to within-district density and the density outside the district (i.e. city-level density minus district-level density), yields no statistically significant difference in a Wald test (first-order coefficients: χ^2=0.14, second-order coefficients: χ^2=0.08). The district-level specification (model 4) also shows poorer fit than the city-level specification (model 2). So, with respect to branch offices, there was no support for the expectation that a stronger association would be found at smaller geographical scales. Hypothesis 5.6 was better supported. In contrast with what was found at the city level, representative office density at the district level showed a statistically significant relationship with the transition rate.

The influence of the number of representative offices at the district was, however, linear (in contrast with expectations): one additional representative office in the same district predicted a reduction in the likelihood of transitioning to the operational stage by almost nine percent (exp(-0.092)=0.912). Representative offices thus were seemingly more strongly influenced in their decision to apply for a branch license by the number of other representative offices already in their district than by offices elsewhere in the city. A Wald test of the equality of coefficients between the density of representative offices within the district and the density outside the district (based on the coefficients in model 7) confirmed a statistically significant difference (at the one percent level) with a χ^2 value of 9.99. Carroll and Hannan (2000) have earlier argued that organizers are particularly sensitive to other organizers during the pre-entry stages. Our results prompt a refinement of this idea, suggesting that it is especially the organizers in nearby locations that matter.

The intuition that the identity of representative offices is particularly strong at the district level while the identity of branch offices remains strong at the city level was further explored in model 8. This model included the density of branch offices citywide and the density of representative offices in each district, and this model did indeed improve significantly on the other models (e.g. model 8 vs. 2: Haberman's χ^2=5.92, Δd.f.=1, p<.05). This suggests that the actions of a particular representative office were visible to other representative offices in close geographical proximity but were less clearly perceived in other parts of the city. When representative offices in other parts of the city upgraded their operations to the status of branch office, however, they did become more visible, and then exerted a stronger influence on

Table 5.2: *Piece-wise exponential models of the transition rate from representative office to branch office in Shanghai, 1982-2004[a].*

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Organizing Period[b]					
$0<u\leq 2$	-8.358**	-11.578**	-5.643	-7.177*	-11.764**
	(3.092)	(3.346)	(4.699)	(3.129)	(3.379)
$2<u\leq 4$	-6.873*	-9.998**	-4.095	-5.659†	-10.273**
	(3.006)	(3.307)	(4.690)	(3.072)	(3.285)
$4<u\leq 7$	-7.018*	-9.216**	-4.245	-5.854†	-9.903**
	(2.937)	(3.222)	(4.639)	(3.033)	(3.205)
$7<u\leq 11$	-6.874*	-8.561**	-4.045	-5.389†	-9.430**
	(2.952)	(3.318)	(4.707)	(3.023)	(3.227)
$u>11$	-7.680†	-8.885*	-4.669	-6.251*	-10.155**
	(2.925)	(3.470)	(4.856)	(3.083)	(3.248)
Organizational Characteristics					
Multinationality	0.030*	0.036*	0.030*	0.030*	0.029*
	(0.013)	(0.014)	(0.013)	(0.013)	(0.014)
Size[c]	0.365	0.254	0.361	0.292	0.375
	(0.242)	(0.277)	(0.243)	(0.248)	(0.266)
Spatial Heterogeneity					
Pudong	1.991**	2.565**	2.016**	2.764**	1.612**
	(0.525)	(0.568)	(0.537)	(0.596)	(0.574)
Urban Districts	0.786	1.071*	0.793	0.631	0.807
	(0.505)	(0.525)	(0.515)	(0.508)	(0.517)
Temporal Heterogeneity					
Timing Initial Entry	-0.071	0.107†	-0.053	-0.055	0.000
	(0.059)	(0.065)	(0.075)	(0.058)	(0.068)
Environment					
Interest Rate	-0.138	-0.003	-0.149	-0.301*	-0.160
	(0.113)	(0.125)	(0.129)	(0.140)	(0.148)
Lagged Transitions	0.129*	0.024	0.108	0.070	0.057
	(0.066)	(0.083)	(0.070)	(0.084)	(0.098)
Period Effect 1990/91	2.151**	2.243*	2.181**	3.059**	3.646**
	(0.703)	(0.930)	(0.757)	(0.894)	(1.183)
Home Country Trade	-0.119	-0.083	-0.113	-0.107	-0.118
	(0.079)	(0.088)	(0.080)	(0.083)	(0.085)
Other Controls					
Left Censoring	-19.511	-18.443	-20.226	-19.156	-17.820
	$(4.363*10^3)$	$(3.764*10^3)$	$(4.460*10^3)$	$(3.633*10^3)$	$(2.394*10^3)$
Size requirement	-17.473	-17.025	-17.472	-16.763	-16.134
	$(4.909*10^3)$	$(4.274*10^3)$	$(4.915*10^3)$	$(4.362*10^3)$	$(2.931*10^3)$
Mandatory waiting time	-17.070	-17.090	-17.010	-16.586	-16.230
	$(5.936*10^3)$	$(5.316*10^3)$	$(5.883*10^3)$	$(5.178*10^3)$	$(3.598*10^3)$

Continued on next page.

Table 5.2: Continued

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Densities (City-Level)					
Branch Offices		0.214**			
		(0.075)			
(Branch Offices)^2/100		-0.487**			
		(0.134)			
Representative Offices			-0.137		
			(0.178)		
(Rep. Offices)^2/100			0.150		
			(0.197)		
Densities (District-Level)					
Branch Off. District				0.165*	
				(0.074)	
(Branch Off. District)^2/100				-0.592**	
				(0.201)	
Branch Off. *Other* Dist.					0.267†
					(0.077)
(Branches *Other* Dist.)^2/100					-0.534†
					(0.153)
Obs. (bank-years)	889	889	889	889	889
Log-likelihood	-45.91	-35.72	-45.60	-37.26	-37.63
LR $\chi^2_{(d.f.)}$	96.42$_{(16)}$	116.79$_{(18)}$	97.03$_{(18)}$	113.73$_{(18)}$	112.98$_{(18)}$
Haberman's χ^2 (Δd.f.) vs. baseline		20.38(2)**	0.31(2)	17.30(2)**	16.56(2)**

Significance levels :   † : 10%   ∗ : 5%   ∗∗ : 1%
[a] Standard errors are in parentheses.
[b] u is the length of the organizing period measured in years.
[c] Natural logarithm.

other banks' decisions to convert to branch offices as well.

Relative size also appeared to play an important role in delineating the strength of the identity of other organizations in the market, providing support for Hypothesis 5.7. Nearness, which was designed to reflect differences in size between an organizer and the fully established organizations, showed a statistically significant non-monotonic relationship. With initial increases in the proportion of similar size organizations, the transition rate increased as well, but when organizations of similar size became too numerous, the transition rate declined. Including nearness in model 9 also led to an (albeit small) improvement in fit over model 8.

Hypothesis 5.8, in which we predicted that the number of operational organizations from the same home region has an inverted U-shaped effect on the transition rate, receives general support. In addition to banks from the same home region,

Table 5.2: *Piece-wise exponential models of the transition rate from representative office to branch office in Shanghai, 1982-2004[a] -Continued-*

Variable	Model 6	Model 7	Model 8	Model 9	Model 10
Organizing Period[b]					
$0<u\leq 2$	-8.722**	-7.839**	-11.490**	-11.727**	-10.120**
	(3.208)	(3.022)	(3.316)	(3.244)	(3.469)
$2<u\leq 4$	-7.194*	-6.222*	-9.838**	-10.043**	-8.350*
	(3.173)	(2.967)	(3.289)	(3.204)	(3.450)
$4<u\leq 7$	-7.295*	-6.269*	-9.042**	-9.273**	-7.827*
	(3.115)	(2.896)	(3.179)	(3.093)	(3.348)
$7<u\leq 11$	-7.027*	-5.988*	-8.320*	-8.561**	-7.185*
	(3.109)	(2.910)	(3.247)	(3.152)	(3.412)
$u>11$	-7.740*	-6.605*	-8.567*	-8.860**	-7.234*
	(3.139)	(2.987)	(3.411)	(3.307)	(3.533)
Organizational Characteristics					
Multinationality	0.023[†]	0.026*	0.031*	0.029*	0.029*
	(0.013)	(0.013)	(0.014)	(0.014)	(0.014)
Size[c]	0.411[†]	0.356	0.293	0.357	0.372
	(0.243)	(0.236)	(0.266)	(0.255)	(0.282)
Spatial Heterogeneity					
Pudong	1.962**	1.753**	1.949**	1.928**	1.926**
	(0.554)	(0.509)	(0.578)	(0.581)	(0.556)
Urban Districts	0.753	0.565	0.831	0.765	0.777
	(0.540)	(0.506)	(0.518)	(0.513)	(0.517)
Temporal Heterogeneity					
Timing Initial Entry	-0.042	-0.082	0.125[†]	0.126[†]	0.112
	(0.058)	(0.074)	(0.065)	(0.066)	(0.069)
Environment					
Interest Rate	-0.134	-0.108	0.004	-0.013	-0.089
	(0.123)	(0.130)	(0.133)	(0.140)	(0.120)
Lagged Transitions	0.109	0.108	0.018	-0.005	0.061
	(0.070)	(0.068)	(0.085)	(0.090)	(0.072)
Period Effect 1990/91	2.496**	2.208**	2.478**	2.684**	2.211**
	(0.816)	(0.776)	(0.956)	(1.028)	(0.843)
Home Country Trade	-0.104	-0.093	-0.065	-0.069	-0.114
	(0.081)	(0.081)	(0.089)	(0.090)	(0.104)
Other Controls					
Left Censoring	-19.226	-19.445	-18.162	-17.995	-18.425
	$(3.710*10^3)$	$(4.304*10^3)$	$(3.261*10^3)$	$(3.240*10^3)$	$(2.556*10^3)$
Size requirement	-16.965	-17.341	-16.604	-17.492	-16.643
	$(4.409*10^3)$	$(4.982*10^3)$	$(3.844*10^3)$	$(3.920*10^3)$	$(3.881*10^3)$
Mandatory waiting time	-16.888	-17.074	-16.830	-16.813	-16.549
	$(5.145*10^3)$	$(5.757*10^3)$	$(4.568*10^3)$	$(4.520*10^3)$	$(4.492*10^3)$

Continued on next page.

Table 5.2: *Continued*

Variable	Model 6	Model 7	Model 8	Model 9	Model 10
Densities (City-Level)					
Branch Offices			0.199*		
			(0.079)		
(Branch Offices)^2/100			-0.441**		
			(0.139)		
Densities (District-Level)					
Rep. Offices District	0.032	-0.092**	-0.070*	-0.067*	-0.076**
	(0.124)	(0.035)	(0.029)	(0.030)	(0.028)
(Rep. Off. Dist.)^2/100	-0.595				
	(0.615)				
Rep. Off. *Other* Dist.		-0.006			
		(0.020)			
Other Weighted Dens. (City-Level)					
Branches Size Nearness				0.227*	
				(0.095)	
(Size Nearness)^2/100				-0.684**	
				(0.219)	
Branches Same Region					0.234†
					(0.130)
(Same Region)^2/100					-1.345*
					(0.621)
Branches Other Regions					-0.049
					(0.030)
Obs. (bank-years)	889	889	889	889	889
Log-likelihood	-39.97	-40.41	-32.76	-32.52	-35.87
LR $\chi^2_{(d.f.)}$	108.30$_{(18)}$	107.41$_{(18)}$	122.73$_{(19)}$	123.73$_{(19)}$	116.50 $_{(20)}$
Haberman's χ^2 vs. baseline	11.88**	11.00**	26.30**	26.78**	20.08**

Significance levels :   † : 10%   ∗ : 5%   ∗∗ : 1%
[a] Standard errors are in parentheses.
[b] u is the length of the organizing period measured in years.
[c] Natural logarithm.

another variable represented banks from other regions. The effect appeared to be economically significant (an additional bank from another region implied a reduction in the estimated transition rate of almost five percent), but this relationship was not statistically significant. Overall, it should be noted, however, that model 10, in which region-of-origin effects were tested, did not seem to substantially improve the fit achieved with model 8, so a conclusion that banks from the same region

are a more relevant reference group with a stronger identity does not appear to be warranted. Among the control variables, the likelihood that an individual bank upgraded to a branch office was seemingly positively affected by a location in the Pudong district of Shanghai and by exploiting the preferential policy of the years 1990 and 1991. Also the extent of multinationality showed a statistically significant effect. This latter finding shows that a bank's international experience mattered, as opposed to sheer size, for which no significant predictive power was evident.

5.6 Discussion

The early stages of firm activity that pre-date its entry into a population have received only scant attention in previous organizational ecology research. This study investigated how successful entry is related to both the duration of the organizing period as well as on social actors in the entering organization's environment. Several hypotheses related to these issues were tested using data on a population of new affiliates of international banks in Shanghai. The findings show, first of all, that the transition from the organizing period to entry into the population was non-monotonically dependent on the duration of the organizing period, a finding that is in line with results of earlier studies by Carroll and Hannan (2000) and Schoonhoven et al. (1990). The exact pattern of duration dependence appeared to differ depending on the organizer's capabilities: banks with more multinational experience had higher transition rates throughout the organizing period than those which had little multinational experience. In addition, banks with more context-specific multinational experience (experience in the East Asia region) seem to have had shorter waiting times than those which had gained their experience elsewhere. One explanation could be that the timing and likelihood of entry were each influenced by different processes or constituents. Social actors in the organizer's environment might, for instance, have influenced the overall likelihood by assigning positive evaluations to organizers with a high degree of multinationality, while the speed at which the organizer could go through the pre-entry stages then depended on the extent to which its own capabilities (in terms of multinationality) were specialized. At the very least, the finding that an organizer's capabilities were related to the likelihood and timing of entry hints at possible differences between *de novo* and *de alio* organizers in the pre-entry stages. Although this study focused on *de alio* organizers exclusively (and thus was precluded from being affected by heterogeneity of this type), its results

strongly suggest that future studies on mixtures of *de alio* and *de novo* organizers should control for their inherent differences in capabilities.

