THE IMPACT OF EUROPEAN DEREGULATION ON BANKING STRATEGIES

by

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DECLARATION

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ABSTRACT

This dissertation examines which factors determine firms' adjustment to a major environmental change. The study is divided in two Parts. In Part One *I investigate whether organizational forms determine a better realized adjustment to a major environmental change. Dominant streams of strategic management literature typically analyse the determinants of firms' actions and performance at firm-level or industry-level. I extend these approaches by suggesting the relevance of an intermediate level, the organizational form level. Drawing mainly on organizational ecology, but considering a contingent inertia concept (rather than its traditional structural inertia concept) as the main mechanism and continuous performance (rather than failure rates) as the outcome, I argue that more flexible and responsive organizational forms perform better. Findings strongly support my hypotheses that selection forces favor generalist, private-owned and local firms in detriment of specialist, stateowned and foreign firms. Moreover, larger and younger firms also benefit from selection forces. In* Part Two, *I examine whether imitation influence firms' adjustment choices when they face a major environmental change and which are the consequences. Central to important theoretical perspectives in strategic management field is the idea that firms differ. In this study, I take a distinct perspective mainly based on institutional isomorphism (from institutional theory) and herd behavior models (from financial economics) and suggest that there is interfirm imitation on major strategic choices even in the presence of negative payoff externalities. I also argue that such kind of imitation should lead to negative contribution to firms' performance. Finally, I suggest that perceptions of managers and legitimacy-providers on intra-industry categorization are most relevant to determine who follows whom in a mimetic process. The findings fully support these hypotheses. The study discusses the implications of the results of both Parts and concludes that endogenous and exogenous constraints on managerial choices should attract a growing attention in future strategy research.*

CHAPTER 1

Overview

After my graduation in Economics, I spent nearly one decade working for financial institutions in Portugal. I started my financial career in a major Portuguese bank and then I moved to a senior position in a specialized financial institution, also performing some additional roles in related banking and insurance institutions. Meanwhile, I made an MBA and I began teaching in executive education programs. During that period, prior to my PhD, the Portuguese economy was shaken by a formidable set of waves of change, including those brought by the integration of the country in what is now known as the European Union. In this context, I was particularly fascinated by the dynamics of firms' adjustment attempts to this turbulent environment. Two aspects of this dynamics have specially attracted my attention: the differentiated capacity to adjust showed by some groups of firms