In addition to investigating how the likelihood of moving from pre-entry activity to entry was related to duration, how this process was influenced by social interactions was investigated in greater depth than in previous studies. Those effects were weighted by location and size, as well as country-of-origin. In terms of location, organizers appeared to be affected only by the actions of their peers within closely bounded areas, and they were seemingly unaffected by organizers located outside those areas. In developing an interpretation for this finding, we draw attention to another stream in ecological research, namely that studying organizational identity (Hannan et al. 2005; Hsu and Hannan 2005; McKendrick et al. 2003; Pólos et al. 2000, 2002; Ruef 2000). The results showing that the influence of organizers differs from that of operational organizations suggests that any organizer starts with a spatially limited identity. (Though it is not necessarily weak, since many other organizers located in close geographical proximity will recognize that organizer, as will others in the organizer's local network.) The actions of the organizers at this stage are strongly influenced, however, by the identities of the organizations already in operation. Geographical distance plays a lesser role here: the actions of the organizer are also influenced by the still sharp identities of already established organizations in more distant areas. This also implies that once an organization becomes fully established, its identity is likely to broaden geographically and is likely to influence a broader audience. One possible explanation could be that the organizer, once it has entered, starts to adopt more features of the form's identity (Pólos et al. 2000, 2002; Hannan et al. 2005), features it shares with other members of the form.

The findings of this study also suggest that future empirical studies of pre-entry activity could substantially improve their specifications by considering the effects of organizers and fully established organizations on different geographical levels. They also suggest that much is to be gained by analyzing the spatial dimension of social identity. Future research could further explore not only how geographical distances between organizations matter, but also how distances between audience members (Hannan et al. 2005; Hsu and Hannan 2005) or between audiences and organizations affect social identities. Another interesting avenue for research would be how geographical distance between organizations affects the similarity judgments of audience members. An example of the latter is provided by an earlier analysis by McKendrick et al. (2003) who showed that organizational identities more readily

cohere into an organizational form if the organizations are geographically proximate. This study also found that operational organizations differ in the extent to which they exert an influence on individual organizers. Organizations that resemble the organizer are especially likely to influence the organizer in making the transition to a fully established organization (cf. Helfat and Lieberman 2002). Evidence was found for size-localized legitimation and competition, indicating that organizers are particularly sensitive to the identities of similarly-sized organizations, which they are likely to consider part of the same cognitive category. A similar pattern could not be found for banks that originated from the same home region. Home region effects were found, but models that investigated them did not substantially improve upon models with 'standard' density variables, suggesting that organizations from the same home region did not form a significant reference group in this particular setting.

One potential limitation of this study is the highly regulated nature of the pre-entry process, which may have been driven by political motives instead of the characteristics of the foreign banks. This might especially have been the case in the early 1990s, for which we tried to control in our statistical models. In general, however, we think the limitations of studying a strong regulatory environment are outweighed by its benefits. Although, as Sørensen and Sorenson (2003) indicate, regulation creates a disadvantage in terms of one's ability to draw strong inferences, it does provide a rare insight into the pre-entry phase, since the sequential stages are so clearly marked with objectively recorded data. As this study shows, regulations can provide an exceptional natural experiment in delimiting a time period of potential entry and a transition phase from one clearly defined pre-entry organizational form to another more developed organizational form.

Another limitation might be a potential lack of generalizability of the results of this study. Some would argue that the context presented here is too atypical of other countries in terms of the level of government control, the culture, and the social dynamics. Although these issues have certainly affected the findings to some extent, we think that the overall patterns found are not necessarily context specific. Take again our results concerning the duration dependence of the transition rate (which we found to follow an inverted U-shaped pattern). As noted, this particular pattern has earlier also been found in a study of US automobile producers (Carroll and Hannan 2000) and in a study of semiconductor firms (Schoonhoven et al. 1990). In these studies, however, the peak in the duration dependent transition rate came

after six and two and a half years respectively; in the context presented here the peak came after roughly twelve years. Despite the differences in the location of the peak (which can be explained by context-specific factors), the inverted U pattern was nevertheless found in highly diverse regions and industries. Where else it holds, of course, remains an issue to be examined in future research.

Future research should attempt to incorporate the effects of other audiences that might influence organizers to move from pre-entry to full membership of a population (Philips and Zuckerman 2001; Zuckerman 1999). Such audiences may include the already validated members of the population (here, bank branches), investors, employees, potential customers, regulators, and industry analysts (Hsu and Hannan 2005; Hannan et al. 2005). In this particular context, regulators were probably the most relevant audience, but employees (involved in the factual resource allocation needed for the status upgrade) and potential customers may also have been important. For instance, if multinational companies allocated their attention and resources to particular representative offices, those representative offices would have been more likely to apply for a branch license with local regulators. The allocation of attention and resources by potential customers in the candidacy phase should signal that there is a reasonable prospect of sufficient customers once the bank has become a member in the population of bank branches. On the other hand, the bank will probably wait and postpone the transition to branch office status if there is no reasonable prospect of receiving business in the future. An ecological model to predict the likelihood of moving from pre-entry activity to entry, as developed here, may serve as a basis for incorporating measures for various audiences. Such an effort is likely to further illuminate various aspects of the identity formation process.

6

De-Partitioning and Competitive Exclusion

This chapter examines the competitive interactions between domestic Chinese banks and foreign banks in Shanghai. First, a background is provided on the domestic banking sector. It is postulated here that in recent years domestic banks have increasingly started to exert competitive pressure on their foreign counterparts. Two possible explanations are subsequently presented based on ecological arguments: one based on Carroll's (1985) resource partitioning theory, the other on Gause's (1934) 'principle of competitive exclusion'. These explanations are then closer examined by modeling data on the time-to-profitability of foreign banks. On a more general level, the results of this chapter shed light on the degree to which domestic banks have impeded the re-emergence of foreign banks in Shanghai.

6.1   Competition with Domestic Banks

Prior to the reforms initiated in 1978, there were only three domestic banks in China: the People's Bank of China, the Bank of China, and the Construction Bank of China. The *de facto* structure of China's banking structure however resembled more that of a mono-bank system: the Bank of China did not operate independently and was subordinate to the People's Bank of China. The Construction Bank of China was a bank only in name as it functioned as a subsidiary of the Ministry of Finance (Lardy 1998). The dominant bank, the People's Bank of China, operated both as the sole commercial bank, as well as the central bank which regulated money supply and

interest rates.

During the initial phase of the reform era, the first steps were taken to depart from this mono-bank system. In February 1979, the Agricultural Bank of China came into existence and later that year, the Bank of China was separated from the People's Bank of China. The most fundamental change in China's banking system however came in January 1984, when the People's Bank of China was assigned the formal status of central bank. As a consequence, all of its deposit and lending activities were transferred to a newly established bank, the Industrial and Commercial Bank of China. The result of these changes was a banking system consisting of four large banks (which became known as the 'Big Four'), supervised by the People's Bank of China. This system was highly segregated with each bank covering a distinct part of the market space. The Agricultural Bank of China focused on deposit-taking and lending activities in rural areas, the Construction Bank of China aimed at financing real estate projects and investments in fixed assets, the Industrial and Commercial Bank of China focused on financing state owned commercial and industrial enterprises, and the Bank of China covered the area of international banking and foreign exchange. Due to this market segregation, competition among the Big Four banks remained limited (Wong and Wong 2001).

This situation changed with the founding of three so-called policy banks in 1994, banks that among others took over the activity of extending policy loans[1] from the four large banks. The three policy banks (the China Development Bank, the Export-Import Bank of China, and the Agricultural Bank of China) not only increasingly posed more competitive pressure on the Big Four state banks, but also experienced direct competition amongst themselves (Wong and Wong 2001). Further liberalization of the market led to the establishment of several other banks, such as the Bank of Communications in 1987 and the Everbright Bank in 1992, introducing more elements of competition to the market. In Shanghai, also so-called city commercial banks were set up, including the Pudong Development Bank in 1993 and the Bank of Shanghai in 1995. By the end of 2002, there were 15 domestic banks in Shanghai alone (Figure 6.1). With the increase in the number of domestic banks, the market also became less concentrated. While in the pre-reform era, the four-firm concentration ratio in the Shanghai market was close to unity (the market basically being in the hands of the People's Bank of China), this figure has been decreasing to 81

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[1]Policy loans can be seen as directed credit programs, in which the allocation of loans is driven by government objectives (Lardy 1998).
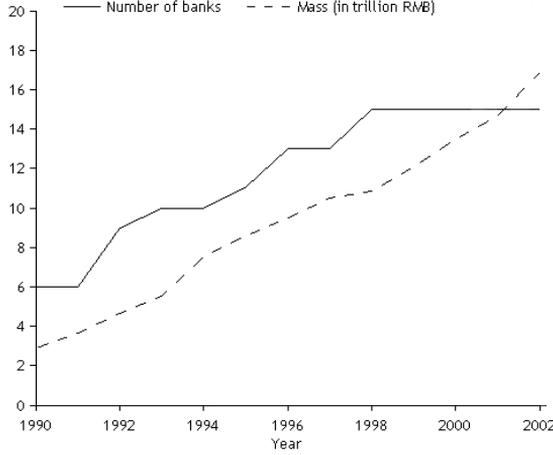
Figure 6.1: *Number and mass of domestic banks in Shanghai, 1990-2002.*

percent[2] in 2002 (Figure 6.2).

Although low in numbers compared to the foreign banks, Chinese banks serve the bulk of all customers in China. The Big Four banks alone operated more than 140,000 branches throughout the country in 1998 with over 1.6 million employees (Wong and Wong 2001). Domestic banks in Shanghai alone represented total assets of almost 17 trillion yuan[3] by the end of 2002 (Figure 6.1). Foreign banks in contrast occupy only a peripheral position in China's banking system. Foreign banks, mainly headquartered in Shanghai and a few other (coastal) cities, only hold a small share of the market. This market share has even been decreasing in recent years: from 2.5 percent in 1996 to 2 percent in 2000 and 1.2 percent at the end of 2002[4]. Part of the low market share of foreign banks can be explained by the restrictions that foreign banks face in the Chinese market. Foreign banks have throughout China's

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[2]For this study, I used a concentration measure similar to Wong and Wong's (2001) four bank concentration ratio based on data in various editions of the *Almanac of China's Finance and Banking*. As in Wong and Wong's (2001) study, there is an unknown degree of overestimation which arises here from the fact that the market share figure makes use of the *total* assets of each domestic bank and not of the assets held by the *Shanghai office* of each bank. Therefore, large banks with an office in Shanghai tend to be disproportionally represented, overestimating the shares these banks have in the local market.

[3]Approximately USD 2,049 billion.

[4]*PBOC Quarterly Statistical Bulletin.*
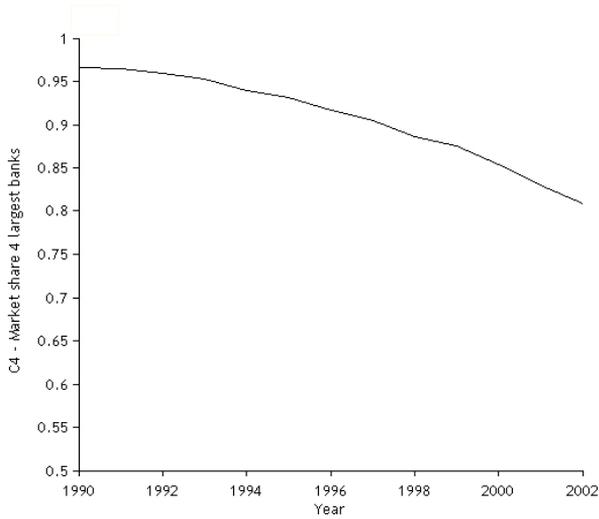
Figure 6.2: *Concentration of domestic banks in Shanghai, 1990-2002.*

reform era largely been banned from conducting banking business in the local currency (the Renminbi or RMB). Additionally, since restrictions imposed on foreign banks prevent them from taking deposits from and lending to privately owned local companies and Chinese citizens, foreign banks have mainly focused on multinational corporations and different types of foreign-invested enterprises (He and Fan 2004). Despite the fact that this is a rapidly growing group of potential customers, it has clearly limited the growth potential of foreign banks.

On the other hand, deregulation did allow foreign banks to gradually move into particular areas. As indicated in Chapter 2, the regulatory environment for foreign banks in China experienced some significant changes since the reform process was set in motion in 1978. Major changes in the regulatory environment were the possibility for representative offices to upgrade to the status of branch office in 1990 (see also Chapter 5), the possibility to obtain a local currency license starting in 1996, and the possibility to offer foreign currency services to Chinese citizens and enterprises as of December 2001. These changes have allowed foreign banks to increasingly operate on the territory of domestic banks, in particular when it comes to providing loans to government agencies and state-owned enterprises. Domestic banks, for their

part, have adopted aggressive strategies and progressively moved on the territory of foreign banks, that is, financing multinationals in China[5]. In ecological parlance, it can thus be said that the niche overlap between domestic and foreign banks in China has been increasing. Competition between domestic and foreign banks has been facilitated by the existence of interest rate differentials, creating the conditions for *price competition*. In this market, domestic banks are able to offer low-interest rate loans to multinationals, rates with which foreign banks find it hard to compete.

How to account theoretically for the increased pressure felt by foreign banks in this market? Organizational ecology offers at least two lines of reasoning[6] that might apply to this particular case. The first is a reversal of the resource partitioning process (cf. Dobrev 2000), in which the increased pressure on the peripheral foreign banks is seen as a consequence of the decreased concentration among domestic banks, i.e. a shift of these domestic banks from the market center towards the periphery. The second interpretation is that we are simply witnessing a process of 'competitive exclusion' (Hannan and Freeman 1977, 942–943), in which one organizational population is outcompeting another population in an increasingly similar resource environment. Both will be discussed below.

6.2 Reversed Resource Partitioning

Organizational ecology's theory fragment of resource partitioning (Carroll 1985) takes as a starting point the environment in which populations of organizations are active. In Carroll's (1985) seminal article, this environment is represented as a finite, multidimensional and heterogeneous resource space in which organizations occupy positions dependent on the resources they draw upon. On a variety of dimensions, the resources in this space tend to be unevenly distributed and in many cases roughly unimodal: there typically is one area along a particular dimension with a peak level of available resources. For example, Boone, Carroll and van Witteloostuijn (2002), in their analysis of the Dutch daily newspaper industry, point to a variety

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[5]This is in line with Leung et al. (2003) who suggest that multinational corporations from one country no longer are served solely by banks from that same country: multinational enterprises in Shanghai are also served by banks from other countries, and indeed domestic banks.

[6]A third perspective on inter-population competition might build on the Red Queen model of organizational evolution (e.g. Barnett and Hansen 1996). In this model, the competitive pressure generated by an organizational population is represented by the sum of individual organizations' (recent) competitive experiences.

of resource dimensions that appear to be relevant in explaining the dynamics of this industry. Among the dimensions considered to represent consumer resources (newspaper readers) are the age structure, religious and political preferences, and education profile. All of these dimensions appeared to be distributed unimodally: for political preferences, for example, the authors describe five categories (extreme left, left wing, center, right wing, extreme right) of which most resources are found to be located in the left wing and center segments, with relatively few resources in the more peripheral extreme left and extreme right political segments. The organizations that are considered to occupy positions in this resource space generally come in two types: organizations that serve the peak, the so-called generalists, and those that occupy positions in peripheral areas with thinly spread resources, the specialists.

Each generalist tries to serve the peak because this allows the organization to achieve economies of scale. Paradoxically, the resulting scale-based competition however leads to increased mortality rates among generalists (Carroll and Hannan 1995) and consequently, the number of generalists declines. With the failure of individual generalists, resources that become available will generally be absorbed by adjacent generalists. The surviving generalists will thus become larger in size as time passes. As this increasingly smaller set of generalists moves towards the market center, they will find it increasingly difficult to secure the resource areas that are located more towards the periphery of the resource space. This might be due to cost or uncertainty considerations or even constraints in identity or capabilities (Boone et al. 2002). Concentration among generalists in the market center thus opens up free resource space at the periphery. Specialists, which tend to operate in areas with thinly spread resources, may therefore increasingly find suitable positions in the margins of the resource distribution. In the periphery of the resource space, specialists can also grow and prosper. The causal mechanism of -on the one hand- increasing generalist concentration and -on the other hand- increased chances of success for specialists is the core prediction of resource partitioning theory (Carroll 1985) and has been empirically validated in a large number of studies (e.g. Carroll 1985; Dobrev et al. 2001; Freeman and Lomi 1994; Mezias and Mezias 2000; for a more complete overview see Carroll, Dobrev, and Swaminathan 2002).

Dobrev (2000) argues that the process can also be *reversed*. That is, decreasing generalist concentration leads to decreased chances of success for specialist organizations. Dobrev (2000), however, does not claim that (decreasing) economies of scale are responsible for lower levels of concentration. Instead, he points to two

alternative mechanisms that drive down concentration, namely resource depletion and deregulation. Under the condition of resource depletion, small organizations in the periphery will be the first to fail (due to a liability of smallness, see also Carroll and Hannan 2000, 313–338). As a consequence of this, and because of the fact that inertial tendencies prevent larger sized organizations near the center from absorbing the newly available resources in the periphery, the proportion of medium-size organizations will increase. The increase in these medium-size organizations will lead to a decrease of concentration in the industry. Deregulation is the other condition affecting concentration, since deregulation leads to the break-up of former state monopolies into smaller and leaner entities (Dobrev 2000; Péli 1999). These spin-off organizations will seek positions away from the crowded market center, *de facto* also reducing concentration. The result of de-concentration among the generalist organization puts increased pressure on the specialists in the periphery (Dobrev 2000).

Figure 6.3 displays this process in a two dimensional resource space[7]. The circles represent areas covered by individual organizations in this resource space. In a concentrated market (panel A), a single organization (F_1) occupies the market center, the place where the distribution of resources peaks. If this organization is either split up into smaller entities or new organizations are allowed into the market (as part of a deregulation policy), the market will de-concentrate. This situation is represented in panel B. Although individual organizations will tend to be smaller on average, their aggregate size (the area covered by areas $F_2 + F_3 + F_4 + F_5$) will generally be larger as each organization will seek some degree of differentiation, away from the market center. As a result, the amount of resource in the peripheral areas of the resource space decreases (i.e. the open space not covered by the circles in Figure 6.3), which will reduce the survival chances of specialists.

Dobrev (2000), analyzing the post-socialist Bulgarian newspaper industry between 1987 and 1992, indeed found that decreasing concentration among generalist newspapers reduced the survival rates of specialist newspapers in the periphery. As generalist newspapers experienced a decline of their market share they retrenched towards the periphery of the market where they engaged in more direct competition with specialist newspapers. Dobrev (2000) however did not find a similar result for his hypotheses pertaining to founding rates: under decreased concentration he pre-

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[7]This figure is in fact a reversal of Carroll's (1985) figure 1.

A. Concentrated market   B. Unconcentrated market
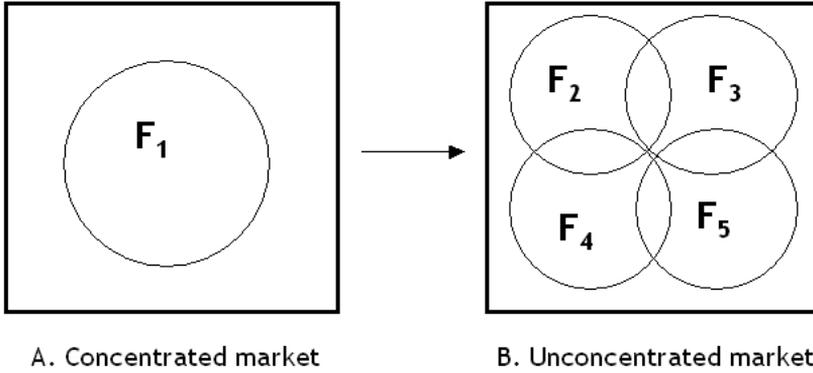
Figure 6.3: *De-concentration in a two-dimensional resource space.*

dicted higher founding rates for generalists in the market center and lower founding rates for specialists in the periphery, but no empirical support was found. Reflecting on this result, Dobrev (2000) argued that resource distributions in the Bulgarian newspaper market might have been bimodal and the decreased concentration overall might have been concealing increased concentration in each of the two peaks in this resource distribution[8].

In the present analysis, it is assumed however that, due to a lack of evidence pointing in the direction of bimodality, the Shanghai banking industry does not exhibit such a dual market structure, but instead a default unimodal resource distribution. Furthermore, it is argued that in this particular environment, domestic banks can be defined as a set of generalists, whereas foreign banks are defined as specialist organizations[9]. These roles are assigned based on the differences between

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[8]Dobrev (2000) however leaves open the question why this dual market structure did not affect the relationship between concentration and specialist mortality rates.

[9]Earlier, in Chapter 4, I defined the community of multinational banks as a set of generalist organizations. Here, however, these banks are seen as specialists. What has changed? In Chapter 4, the environment in which multinational banks operate was seen from a global perspective, with multinational banks operating in a variety of nation-states. In this chapter however, the nation-state is kept constant and the multinational banks appear to be very peripheral players in this environment. This is in line with Freeman and Hannan (1983, n11) who argue that the extent of specialism or generalism must be defined relative to the environment. Also note that there is a subtle difference between generalism in the context of resource partitioning theory and generalism in the context of niche width theory. In resource partitioning, generalists try to serve the peak in the distribution of resources (the 'depth' of the appeal), whereas in niche width theory, generalists have broad niches (the 'breadth' of the appeal).

foreign and domestic banks in terms of their position in resource space: foreign banks operate in the areas with thinly spread resources, while Chinese banks are active in such areas as retail banking, the market where the bulk of available resources are located (He and Fan 2004; Fu 1998; Lees and Liaw 1996; MacCormac 1993). The interpretation of Shanghai's banking system is that, over time, the generalist domestic banks have moved into a direction that is in line with the reversal of the resource partitioning theory as described by Dobrev (2000). From a mono-bank system, in which one bank attempted to control and cover various central areas of banking, the banking system has expanded and became increasingly de-concentrated. New banks that came into existence have sought differentiation by providing new services and targeting new areas. By doing so they generally moved away from the market center in the direction of the peripheral areas in which the specialist foreign banks were located. Hence, it is postulated that:

Hypothesis 6.1 (Reversed Resource Partitioning). *Decreased concentration among the generalist, domestic banks is associated with a lower profitability rate of specialist, foreign banks.*

In order to test this hypothesis, one particular assumption as put forward in Carroll's (1985) resource partitioning theory has to be relaxed however. As I pointed out in the introductory part of this chapter, it is clear that price levels (i.e. interest rates) do play a role in this particular context. Part of the reason why in some areas foreign banks are outcompeted by domestic banks is because the latter group is able to grant loans at lower interest rates. One of the scope conditions of Carroll's (1985) resource partitioning theory however is the *absence* of price competition: with equal price levels (and in the presence of economies of scale), large-scale firms will have the highest profit margins. Since a reversed resource partitioning process is in essence not driven by (a diminished importance of) economies of scale, but rather by deregulation (Dobrev 2000), relaxing the scope condition of no real price competition here seems to be defendable. A consequence would be that, if Hypothesis 6.1 indeed holds, then this may provide evidence that price competition is asymmetric in its function as a scope condition: an absence of price competition might then be a necessary condition for a general resource partitioning process (as Carroll (1985) argues), but not a necessary condition for a reversed resource partitioning process as articulated by Dobrev (2000).

6.3   The Principle of Competitive Exclusion

Independent of the movement of generalist banks from the center towards the periphery, increased competition with foreign banks may also result from general growth of the *size* of the domestic banking population. This interpretation is in line with early ecological models inspired by the work of Lotka (1932) and Volterra (1926). These initial models do not take into account the possibility that one subpopulation might move towards the other, but instead focus on the relative sizes of each of these populations and the competitive pressure that each of them can exert on the other (the position of these populations relative to each other is kept constant). Competition between two populations is particularly strong when both populations occupy a similar position in resource space, i.e., when they occupy the same niche. Ecologists usually invoke Gause's (1934) 'principle of competitive exclusion' when modeling such effects. The principle of competitive exclusion states that 'no two populations can continuously occupy the same niche', and 'populations are said to occupy the same niche to the extent that they depend on identical environmental resources' (Hannan and Freeman 1977, 942–943). In the presence of such conditions, one of the two populations will always be forced to drop out from the market. The principle of competitive exclusion, as shown by Gause (1934), is in essence a mathematical result based on Lotka-Volterra models of competing populations.

$$\frac{dN_1}{dt} = b_1 N_1 \frac{K_1 - (N_1 + \alpha N_2)}{K_1} \tag{6.1}$$

and

$$\frac{dN_2}{dt} = b_2 N_2 \frac{K_2 - (N_2 + \beta N_1)}{K_2} \tag{6.2}$$

where the growth rate of a population is influenced by the number of organizations pertaining to the population, the carrying capacity (K) for that population, and the number of organizations in the competing population. In Lotka-Volterra equations of competing populations, an equilibrium (i.e. population growth for both populations equals zero) can only exist when

$$\frac{1}{\alpha} < \frac{K_1}{K_2} < \beta \tag{6.3}$$

It is easy to see that in these models a stable equilibrium for two very similar populations (when α and β are close to unity), can only exist under a very precise

K_1/K_2 ratio. Any external shock to the system will result in the competitive exclusion of one of the two populations[10]. Ruef (2004a) illustrates how competitive exclusion can lead to the demise of an organizational population. In his study on the disappearance of the plantation system between 1860 and 1880, Ruef (2004a) finds that among alternative populations, medium-sized farms exerted the strongest competitive pressures on the plantation system. Medium-sized farms had similar resource requirements, among others in terms of crop diversity. The crop diversity that both populations relied on was almost identical, as both focused on cotton, corn and a few selected other crops. Both populations also made use of the same labor force, which was a relatively homogeneous one in terms of ethnical background, education, and economic status.

It is assumed here that the niche that is occupied by both domestic and foreign banks (i.e. that part of the resource space in which both foreign and domestic banks are active) also shows sufficient overlap to allow for the possibility of competitive exclusion. As pointed out earlier in this chapter, both sub-populations serve foreign multinationals in China, and both are allowed to extend loans to the government and state-owned enterprises in China. In these domains, foreign and domestic banks have come to compete increasingly. In the interpretation presented here, the growing and increasingly competitive population of domestic banks is causing a depression of the profitability rates of foreign banks. In order to test the possible competitive exclusion of foreign banks in Shanghai, I follow Hannan and Carroll (1992) and Hannan and Freeman (1989) in measuring the effect of a competing population by incorporating a variable representing the number of organizations in the competing population, i.e. the density of domestic banks.

Hypothesis 6.2 (Competitive Exclusion)**.** *An increased density of domestic banks is associated with a lower profitability rate of foreign banks.*

A second way to represent the competitive pressure generated by a population is the mass[11] of that population (i.e. the aggregate size of the organizations in that

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[10]Relaxing the assumption of similarity however, equilibria in the set of equations can generally be found when the level of within-population competition is high, and the competition between the two different populations is relatively low. In other words, co-existence is possible when some form of niche differentiation would occur and when there is some distance between the two competing populations in the resource space. The question of how different these competing populations must be to make co-existence possible is known as the problem of '*limiting similarity*' (MacArthur and Levins 1967; MacArthur 1972).

[11]Barnett and Amburgey (1990) provide an interesting extension of the Lotka-Volterra equations

population). Barron et al.'s (1998) study of several competing populations in the financial services sector provides such an approach. They find that after the industry's deregulation, populations such as credit unions, savings banks, commercial banks, and savings and loans associations (S&Ls) showed greater intensity of competition. Using data on the aggregate size of each of these populations (measured in terms of total assets), they show for instance that credit unions competed strongly with S&Ls, and that the credit union population was growing substantially over time at the expense of S&Ls. Barron et al. (1998) attribute the increased competition after the deregulation of the industry to increasing overlap in the financial services that are provided by these populations. In a similar vein, it is argued here that deregulation of the financial sector led to increasing overlap between domestic and local banks in China. As a result, foreign banks have also increasingly been affected by the growing population of domestic banks. As Barron et al.'s (1998) approach shows, the competitive interaction resulting from this increased pressure can be effectively modeled using the aggregate size of the competing population, here domestic banks. Hence, it is hypothesized that:

Hypothesis 6.3 (Competitive Exclusion). *An increased mass of domestic banks is associated with a lower profitability rate of foreign banks.*

6.4   Variables

In order to test the hypotheses postulated above, the profitability rate of foreign banks in Shanghai is analyzed using the event history method. For this purpose, self-reported data is collected on the first year of profitability of foreign banks in Shanghai, covering the period from 1990 to 2002. The resulting dataset includes 147 observations, representing the time-to-profitability of 41 foreign banks. Only one foreign bank in Shanghai reported that it had not become profitable before the end of the observation window; the other foreign banks reached profitability after an average of 2.45 years[12](see Chapter 3 for a more detailed treatment of the data

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presented earlier in this chapter, by incorporating mass effects and a mass-defined carrying capacity constraint.

[12]138 observations divided by 40 profitable banks results in an average of 3.45 years. However, when a bank is allowed to generate profit in year t and it becomes profitable in year $t+1$, then this is represented by two observations in the dataset. Since none of the banks reached profitability in the same year it was allowed to do so and foreign banks are in reality assumed to be able reach profitability levels any time during the year, subtracting this average with 1 yields a more accurate

and method).

The main variables used for predicting the profitability rates of foreign banks are:

Concentration of domestic banks. This variable is represented by a four-firm concentration ratio (C4), defined as the total assets held by the Big-Four domestic banks (the Bank of China, the Construction Bank of China, the Agricultural Bank of China, and the Industrial and Commercial Bank of China) divided by the total assets held by all banks in the industry. To construct this variable, data was adapted from annual editions of the *Almanac of China's Finance and Banking* as well as balance sheets in the annual editions of *The Bankers' Almanac.*

Mass of domestic banks. Using the same sources, the total mass of domestic banks, defined as the aggregate of individual organizations' total assets, is calculated and updated annually. A measure based on total assets is especially appropriate in a study of financial institutions, given their function of accepting deposits and providing credit (Barron et al. 1998).

Density of domestic banks. A list of domestic banks was obtained comparing the annual editions of *The Bankers' Almanac*, and starting dates for each of these banks were easily found via *Lexis-Nexis.* Since domestic banks are not numerous, every single domestic bank could be identified implying full coverage of this population. Density, as well as mass and the C4 concentration ratio, were all lagged one year. Change variables were also computed, defined as the growth (or decline) in mass, density and C4 in the previous year.

The following control variables were used:

Experience China/Hong Kong. This variable can be seen as an extension of the analysis presented in Chapter 4. In Chapter 4, I outlined how the multinational banking community withdrew itself from Shanghai in the 1930s and 1940s and instead allocated their attention to Hong Kong. However, in the 1980s many banks that had a presence in Hong Kong started their operations in Shanghai again. Here, I examine the consequences for individual banks. Foreign banks that have spent many years in Hong Kong during the time at which an office in mainland China was not an option, may have had the chance to build up experience and positional advantages that turn out to be helpful in post-dormancy mainland China. Alterna-

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estimate.

tively, foreign banks that have maintained an office in Hong Kong and were among the first batch of banks returning to mainland China may be perceived by local customers and regulators as more reliable and committed to the local market (rather than being perceived as opportunistic actors only interested in short-term gains).

Foreign direct investment. As an approximation of the carrying capacity of the environment in which foreign banks are active, foreign direct investment (FDI) is used. FDI is measured in 100 million US dollars and lagged one year.

Interest rates. As indicated, foreign and domestic banks appear to compete strongly on the basis of the prices of their loans (i.e. the interest rates.) Similar to Leung et al. (2003), I included the Eurodollar three-month rate to control for the possible effects of price competition.

Branch sequence. Foreign banks that were in a position to obtain a branch license early may have enjoyed first-mover advantages, and may have found it easier to become profitable. For this reason, a control variable is included that equals 0 for banks that obtained a branch license in 1990 and 12 for banks that obtained a license in 2002 (cf. Leung et al. 2003).

Branches China. This variable was defined as the number of other branches a bank maintained in China in a previous year.

Extent of multinationality. Multinationality was defined as the number of countries in which the organization has an investment (Youssef 1975). The more international experience, the better the bank will be able to cope with diverse and complex environments and the less difficulties the bank is likely to have to become profitable in Shanghai.

Size. Leung et al. (2003) show that the bank's asset size also is a relevant control variable. According to Leung et al. (2003) large banks have reputational and informational advantages and are likely to be in a better position to assess and monitor risks associated with lending. As a result, larger banks will experience higher profitability rates. The size of the foreign bank is measured in trillion US dollars, and lagged one year.

Length of organizing period. Since previous research (Carroll et al. 1996; Klepper 2002; Klepper and Simons 2000; Ruef 2006) shows that pre-entry experiences have enduring effects on organizational performance, the length of time spend prior to becoming a branch office (i.e. as a representative office) is included as well. Carroll et al. (1996), for instance, in their study of pre-production activities in the U.S. automobile industry between 1885 and 1981, found that firms that have spend a

Table 6.1: *Descriptive statistics and correlations[a].*

Variable	Mean	SD	Min.	Max.	Correlations				
					(1)	(2)	(3)	(4)	(5)
(1) Foreign Bank Dens.	79.14	27.60	34	108					
(2) Interest Rate	5.05	1.10	1.73	8.16	.35				
(3) FDI	29.19	14.59	1.75	48.08	.86	.31			
(4) Branch Sequence	4.46	2.87	0	11	.79	.15	.64		
(5) Branches China	0.80	1.00	0	4	.03	.06	.03	-.27	
(6) Multinationality	30.95	16.88	0	69	-.11	-.02	-.05	-.33	.37
(7) Size (in trillion USD)	0.22	0.16	0.01	0.73	-.12	-.09	-.09	.26	.31
(8) Exper. China/HK	31.24	24.27	0	97	-.28	-.01	-.28	-.28	.22
(9) Length of Org. Period	4.40	3.56	0	12	-.18	-.10	.13	-.20	.40
(10) C4	0.92	0.04	0.83	.97	-.89	-.08	-.65	-.79	-.02
(11) ΔC4	-0.01	0.01	-0.02	-0.00	.95	.19	.80	.80	.02
(12) Domestic Bank Dens.	11.44	3.00	6	15	.96	.16	.79	.81	.02
(13) ΔN_2	0.87	1.03	0	3	-.74	-.04	-.62	-.65	.01
(14) Domestic Bank Mass	8.41	3.24	2.37	1.47	-.07	-.31	.02	-.08	-.01
(15) ΔM_2	1.92	2.47	0.36	9.10	.10	.06	.06	-.02	.00
(16) C4*Exper. China/HK	28.98	23.17	0	93.51	-.32	-.02	-.30	-.31	.21

	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(7)	.38									
(8)	.30	-.00								
(9)	.16	.52	.08							
(10)	.16	.13	.26	.17						
(11)	-.11	-.11	-.29	-.19	-.93					
(12)	-.13	-.13	-.30	-.18	-.97	.96				
(13)	.10	.13	.28	-.15	.76	-.76	-.81			
(14)	.06	.09	-.02	.01	.16	.08	-.14	.24		
(15)	.06	.02	-.06	-.03	.08	-.02	.04	-.21	.05	
(16)	.30	-.00	.87	.09	.30	-.33	-.33	.31	-.01	-.05

[a] N of bank-year observations=147; correlations beyond +/- .21 are significant at the 1 percent level.

longer time in pre-production mode experience lower mortality rates after their entry into the population. The length of the organizing period is defined as the time (in years) the bank has spent in Shanghai as a representative office prior to becoming a branch office.

Table 6.1 gives descriptive statistics for the variables used[13].

6.5 Results

Table 6.2 reports the results of the analysis of the profitability rate among foreign banks in Shanghai, using a Weibull specification (see Chapter 3 for the motivation

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[13]Multicollinearity can lead to potential problems in estimating models, however as McKendrick et al. (2003, 78) note, this is not a problem when statistically significant support is found with collinear data, as is the case here.

underlying this choice). Model 1 shows a baseline model with control variables only. These control variables are used in all subsequent models and show some very consistent effect for some variables. Branch sequence, for instance, appeared to generate statistically significant effects in every model tested, indicating that late entrants enjoy advantages in terms of their profitability rates. Expanding on the results of Chapter 4, it also becomes evident that China or Hong Kong specific experience (measured by the number of years that the bank has spent in the Greater China region) results in higher profitability rates. Foreign banks that diverted to Hong Kong -while Shanghai experienced a period of dormancy- may somehow have retained local market knowledge or, alternatively, are more valued by local audiences in Shanghai. Surprisingly, foreign banks with longer organizing periods, i.e. with a longer time spent as a representative office, do not show higher profitability rates, a finding which is inconsistent with previous findings on pre-entry experience and post-entry performance (Carroll et al. 1996; Klepper 2002; Klepper and Simons 2000). Clearly, the length of time spent as a representative office did not affect the time to profitability, suggesting that, from a managerial point of view, it would be better to keep these organizing periods as short as possible since there is little to be gained in terms of profitability rates.

In model 2, the four-firm concentration ratio, C4, is added to the baseline model (which improves the model significantly; Haberman's $\chi^2 = 41.08$; Δd.f.=1; $p<.01$). C4 shows the expected positive relationship with the performance of foreign banks. Accordingly, the decrease in the C4 concentration ratio as observed in this empirical setting appeared to significantly depress the profitability rates of foreign banks, providing support to Hypothesis 6.1. A decrease in the market concentration signals a shift in the position of domestic banks from the center towards the periphery, and this clearly had a substantial negative impact on the peripheral foreign banks. If the market share of the Big Four domestic banks decreased by one standard deviation from the mean, the profitability rate of foreign banks would fall by 94.5 percent[14].

In model 3, the density of domestic banks is added to the baseline model and clearly shows its expected negative relationship with bank performance. This negative association is indicative of processes of competitive exclusion and is interpreted

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[14]Large effects of market conditions on organizational vital rates such as those found here are not uncommon. Haveman et al. (2004), for instance, find a drop of 92 percent in the founding rate of thrifts after a similar increase in public opinion concerning bureaucracy. The procedure of calculating these effect sizes is identical to the one used by Haveman et al. (2004).

Table 6.2: *Weibull models predicting the profitability rate among foreign banks in Shanghai, 1990-2002[a].*

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Environment					
Foreign Bank Dens. (N_1)	-0.116**	-0.026	-0.067†	-0.032	0.050
	(0.032)	(0.035)	(0.036)	(0.035)	(0.042)
Interest Rate	0.575**	0.558*	0.568**	0.066	-0.376
	(0.195)	(0.273)	(0.192)	(0.233)	(0.284)
FDI (K_1)	0.037	-0.033	0.019	0.034	-0.016
	(0.027)	(0.030)	(0.024)	(0.028)	(0.030)
Organizational Characteristics					
Branch Sequence	1.018**	3.167**	1.425**	2.164**	3.730**
	(0.230)	(0.500)	(0.275)	(0.378)	(0.574)
Branches China	-0.486†	-0.349	-0.408	-0.508†	-0.402
	(0.263)	(0.291)	(0.253)	(0.285)	(0.277)
Multinationality	-0.025†	-0.041*	-0.023	-0.020	-0.033*
	(0.015)	(0.016)	(0.014)	(0.015)	(0.016)
Size	1.750	1.546	1.934	1.103	1.810
	(1.387)	(1.466)	(1.356)	(1.401)	(1.416)
Exper. China/HK	0.025**	0.025**	0.021*	0.022*	0.022*
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Length of Org. Period	0.006	0.006	-0.000	0.012	0.038
	(0.074)	(0.076)	(0.070)	(0.077)	(0.072)
Domestic Banks					
C4		199.902**			100.516*
		(35.842)			(48.376)
Density (N_2)			-0.854**		-1.001**
			(0.285)		(0.324)
Mass (M_2)				-1.687**	-1.573*
				(0.371)	(0.658)
ρ	5.560**	12.684**	6.935**	9.456**	14.723**
	(0.796)	(1.720)	(0.984)	(1.292)	(1.968)
Constant	-6.432**	-206.386**	-3.112*	-5.170**	-102.146*
	(1.361)	(36.074)	(1.477)	(1.436)	(49.023)
Obs. (bank-years)	147	147	147	147	147
Log-likelihood	-6.78	13.76	-1.98	4.97	18.05
LR $\chi^2_{(d.f.)}$	51.76$_{(9)}$	92.83$_{(10)}$	61.36$_{(10)}$	75.25$_{(10)}$	101.41$_{(12)}$
Haberman's χ^2		41.08**	9.60**	23.50**	8.58*
		(vs. 1)	(vs. 1)	(vs. 1)	(vs. 2)

Significance levels : † : 10% ∗ : 5% ∗∗ : 1%
[a] Standard errors are in parentheses.

as support for Hypothesis 6.2. In terms of the size of the effect, an increase of one standard deviation from the mean number of domestic banks in Shanghai results in

Table 6.3: *Weibull models predicting the profitability rate among foreign banks in Shanghai, 1990-2002[a].*

Variable	Model 6	Model 7	Model 8	Model 9	Model 10
Environment					
Foreign Bank Dens. (N_1)	-0.047	-0.077†	-0.037	-0.176**	-0.046
	(0.036)	(0.039)	(0.035)	(0.041)	0.036
Interest Rate	-0.502†	1.442**	0.103	0.963**	-0.538†
	(0.272)	(0.293)	(0.241)	(0.269)	(0.278)
FDI (K_1)	0.032	0.015	0.038	0.044	-0.028
	(0.029)	(0.027)	(0.030)	(0.035)	(0.031)
Org. Characteristics					
Branch Sequence	3.594**	3.332**	2.300**	1.668**	3.258**
	(0.578)	(0.496)	(0.391)	(0.323)	(0.512)
Branches China	-0.368	-0.425	-0.478†	-0.477†	-0.423
	(0.292)	(0.275)	(0.287)	(0.281)	(0.292)
Multinationality	-0.032*	-0.030*	-0.022	-0.022	-0.033*
	(0.015)	(0.014)	(0.015)	(0.015)	(0.016)
Size	1.259	1.784	1.146	1.312	0.641
	(1.445)	(1.457)	(1.422)	(1.406)	(1.488)
Exper. China/HK	0.021*	0.021*	0.021*	0.021*	0.497*
	(0.009)	(0.009)	(0.009)	(0.009)	(0.239)
Length of Org. Period	-0.002	-0.022	0.011	0.004	0.042
	(0.078)	(0.077)	(0.079)	(0.080)	(0.075)
Domestic Banks					
C4	209.713**				209.222**
	(37.655)				(36.344)
ΔC4	100.192*			93.619	
	(44.597)			(58.167)	
Density (N_2)		-2.695**			
		(0.478)			
ΔN_2		1.964**		0.478†	
		(0.352)		(0.261)	
Mass (M_2)			-1.774**		
			(0.388)		
ΔM_2			0.153†	0.239*	
			(0.085)	(0.097)	
C4*Exper. China/HK					-0.507*
					(0.257)
ρ	14.097**	13.543**	9.839**	-7.782**	13.274**
	(1.947)	(1.774)	(1.330)	(1.144)	(1.791)
Constant	-216.103**	-2.184	-5.579**	-8.590**	-214.895**
	(37.922)	(1.571)	(1.524)	(1.927)	(36.553)
Obs. (bank-years)	147	147	147	147	147
Log-likelihood	16.22	17.01	6.34	-0.05	15.67
LR $\chi^2_{(d.f.)}$	97.76$_{(11)}$	99.33$_{(11)}$	77.99$_{(11)}$	65.12$_{(12)}$	96.66$_{(11)}$
Haberman's χ^2	4.92*	37.98**	2.74†	13.66**	3.82†
	(vs. 2)	(vs. 3)	(vs. 4)	(vs. 1)	(vs. 2)

Significance levels : $\dagger$: 10%   * : 5%   ** : 1%
[a] Standard errors are in parentheses.

a drop in the profitability rate of 93 percent. This is somewhat less than the effect of C4, but, again, substantial. Interestingly, the effect of domestic bank density is also substantially larger than that of within-population competition among foreign banks. By comparing the competition coefficients, it becomes evident that one additional domestic bank has a much stronger bearing on the profitability rate compared to the addition of one additional foreign bank. When the density of domestic banks is replaced with the mass of the domestic banks (model 4), the competitive nature of the effect of domestic banks on foreign banks persists. Here, an increase of one standard deviation from the mean aggregate size of domestic banks results in a 96.2 percent lower profitability rate. Finally, model 5 shows a joint test of C4, density, and mass. This model improves significantly over other models (Haberman's $\chi^2=$ 8.58; Δd.f.=2; $p<.05$). The effect of each of the variables of interest as observed in earlier models, persist in model 5, suggesting that both the principle of competitive exclusion as well as a reversed resource partitioning process can account for the performance of foreign banks in Shanghai.

In Table 6.3 the effects of C4, density and mass are explored in more detail. In particular, it is investigated whether it is the absolute value of each of these variables that matters, or *changes* in each of these variables. Model 6 starts by investigating whether this is the case for the concentration measure. Here, it appears that both the absolute value of C4 as well as a change in C4 have a statistically significant impact on the profitability rate. In a reversed resource partitioning context this implies that the profitability rate of specialist organizations in a given year is negatively affected by both the sheer existence of a lower market concentration as well as further decreases (changes) in that given year. In models 7 and 8, change variables are also added for density and mass, respectively. Surprisingly, both changes in density and mass have a positive effect, suggesting that any increase in the number or aggregate size of domestic banks would actually have a positive effect on the profitability rate of foreign banks, at least in the short term. The main effects of density and mass remain negative, implying that, overall, the domestic banking population still competes strongly with the foreign banking population. One explanation for the initial positive effect of increases in the density and mass of domestic banks might be that such increases temporarily disrupt the industry social structure which leads to some short-term benefits for foreign banks or, alternatively, the founding of new domestic banks may lead to a temporary legitimacy spillover. In model 9, all change variables are jointly tested. The statistical significance of all change variables drops

substantially, and in the case of change in C4 it is no longer significant at the ten percent level. In terms of fit, model 9 also performs substantially worse than the best-fitting model, model 7.

In model 10, an extension of Chapter 4 is tested concerning the boundaries of legitimation: it is tested whether some foreign banks were able to reduce the negative effects stemming from the shift of domestic banks towards the periphery, and were perhaps perceived to be more legitimate than others in the market. The reason for this may be that the market displayed strong path dependence: foreign bank that had a long history in perhaps pre-socialist mainland China or Hong Kong may have been able to develop strong positional advantages, advantages that other foreign banks find difficult to overcome (despite the fact that these banks might have better organizational designs and capabilities (Carroll and Hannan 2000, 11–12)). The interaction effect between local market experience and the C4 measure confirms this interpretation, as the negative effect of C4 decreases with more local market experience.

6.6   Discussion

Starting with the observation that foreign banks are increasingly feeling the competitive pressure generated by domestic banks, this chapter examined two ecological mechanisms that could account for this increased pressure. The first, a reversal of the resource partitioning process as described by Dobrev (2000), argues that domestic banks (being the generalists in this market) are increasingly shifting their position towards the periphery where they engage in more direct competition with the more specialist foreign banks. The other ecological mechanism, based on the principle of competitive exclusion (Gause 1934), argues that (independent of changes in position) the two populations are in fact competing because of their similar resource environment. Domestic banks in such an environment are able to exert pressure on foreign banks because of their increase in numbers and aggregate size. Both type of explanations have been tested and gained support in the empirical analysis.

The fact that both reversed resource partitioning and competitive exclusion apply to this particular case, warrants a closer examination of the possible relation between the two. In this particular context it is clear that generalist concentration, and generalist density and mass are not totally unrelated as all seem to be products of the process of deregulation. Normally, the first response to deregulation in

a post-socialist setting is an increase in the number of (generalist) market players (Dobrev 2000; Péli 1999): new organizations that arise from the break up of former state monopolies or those that make use of the incentives offered by the introduction of market mechanisms. Such an increase in the number of organizations will draw away resources from the key state-owned organizations that previously were the sole participants in the market. As a result, market concentration tends to go down. Generally the mass of the increasing number of generalists will also tend to increase, as these generalists try to differentiate themselves by securing their own niches. By doing so they increase the generalists' total resource base[15]. As shown in this chapter, the exact mechanism that causes the pressure on specialists such as foreign banks can be difficult to identify. In this case, both concentration (C4) and density as well mass can be used to represent the effect of deregulation on specialist performance. Only with more fine-grained data, such as e.g. marketing data which would allow for the actual mapping of the positions of these banks in resource space, we would be able to identify the processes that deteriorate the performance of foreign banks. With such data, actual shifts in position and changes in resource distributions can be observed, the examination of which would be a promising area for future research. The obvious question to ask is how concentration, density and mass of generalists relate to each other with respect to the more standard resource partitioning theory (as put forward by Carroll 1985). Generalist density and concentration for instance appear to be strongly correlated in the reasoning of resource partitioning: under scale-based competition, the mortality rate of generalists increases and the density of generalists drops. The surviving generalists then move closer to the market center leading to a concentrated market. Since both decreasing generalist density and increasing concentration seem to be part of the same process, both can possibly be used to account for specialist proliferation. But this is problematic: what may turn up in some studies as resource partitioning might as well be the product of weakening competitive exclusion or competitive 'inclusion'. Do specialists proliferate because generalists move away from the periphery or do they proliferate because they face less direct competition (due to a lower number of generalists)? Alternatively, as Geroski (2001, 525–527) suggests, competitive exclusion may in fact *cause* resource partitioning: the risk of being competitively excluded may lead (new) organizations

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[15]Such an increase can then generate pressure on the periphery even in transition economies with an inflow and rapid growth of resources (such as China), so resource scarcity may not be a scope condition in a reversed resource partitioning as Dobrev (2000) would argue.

to differentiate themselves from the generalists by developing a specialist strategy. And because the risk of becoming competitively excluded makes it less attractive to become a generalist, the market may fall in the hands of a few oligopolists, increasing concentration in the market. It is important for theory development in the field of resource partitioning to distinguish between resource partitioning on the one hand and competitive exclusion on the other hand (or otherwise to integrate them). It is important to note in a discussion of this issue that it became evident during this study that the reversed resource partitioning theory as described here and by Dobrev (2000) is not the perfect mirror image of Carroll's (1985) resource partitioning theory. For instance, in a reversed resource partitioning, scope conditions of price competition and economies of scale might not be applicable. There is ample evidence of price competition in the Chinese banking system, but still the results of the analysis presented here provide strong evidence in favor of a reversal of the resource partitioning process. Also there is no reason why economies of scale should be a scope condition in a reversal of the resource partitioning process[16]. Instead, deregulation seems to drive much of this phenomenon and can be seen as a scope condition that applies specifically to departitioning (Dobrev 2000).

Does the analysis presented here imply that, sooner or later, foreign banks will be forced to drop out of the market? Recently, Beamish and Delios (2005) have suggested that the proportion of China's economy dominated by foreign firms will decline in the coming years, pointing to a lack of profitability as one of the main reasons. Based on an evaluation of the performance of a large number of Japanese firms in China, Beamish and Delios (2005) report that the percentage of Japanese subsidiaries that report profitable performance has been decreasing over the past decade, and has become lower relative to other countries in the world. This leads them to expect that many of the foreign firms in China will eventually exit as foreign investors. On the other hand, there are at least two good reasons to suggest that this is not likely to happen. First, the offices of international banks in Shanghai are backed by financial resources which in some cases even exceed those of domestic banks. Backed by such assets, foreign banks in Shanghai may continue to exist even in the absence of reasonable returns (Leung et al. 2003). The weaker sub-population

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[16]In the absence of these scope conditions, the set of organizational populations in which a reversed resource partitioning process might take place, is less restrictive; we can e.g. expect such a process to take place in populations not characterized by economies of scale as well. Of course, one might wonder whether such process really deserves the label of resource partitioning.

here thus has the means to defend itself in some way (cf. Geroski 2001). Second, one might also point to expected changes in the resource environment for banks in China. This resource environment is likely to become more heterogeneous in the future. Chinese consumers will for instance demand a greater variety of financial services (He and Fan 2004). This increased heterogeneity is likely to provide opportunities for niche differentiation and could enhance the performance of the specialist foreign banks (cf. Péli and Nooteboom 1999; Boone et al. 2002), since it diminishes both the pressures arising from competitive exclusion as well as those arising from de-concentration among the generalist, domestic banks.

One limitation of this research is that it did not investigate recent developments in resource partitioning theory that sketch a more complicated picture than the one suggested here. For instance, Boone et al. (2002) incorporate data on the resource distributions affecting the partitioning process, and show that homogeneity in the resource distribution drives generalist consolidation, while, paradoxically, heterogeneity seems to enhance specialist proliferation. In another study, Boone and van Witteloostuijn (2004) propose that scope economies, in addition to scale economies, affect the partitioning process. Unfortunately, data limitations did not allow for empirically testing these recent advances in the present study.

Future research may investigate whether the effect of the competitive exclusion generated by domestic banks can also be extended to the founding rates of foreign banks. There is some reason to suggest that this might not be the case. Li (2002), for instance, investigates the possible presence of competitive exclusion in the Californian banking industry between 1979 and 1988. In examining the reversed relationship, namely that of the effect of foreign banks on the entry of domestic banks, Li (2002) finds that at higher levels, the density of foreign banks actually stimulates the entry rate of domestic banks. The increase of foreign bank density may in such cases signal a favorable opportunity structure which then attracts an increasing number of local banks. If this finding applies to the Shanghai banking industry as well, then an increase of domestic banks in Shanghai may attract an increasing number of foreign banks, especially when the number of domestic banks exceeds a particular threshold level. Such an effect could persist even in the presence of the deleterious consequences of competitive exclusion, if it would mirror recent research in industrial geography (Sorenson and Audia 2000; Stuart and Sorenson 2003).

Future research may also seek to incorporate reversed resource partitioning (and

possibly the principle of competitive exclusion) into existing logical formalizations of resource partitioning. Recent studies (Vermeulen and Bruggeman 2001; Hannan et al. 2005) have sought to re-analyze the main arguments of resource partitioning theory by means of formal logic, but it would be interesting to see how a reversal of the partitioning process, as well as the principle of competitive exclusion, would fit into the developed logical structures.

7

Conclusion

In this final chapter, a summary of each of the three empirical chapters is presented, as well as some of their main findings. In addition, a brief appraisal is provided on using the ecological approach in the Chinese context, and on the generalizability of the findings of this study. The chapter closes with some possible directions for future research.

7.1 Summary of Main Findings

The substantive purpose of this dissertation was to address several important theoretical issues in the field of organizational ecology (Hannan and Freeman 1977, 1989; Carroll and Hannan 2000), namely: 1) the re-emergence of organizational populations, 2) ecological interactions during the early stages of firm activity, and 3) the modeling of inter-population competition. These were investigated using data on the ventures of foreign banks in Shanghai.

First of all, an effort was thus made to further our understanding of how organizational populations are able to re-emerge after a period of dormancy, as in the case of foreign banks in Shanghai. An improved understanding is of theoretical relevance because many of the processes that underlie re-emergence are believed to be relevant to the general evolution of organizational forms as well and instances of re-emergence provide us with a unique opportunity to study these processes under unusual circumstances. These may include the degree of legitimacy of the organizational form and the construction of the social identity of the organizational form. But, as this dissertation showed, both of these can sometimes not be fully cap-

tured when the social system, in which the phase of dormancy and the subsequent re-emergence take place, is considered in isolation of other systems. It turned out that a broader perspective that took into account organizational dynamics outside the social system in question offered a more complete picture of various aspects of re-emergence. Analytically, this was shown by modeling the founding rate of foreign banks in Shanghai, which increased substantially after a period of dormancy for this population ended in the early 1980s. When only the foreign banking population in Shanghai was considered, and both the pre-dormancy and the post-dormancy periods were included in the analysis, one arrived at the conclusion that the re-emergence of foreign banks did not involve a renewed increase in legitimation (as in the case of Dobrev (2001)) and that therefore this process could not fully account for patterns in the increased founding rate of foreign banks. However, such an account could be provided after studying the dynamics in an alternative financial center located relatively closely to Shanghai, namely Hong Kong. The size of the foreign banking population in Hong Kong, which expanded substantially during the period in which international banks were inactive in Shanghai, had a significant impact on the re-emergence of foreign banking in Shanghai, suggesting that broader movements of the form need to be taken into account when analyzing cases of re-emergence. It was noted however that, theoretically, the explanation offered by Dobrev (2001) related to 're-legitimation' and the explanation offered here are not necessarily at odds, as earlier pointed out as well by Carroll and Teo (1998). The research presented in this dissertation has set the stage for studying both explanations simultaneously, and can be an effort worthwhile given the centrality of these processes in the study of organizational forms and their identity.

A second theoretical issue that was addressed in this dissertation is on the organizational level and concerns the early stages of firm activity, i.e. the stages that precede the entry of an organization into a population, and how these are shaped by ecological interactions. The relevance of addressing this issue lies in the fact that the way these initial stages are passed has lasting consequences for growth and survival chances at later stages (e.g. Carroll et al. 1996), but also has consequences for the general evolution of the industry (Ruef 2006). In order to shed light on these pre-entry dynamics, the transition from representative office to foreign branch was modeled in the empirical analysis. Representative offices were considered to be pre-operational ventures in this particular context, due to the nature of their activities and the fact that representative offices are precluded from providing revenue gener-

ating services. Foreign banks are required to commence their activities in China as representative offices, but after some time (after having obtained a branch license) they can start providing financial services. The moment at which this takes place was defined as the actual market entry, as the bank at this point becomes subject to a whole new set of market forces, such as price competition. The transition from representative office to branch office was modeled with the attributes of the representative office and its 'parent' bank, the length of time the representative office has spend in its pre-entry stage, as well as additional environmental factors. In the spirit of organizational ecology's fundamental premise that the environment of an organization is composed mainly of other organizations, specific attention was paid to the possible effects of the presence of representative offices that were in the same process as well as the already established branch offices. A main finding was that the transition of a representative office to entry into the population of bank branches depended strongly on the representative offices of competitors that were located within close distance (within the same city district), but not on those representative offices that were located in other parts of the city. The identity strength of an organizer thus appeared to abate rapidly as the geographical distance increases. This contrasted with the social identity of an already established organization (branch office) which clearly was present on a broader geographical scale.

A third theoretical issue that has received attention in this dissertation concerns mechanisms underlying inter-population competition. One perspective on inter-population competition holds that one population competes with another population depending on the level of concentration in the market. In highly concentrated markets where one (generalist) population occupies the center of the market and another (more specialist) population operates in the periphery of the market, competition can be limited. In such situations, the market is effectively partitioned between two populations (Carroll 1985). However, competition between these populations can increase when the market becomes less concentrated (for instance due to deregulation). The generalist population in the market center will then move towards the periphery of the market where it will engage in competition with the specialist population. In this dissertation, this process was referred to as a reversal of the resource partitioning process or 'de-partitioning' (Dobrev 2000). Another perspective on inter-population competition does not make any assumptions about the strategic orientation of each of these populations or changes in the resource distribution (as suggested by the level of concentration). This perspective simply studies

the competitive pressure each of these populations can exert, typically measured by such approximations as the number of organizations in the competing population (the density) or the aggregate size of these organizations (the population's mass). When both populations operate in the same environment the population which can exert the highest competitive pressure will, in the most extreme case, force the other population to drop out of the market. This is referred to as the 'principle of competitive exclusion' (Gause 1934). In less extreme situations (e.g. when environments are sufficiently heterogeneous), populations may find ways to co-exist, but individual organizations may still suffer from the presence of a competing population in terms of their performance. Studying competition between populations from both of these perspectives is important because it allows us to assess which variables, and under which conditions, can most effectively account for the degree of competition. Even in situations in which increased concentration of the market characterizes the evolution of an industry (as described in many studies of resource partitioning) it could be investigated to what extent simple principles of competitive exclusion (or put differently: competitive inclusion) could account for the proliferation of specialists as well. In this study, both explanations applied equally well, possibly because both were in turn products of an underlying deregulation. As deregulation policies were implemented in China after the early 1980s, the number of local banks has increased and market concentration has decreased. These developments have led to an increased pressure on foreign banks, which to date have only been able to capture a marginal share of the Chinese market.

7.2   Appraisal and Generalizability

This dissertation has demonstrated how organizational ecology can be used to shed light on aspects of China's rapidly changing economy. Ecological models build on insights from a variety of disciplines -such as sociology, economics, and biology-, generally have a longitudinal focus, and are able to cope with spatial heterogeneity, aspects that are desirable attributes in an analysis of China's complex transitional economy. Ecological models have been applied here to illuminate the re-emergence of organizational populations, pre-entry ecological dynamics, and inter-population competition. But the ecological approach is able to generate more analytical yield than can be illustrated here. In particular, ecology can provide much needed insights into such topical issues as the structural or relative inertia of Chinese enterprises

(Nee 2005), their position in a changing resource space (Krug and Pólos 2004), China's organizational diversity (cf. Grabher and Stark 1997), and the legitimacy of new organizational forms in China (Li et al. 2005). The disadvantage that other researchers might encounter in the Chinese context in terms of the potential lack of consistent and high quality data spanning over several decades (a common observation window in ecological studies) is mitigated by the fact that the post-socialist reform era itself provides an empirical context that is free from left censoring problems in the sense that many industries are either re-emerging or are starting from scratch. In this smaller observation window, spatial heterogeneity and the growing diversity of organizational forms should provide the researcher with ample opportunities to adopt an ecological approach.

The logic and findings presented here, however, may extend well beyond the domain of China and apply to other settings as well. For instance, the phenomenon of re-emerging organizational populations, as described in Chapter 4, can be observed in many other transitioning economies as well, or even in western societies where regulations may have temporarily suppressed an organizational population (as was the case in the Prohibition in the U.S. during the Interbellum and lifting the regulation then caused the re-emergence of the populations in question). Theoretically these cases of re-emergence should be governed by the same general principles as those outlined here: forms, by virtue of the codes that characterize it or the member that pertain to it, generally survive in other social systems in the meantime, serving as a platform from which organizational populations may re-emerge in a focal social system. In this respect, it would for instance be interesting to re-analyze the Bulgarian newspaper industry as studied by Dobrev (2001) from the perspective that specific codes may have survived in neighboring societies and possibly have facilitated the re-emergence of the independent newspaper population in Bulgaria (cf. Bigelow et al. 1997; Delacroix 2004; Han 1998; Hannan et al. 1995; Lomi 2000). Furthermore, in Chapter 5, an ecological model was applied to predict a social actor's likelihood from moving from pre-entry activity to becoming a fully established member of a population. Again, it is expected that the general outcomes of this model are not context specific. For example, findings related to the effect of the number of fully established organizations on the likelihood of moving to the operational fase are in line with earlier findings by Carroll and Hannan (2000) and Schoonhoven et al. (1990). Similarly, findings related to mimetic entry based on relative size are in line with those reported by Haveman (1993a). These parallel findings provide confi-

dence that similar findings can be found in other industries and countries. Clearly, the reversed resource partitioning model that was tested in Chapter 6 should be applicable to organizational dynamics in other countries as well, in particular those with transitional economies as was shown by Dobrev (2000). It is expected that models that are constructed along these lines can provide much needed insights into the industrial demography of these rapidly changing societies. It is less certain if the findings of this reversed resource partitioning model will be mirrored in 'classic' resource partitioning settings (cf. Carroll 1985). The generalizability here hinges on the degree to which the two processes are a perfect mirror image of each other, something that was questioned in Chapter 6. The extent to which the resource partitioning process can be reversed in *optima forma* remains an issue to be examined in future research.

7.3   Future Research Directions

The most obvious research strategy would be, aside from the datasets used here on Hong Kong and Shanghai, to start collecting data on foreign banks in alternative financial centers in the East Asian region. Such a data collection effort would cover earlier investigated cities such as Singapore (Carroll and Teo 1998) and Tokyo (Greve 2000, 2002; Han 1998), but also some cities in which the foreign banking population remained much smaller (and possibly did not gain legitimation to the extent that banking populations in Hong Kong and Shanghai did). There are at least two theoretical issues that could be addressed with a dataset that is constructed along these lines. The first is that it could test various aspects of 'multi-market competition' (e.g. Greve 2000; Stephan and Boeker 2001; van Witteloostuijn and van Wegberg 1992). Theoretical work in this area has yielded a great number of testable propositions that have only been scantly tested in the ecological arena. For instance, it would be interesting to see to what extent behavior such as reciprocal entry occurred, i.e. entry of a focal organization into another organization's market after a similar event took place *vice versa*. Also, investigating what the effects are of organizations meeting each other in multiple markets (so-called 'multimarket contacts') in terms of organizational learning or collusion would be a valuable area of research. A second issue that could be addressed using a dataset that includes several banking populations, is how identities of these organizational populations differ between settings. Identities get conferred to organizations and organizational

forms by relevant audiences (Hannan et al. 2005; Hsu and Hannan 2005), but these audiences may differ substantially in alternative settings. The features that make up an identity in one society, may differ substantially from those that make up an identity in other societies. While the organizational form might in principle display the same structural features across a variety of societies, its social identity may come to highlight very different aspects dependent on the perspective of the local audience. This is shown by Carroll and Swaminathan (2000) in their study of cultural identities in the U.S. brewing industry. They found that microbreweries, in contrast to mass breweries, hold an identity associated with authenticity and traditional craftsmanship. Reflecting on their results, they note that (p. 754) these identities might be completely different in a society such as Hong Kong where traditional production is instead associated with 'quality imperfections, higher costs, and inaccessibility'. Here, the larger, high-technology brewing companies were preferred. In a similar vein, I expect the foreign banking form to have a different identity in societies other than China[1]. Throughout China's modern history, foreign firms' position has always been ambiguous (Nee and Peck 1975), ranging from unwelcome agents of western imperialism to an essential element in the opening up of the national economy. In Hong Kong, the social identity of foreign banks is likely to be both less surrounded by such ambiguity and also somewhat less sharp (cf. Baron 2004) as foreign banks are seen more as an integrated element of Hong Kong's social system. Studying and mapping how such identities vary across societies is likely to enhance our understanding of the evolution of organizational forms.

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[1]It might also be that an identity for foreign banks is non-existent in other societies. In many Western European countries it can for instance be doubted whether foreign banks have been able to generate a distinct social identity, possibly because in many countries they have not been able to pass a threshold in terms of density (cf. Hannan and Carroll 1992; Hannan et al. 2005).

Appendix

This appendix contains a list of all foreign banks that ever maintained a presence in Shanghai from the founding of the first foreign bank in 1847 to the end of this study's observation window, 2004. The first column of this list indicates the name with which the bank started its venture in Shanghai. Subsequent name changes are not mentioned, but are available on request from the author. Simple name changes do not constitute an ending event.

The second column provides the starting month (SM), and the third column the starting year (SY). Three codes are used for the starting events (SE) in the fourth column. The event is coded "1" if a foreign bank independently sets up a new office in Shanghai. Starting events with code "2" are those ventures that come into existence after their parent bank merged into a new bank or was subject to an acquisition *and* the office in Shanghai changed its name[2]. Starting event "3" is assigned to joint ventures between a foreign investor and a local partner.

The next two columns give the ending month (EM) and ending year (EY). There are three codes for ending events (EE). The ending event is coded "5" if the bank failed or disbanded, is coded "6" if the bank again satisfies two conditions: its parent bank merged into a new bank or became subject to an acquisition, *and* the office in Shanghai experienced a name change, and "9" if the bank was still in existence

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[2]This second condition is added since a change in the ownership structure of the parent bank is not deemed sufficient to assume a starting event of a 'new' affiliate in Shanghai. A foreign affiliate can in principle continue functioning without being (immediately) affected by the ownership change. I interpret a subsequent name change of the Shanghai office as more indicative of a more fundamental change at the affiliate level and as such is recorded as a starting event. For example, when the National City Bank of New York (NCB) acquired a majority interest in the International Banking Corporation (IBC) on October 29, 1915 (the latter having operations in Shanghai) this is not translated into an ending event at IBC's Shanghai branch and a starting event for NCB until January 1, 1927 when also the name of the branch changed into that of the NCB. For a similar procedure see McKendrick (2001, 313 note 8), see also Carroll and Hannan (2000, 52) for a discussion on differences in demographic activity between parent banks and bank branches.

by December 31, 2004. Full names for 'starred' banks appear at the end of the appendix.

Bank Name	SM	SY	SE	EM	EY	EE
ABN AMRO Bank	9	1991	1	12	2004	9
ABSA Bank	2	1995	1	12	2004	9
Agra and Masterman's Bank		1864	2	7	1866	5
Agra and United Services Bank	5	1858	1		1864	6
Agra Bank	5	1870	1	7	1893	5
American Express Company		1918	1	12	1941	5
American Express Company		1946	1	12	1949	5
American Express Bank		1992	1	12	2004	9
American Oriental Banking Corp.		1918	1	5	1935	5
Arab Bank		1996	1	12	2004	9
Asahi Bank	4	1992	1	3	2002	5
Asia Banking Corporation	2	1919	1	2	1924	6
Asia Commercial Bank		1996	1	12	2004	9
Asiatic Banking Corporation	8	1864	1		1866	5
Australia and New Zealand Banking Group	12	1993	1	12	2004	9
Banca Commerciale Italiana		1987	1	5	2001	6
Banca di Roma	5	1995	1	12	2004	9
Banca Intesa	1	1998	2	5	2001	6
Banca Italiana per la Cina		1924	2		1945	5
Banca Nazionale del Lavoro	5	1986	1	12	2004	9
Banca Sino-Italiana	9	1920	3		1924	6
Banco Espírito Santo e Comercial de Lisboa	4	1998	1	12	2004	9
Banco Santander		1995	1	4	1999	6
Banco Santander Central Hispano	4	1999	2		2000	5
Bangkok Bank	6	1993	1	12	2004	9
PT Bank Bali	8	1997	1		2001	5
BankBoston		1997	2		2000	5
Bank Brussels Lambert		1999	1	6	2002	6
Banking Corporation of China	10	1891	3		1911	5
Bank of America N.T. and S.A.	1	1949	1	5	1951	5
Bank of America N.T. and S.A.	10	1984	1	12	2004	9
Bank of China, Japan and the Straits	7	1891	3		1902	5
Bank of Chosen	4	1918	1		1945	6
Bank of Credit and Commerce International		1989	1	7	1991	5
Bank of East Asia	4	1920	1	12	2004	9

The Bank of Fukuoka	3	1995	1	12	2004	9
Bank of Hindustan, China and Japan	2	1864	1	1	1866	5
Bank of India	12	1864	1	5	1866	5
Bank of Montreal	1	2002	1	12	2004	9
The Bank of Nagoya	4	1995	1	12	2004	9
The Bank of New York	6	1994	1	12	2004	9
Bank of Taiwan	4	1911	1	9	1945	6
Bank of Tokyo	12	1982	1	4	1996	6
The Bank of Tokyo-Mitsubishi	4	1996	2	12	2004	9
The Bank of Yokohama	12	1994	1	12	2004	9
Banque Belge pour l'Etranger Extrème Orient		1945	1		1956	5
Banque de l'Indochine		1899	1		1955	5
Banque Française de Commerce Exterieur	9	1994	1	6	1997	6
Banque Franco-Chinoise*		1925	3		1950	5
Banque Indosuez		1984	1	7	1996	6
Banque Industrielle de Chine		1913	3	6	1921	5
Banque Nationale de Paris	12	1982	1	5	2000	6
Banque Paribas		1987	1	5	2000	6
Barclays Bank	9	1991	1	12	2004	9
Bayerische Hypotheken- und Wechsel-Bank		1994	1	9	1998	6
Bayerische Hypo und Vereinsbank	9	1998	2	12	2004	9
Bayerische Landesbank Girozentrale	1	1995	1	12	2004	9
Bayerische Vereinsbank		1994	1	9	1998	6
The Bear Stearns Companies	4	1993	1	12	2004	9
Joh. Berenberg, Gossler and Co.	6	2001	1	12	2004	9
BNP Paribas	5	2000	2	12	2004	9
Calyon	4	2004	2	12	2004	9
Cassa di Risparmio Lomb.*		1996	1	1	1998	6
Cathay Bank	4	2002	1	12	2004	9
Cathay Trust Company		1902	1		1920	6
Central Bank of West India	9	1861	1		1866	5
Central Reserve Bank of China	1	1941	1		1945	6
Česká Spořitelna	4	1998	1		2000	5
Chartered Bank of India, Australia, and China	8	1858	1	12	1941	5
Chartered Bank of India, Australia, and China		1945	1	1	1970	6
Chase Bank	5	1930	2	12	1941	5
Chase Bank	12	1945	1	8	1950	5
Chase Manhattan Bank	3	1993	1	11	2001	6
Chemical Bank	6	1992	2	7	1996	6
The Chiba Bank	11	1995	1	12	2004	9

Chinese-American Bank of Commerce	9	1920	3	8	1927	5
The Chugoku Bank	5	1996	1	12	2004	9
Citibank	12	1985	1	12	2004	9
Commercial Bank of India	1	1855	1	9	1866	5
The Commercial Bank of Korea	4	1993	1	1	1999	6
Commerzbank		1993	1	12	2004	9
Commonwealth Bank of Australia		1995	1	12	2004	9
Comptoir National d'Escompte de Paris		1860	1		1889	5
CoreStates Bank		1995	1	5	1998	6
Crédit Agricole Indosuez	7	1996	2	4	2004	6
Crédit Foncier pour l'Extrème Orient		1912	1		1941	5
Crédit Industriel et Commercial	10	1998	1	12	2004	9
Crédit Lyonnais		1986	1	4	2004	6
Credit Suisse		1992	1	12	2004	9
The Dai-Ichi Kangyo Bank		1985	1	4	2002	6
The Daiwa Bank	9	1985	1	12	2004	9
Dao Heng Bank		1994	1	12	2004	9
Deutsch-Asiatische Bank	1	1890	1	8	1917	5
Deutsch-Asiatische Bank		1918	1	9	1945	6
Deutsche Bank		1872	1		1875	5
Deutsche Bank	8	1995	1	12	2004	9
Deutsche Genossenschaftsbank		1995	1	12	2004	9
The Development Bank of Singapore	12	1994	1	12	2004	9
Dresdner Bank		1989	1	12	2004	9
Equitable Eastern Banking Corp.	1	1921	1	5	1930	6
Exchange Bank of China	9	1918	3	12	1928	5
The Export-Import Bank of Korea		1997	1		1998	5
Far Eastern Bank of Harbin		1925	1	9	1929	5
Finance Banking Corporation		1932	1		1940	5
First Commercial Bank		2003	1	12	2004	9
First Interstate Bank	10	1991	1	4	1993	6
First National Bank of Boston	4	1994	1		1997	6
First Sino Bank	6	1997	3	12	2004	9
First Union National Bank	5	1998	2	4	2002	6
FöreningsSparbanken	5	2001	1	12	2004	9
Fortis Bank	11	1999	2	12	2004	9
The Fuji Bank		1983	1	8	2001	6
The Fukui Bank	6	1997	1	2	1999	5
The Fukuoka City Bank	11	1995	1	2	1999	5
Generale Bank		1987	1	11	1999	6

Gota Bank	10	1985	1		1994	5
Great Eastern Bank		1922	1		1927	5
Hachijuni Bank	5	2002	1	12	2004	9
Hamburgische Landesbank Girozentrale		1999	1	12	2004	9
Hana Bank	7	1996	1	12	2004	9
Hang Seng Bank	8	1991	1	12	2004	9
Hankow Bank		1932	1		1945	5
Hanil Bank	7	1993	1	1	1999	6
Hanvit Bank	1	1999	2	12	2004	9
The Hiroshima Bank	2	1996	1	12	2004	9
The Hokuriku Bank	9	1994	1	12	2004	9
HSBC	4	1865	1	12	1941	5
HSBC	12	1945	1	12	2004	9
Hua Hsing Bank	5	1939	1	2	1941	5
Industrial Bank of Japan		1983	1	4	2002	6
ING Bank		1992	1	12	2004	9
International Bank Ningbo	12	1998	1	12	2004	9
International Bank of Paris and Shanghai	11	1992	3	12	2004	9
International Banking Corp.	5	1902	1	1	1927	6
IntesaBci	5	2001	2	12	2004	9
Istituto Bancario San Paolo di Torino		1996	1	6	1999	6
Iyo Bank	10	1994	1	12	2004	9
Joyo Bank	5	1996	1	12	2004	9
Juroku Bank	3	1993	1	12	2004	9
KBC Bank	6	1998	2	12	2004	9
Kookmin Bank	6	1995	1		2000	5
The Korea Development Bank	4	1996	1	12	2004	9
Korea Exchange Bank	10	2003	1	12	2004	9
Kredietbank	5	1993	1	6	1998	6
Krung Thai Bank	1	1997	1	1	1999	5
Landesbank Baden-Württemberg	1	1999	2	12	2004	9
Liu Chong Hing Bank		1988	1	12	2004	9
Long-Term Credit Bank of Japan		1986	1		1999	5
Manufacturers Hanover Trust Co.		1988	1	6	1992	6
Maybank	12	2000	1	12	2004	9
MeesPierson	10	1994	1		2003	6
Mercantile Bank of India, London and China	11	1854	1	12	1941	5
Mercantile Bank of India, London and China		1945	1		1952	5
Metropolitan Bank and Trust		1994	1	12	2004	9
Mitsubishi Bank	11	1917	1		1945	6

Mitsubishi Bank	6	1984	1	4	1996	6
The Mitsubishi Trust and Banking Corporation	7	1987	1	12	2004	9
Mitsui Bank	10	1917	1	4	1943	6
Mitsui Bank		1983	1	4	1990	6
Mitsui Taiyo Kobe Bank	4	1990	2	4	2001	6
Mizuho Bank	4	2002	2	12	2004	9
Monte dei Paschi di Siena		1994	1	12	2004	9
JP Morgan and Co.	3	1994	1	10	2001	6
JP Morgan Chase Bank	10	2001	2	12	2004	9
Moscow Narodny Bank		1934	1	5	1950	5
Natexis Banque	6	1997	2	6	2000	6
Natexis Banques Populaires	6	2000	2	12	2004	9
National Bank of Egypt	5	1999	1	12	2004	9
National City Bank of New York	1	1927	1	12	1941	5
National City Bank of New York	12	1945	1	8	1950	5
National Westminster Bank	10	1994	1	3	2000	6
Nederlandsche Handel-Maatschappij	2	1903	1	12	1941	5
Nederlandsche Handel-Maatschappij		1945	1		1950	5
Nederlands Indische Handelsbank	9	1920	1	12	1941	5
Nederlands Indische Handelsbank		1945	1	11	1949	5
New Oriental Banking Corp.		1885	1	6	1892	5
The Nippon Credit Bank	7	1995	1		1997	5
The Nishi Nippon Bank	11	1993	1	12	2004	9
Norddeutsche Landesbank	4	2004	1	12	2004	9
NORDEA Bank	11	2001	1	8	2003	5
Ogaki Kyoritsu Bank	12	2002	1	12	2004	9
Oriental Banking Corporation		1847	1		1884	5
Overseas Chinese Banking Corp.		1927	1	12	2004	9
Overseas Union Bank	12	1999	1	1	2002	6
Pacific Banking Corporation		1934	1		1935	5
P. and O. Banking Corporation	3	1922	1	2	1939	6
Park Union Foreign Bank. Corp.		1919	1		1922	6
Philippine National Bank		1919	1		1921	5
Po Sang Bank	3	1994	1	10	2001	6
Rabobank Nederland		1994	1	12	2004	9
N. M. Rothschild and Sons	3	1994	1	12	2004	9
Royal Bank of Canada	10	1988	1	5	1999	5
The Royal Bank of Scotland	3	2000	2	12	2004	9
Russo-Asiatic Bank	1	1910	2	9	1926	5
Russo-Chinese Bank	2	1896	3	1	1910	6

Sanpaolo IMI	6	1999	2	12	2004	9
The Sanwa Bank	4	1983	1	1	2002	6
Sassoon, E.D. Banking Company		1931	1	12	1941	5
Sassoon, E.D. Banking Company		1945	1	7	1949	5
Schroder, J. Henry, Wagg and Co	12	1994	1	12	2004	9
Seiryu Bank		1906	1		1937	5
Shanghai Bank	10	1918	1	8	1945	5
Shinhan Bank	10	2003	1	12	2004	9
The Shizuoka Bank	11	1995	1	12	2004	9
Sino-Belgian Bank	12	1902	1	12	1941	5
Sino-Scandinavian Bank	9	1921	3		1926	5
Società Coloniale Italiano		1903	1		1912	5
Société d'Epargne Franco-Chinoise		1918	1		1926	5
Société Française de Gérance*	7	1922	1		1925	5
Société Générale	8	1983	1	12	2004	9
Standard Bank London		1999	1	12	2004	9
Standard Chartered	1	1970	2	12	2004	9
State Bank of India	8	1997	1	12	2004	9
Südwestdeutsche Landesbank Girozentrale		1998	1	1	1999	6
Sumitomo Bank	11	1916	1		1945	6
Sumitomo Bank		1985	1	4	2001	6
Sumitomo Mitsui Banking Corp.	4	2001	2	12	2004	9
The Sumitomo Trust and Banking Corporation	8	1994	1	12	2004	9
Svenska Handelsbanken	12	2002	1	12	2004	9
Swiss Banking Corporation (SBC)	10	1993	1	6	1998	6
Thai Farmers Bank	9	1995	1	12	2004	9
Thrift and Investment Finance and Trust Corporation		1927	1		1930	5
The Tokai Bank		1985	1	1	2002	6
TM International Bank	6	1996	1	12	2004	9
Toyo Trust and Banking	9	1983	1	1	2002	6
Turkiye Garanti Bankasi		1999	1	12	2004	9
UBS	6	1998	2	12	2004	9
UFJ Bank	1	2002	2	12	2004	9
Underwriters Savings Bank for the Far East		1930	1	12	1941	5
Underwriters Savings Bank for the Far East		1945	1	4	1951	5
UniCredito Italiano	8	1998	1	12	2004	9
Union Bank of California	7	1999	1	12	2004	9
Union Mobilière*	2	1926	1		1941	5
United Overseas Bank	8	1998	1	12	2004	9
Vereins- und Westbank	5	1996	1	9	1998	6

Všeobecná Úverová Banka	7	1998	1	11	2001	6
Wachovia Bank	4	2002	2	12	2004	9
Westdeutsche Landesbank Girozentrale	11	1994	1	12	2004	9
Wing Hang Bank		2000	1	12	2004	9
Wing Lung Bank	9	1999	1	12	2004	9
The Yasuda Trust and Banking Corporation	6	1987	1		1999	5
Yokohama Specie Bank	5	1893	1		1945	5

Full names of foreign banks that are marked with an asterisk(*): Banque Franco-Chinoise pour le Commerce et l'Industrie; Cassa di Risparmio delle Provincie Lombarde (CARIPLO); Société Française de Gérance de la Banque Industrielle de Chine; Union Mobilière Société Française de Banque et de Placement.

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Samenvatting
(Summary in Dutch)

Het doel van dit proefschrift is om inzicht te verschaffen in enkele belangrijke vraagstukken op het gebied van de organisatie-ecologie (zie Carroll, Hannan en van Witteloostuijn 2001), te weten: 1) de her-opkomst van populaties van organisaties, 2) ecologische interacties gedurende de eerste stadia van bedrijvigheid en 3) het modelleren van concurrentie tussen populaties. Deze worden onderzocht door gebruik te maken van informatie over de vestigingen van buitenlandse banken in Shanghai.

Ten eerste is aldus geprobeerd een beter inzicht te krijgen in hoe populaties van organisaties in staat zijn om opnieuw op te komen na een periode van inactiviteit. Een beter begrip is van theoretisch belang omdat van veel van de processen die ten grondslag liggen aan her-opkomst verwacht wordt dat ze ook van belang zijn voor de algehele evolutie van organisatievormen en gevallen van her-opkomst bieden een unieke mogelijkheid om deze processen onder ongebruikelijke omstandigheden te bestuderen. Hier valt te denken aan de mate van legitimiteit van de organisatievorm en de constructie van de sociale identiteit van de organisatievorm. Maar, zoals dit proefschrift laat zien, deze kunnen niet volledig begrepen worden wanneer het sociale systeem, waarin de periode van inactiviteit en de daaropvolgende her-opkomst plaatsvindt, beschouwd wordt in afzondering van andere systemen. Het blijkt dat een breder perspectief dat rekening houdt met de organisatiedynamiek buiten het desbetreffende sociale systeem een completer beeld geeft van de verschillende aspecten van her-opkomst. Dit wordt analytisch aangetoond door het modelleren van de vestigingsvoet van buitenlandse banken in Shanghai, die substantieel is toegenomen nadat de periode van inactiviteit van deze populatie eindigde in het begin van de jaren tachtig. Wanneer alleen de populatie van buitenlandse banken in Shanghai in ogenschouw wordt genomen en de periode voorafgaand en volgend op de fase

van inactiviteit in de analyse betrokken wordt, komt men tot de conclusie dat de her-opkomst van buitenlandse banken niet gepaard ging met een hernieuwde toename in legitimiteit (zoals in het geval van Dobrev (2001)) en dat dit proces dus niet volledig het patroon in de toegenomen vestigingsvoet van buitenlandse banken kan verklaren. Een dergelijke verklaring kan wel worden gegeven na het bestuderen van de dynamiek in een alternatief financieel centrum dat relatief dichtbij Shanghai gesitueerd is, namelijk dat van Hong Kong. De grootte van de populatie van banken in Hong Kong, substantieel toegenomen gedurende de fase waarin het internationale bankwezen inactief was in Shanghai, had een significante invloed op de her-opkomst van buitenlandse banken in Shanghai, hetgeen suggereert dat bredere bewegingen van de organisatievorm bestudeerd moeten worden in de analyse van gevallen van her-opkomst. Er moet echter wel opgemerkt worden dat, theoretisch gezien, de verklaring zoals die gegeven wordt door Dobrev (2001) met betrekking tot 'her-legitimering' niet noodzakelijkerwijs in tegenstelling staat tot de verklaring zoals die hier gegeven wordt, zoals eerder ook aangegeven werd door Carroll en Teo (1998). Het onderzoek in dit proefschrift maakt de weg vrij voor een simultane bestudering van deze processen, hetgeen een waardevolle inspanning kan zijn gegeven de centraliteit van deze processen in het onderzoek naar organisatievormen en hun identiteit.

Het tweede theoretische vraagstuk dat aan bod komt in dit proefschrift is op organisatieniveau en betreft het vroege stadium van bedrijvigheid (met andere woorden het stadium dat voorafgaat aan de toetreding van een organisatie tot een populatie) en hoe deze bedrijvigheid wordt beïnvloed door ecologische interacties. Het belang van dit vraagstuk ligt in het feit dat de manier waarop deze initiële fase doorlopen wordt, blijvende consequenties heeft voor de latere groei- en overlevingskansen van de organisatie (bijv. Carroll e.a. 1996), maar ook consequenties heeft voor de algehele evolutie van de bedrijfstak (Ruef 2006). Om inzicht te krijgen in de ecologische processen tijdens de pre-toetreding fase wordt de overgang van bankvertegenwoordiging naar volledig operationeel bankkantoor gemodelleerd in de empirische analyse. Bankvertegenwoordigingen worden gezien als organisaties-in-opbouw, vanwege de aard van hun activiteiten en het feit dat het de vertegenwoordigingen nog niet is toegestaan inkomsten te genereren. Buitenlandse banken zijn verplicht hun eerste schreden in China te zetten met een vertegenwoordiging, maar na verloop van tijd (nadat de bank een licentie voor een bankkantoor heeft ontvangen) kan men financiële diensten aan gaan bieden. Het moment waarop dit gebeurd wordt

gedefiniëerd als de feitelijke markttoetreding, omdat de bank vanaf dit punt onderworpen wordt aan marktwerking en prijsconcurrentie. De overgang van vertegenwoordiging naar operationeel bankkantoor wordt gemodelleerd met kenmerken van de vertegenwoordiging en haar moederorganisatie, de tijd die de vertegenwoordiging heeft doorgebracht in de pre-toetreding fase, alsmede omgevingskenmerken. In de geest van de fundamentele aanname van de organisatie-ecologie dat de omgeving van een organisatie voornamelijk bestaat uit andere organisaties, wordt speciale aandacht geschonken aan de effecten van de aanwezigheid van andere vertegenwoordigingen en van de al operationele bankkantoren. Een belangrijke bevinding is dat de overgang van vertegenwoordigend kantoor naar de toetreding tot de populaties van operationele bankkantoren sterk afhangt van de vertegenwoordigingen van concurrenten in de dichte nabijheid (binnen hetzelfde stadsdistrict), maar niet van de vertegenwoordigingen in andere delen van de stad. De sterkte van de identiteit van een organisatie-in-opbouw neemt dus snel af als de geografische afstand toeneemt. Dit staat in contrast met de identiteit van de operationele organisatie (het bankkantoor) die duidelijk aanwezig was op een grotere geografische schaal.

Het derde theoretische vraagstuk dat aandacht krijgt in dit proefschrift heeft betrekking op de mechanismen die ten grondslag liggen aan concurrentie tussen populaties van organisaties. Eén perspectief op concurrentie tussen populaties stelt dat de mate van concurrentie tussen populaties afhangt van de concentratie in de markt. In sterk geconcentreerde markten waar een (generalistische) populatie gepositioneerd is in het marktcentrum en de andere (specialistische) populatie in de periferie van de markt, kan de concurrentie beperkt zijn. In dergelijke situaties is de markt feitelijk verdeeld tussen twee populaties (Carroll 1985). Concurrentie kan echter toenemen als de markt minder geconcentreerd wordt (bijvoorbeeld door deregulering). De generalistische populatie zal zich dan bewegen naar de periferie van de markt waar de concurrentie aangegaan wordt met de specialistische populatie. In dit proefschrift wordt in dit verband gerefereerd aan het terugdraaien van de middelenverdeling in de markt oftewel een 'de-partitionering' (Dobrev 2000). Een ander perspectief op de concurrentie tussen populaties maakt daarentegen geen aannames over de strategische oriëntatie van elk van deze populaties of veranderingen in de verdeling van middelen (zoals gesuggereerd wordt door de mate van concurrentie). Dit perspectief bestudeert simpelweg de concurrentiedruk van de ene populatie op de andere, doorgaans gemeten in termen van het aantal organisaties in de concurrerende populatie (de dichtheid) of de gesommeerde grootte van deze organisaties (de massa van

de populatie). Wanneer beide populaties in dezelfde omgeving actief zijn zal in het uiterste geval de populatie die de meeste concurrentiedruk kan uitoefenen de ander de markt doen verlaten. Dit wordt ook wel het 'principe van concurrentie-uitsluiting' genoemd (Gause 1934). In minder extreme situaties (bijvoorbeeld wanneer de omgeving voldoende heterogeen is) kunnen populaties manieren vinden om samen voort te bestaan, maar individuele organisaties kunnen mogelijk nog steeds de nadelen ondervinden van de aanwezigheid van de concurrerende populatie in termen van hun bedrijfsresultaat. Het bestuderen van de concurrentie tussen populaties vanuit beide perspectieven is van belang omdat we zo kunnen achterhalen welke variabelen onder welke condities het beste de mate van concurrentie weer kunnen geven. Zelfs in situaties waarin een toenemende marktconcentratie aan de orde is in de evolutie van een bedrijfstak (zoals beschreven in veel studies naar middelenverdeling) zou men kunnen onderzoeken in welke mate eenvoudige principes van concurrentie-uitsluiting (of anders geformuleerd: concurrentie-insluiting) ook niet de proliferatie van specialisten zou kunnen verklaren. In deze studie bleken beide verklaringen in gelijke mate toepasbaar, mogelijk omdat beiden zelf het product zijn van een onderliggende deregulering. Als gevolg van de deregulering in China die ingezet werd in het begin van de jaren tachtig is het aantal lokale banken toegenomen en is de concentratie in de markt afgenomen. Deze ontwikkelingen hebben geleid tot een toegenomen druk op de buitenlandse banken, die tot nu toe slechts een marginaal deel van de Chinese markt hebben veroverd.

Biographical Sketch

Jeroen Kuilman was born in Hoogezand-Sappemeer on May 8, 1979. He attended Collegium Marianum in Venlo, from which he received his Atheneum diploma in 1997. After high school, Jeroen went on to study International Business at the University of Maastricht. He worked at Hewlett-Packard in Germany in 2000 and was an exchange student at Keimyung University, South Korea, in 2001. In October 2001, Jeroen received his Master's degree with a thesis on headquarter-subsidiary relationships within multinational corporations.

In November 2001, Jeroen became a Ph.D. student in the Department of Organization and Personnel Management at Erasmus University Rotterdam. He traveled to Shanghai at the end of his second year as a doctoral student, to collect data on the history of the local banking industry during three months of field research. In the spring semester of 2004, Jeroen studied at Stanford University where he was trained in ecological theory and methods of analysis. During his time as a doctoral student, he presented papers at several major international conferences and seminars, such as the Annual Meeting of the Academy of Management and the Organizational Ecology Conference at the University of Durham.

Jeroen will be working as a post-doctoral researcher at RSM Erasmus University as of November 1, 2005. His main research interests include organizational ecology, industry evolution, and international business.

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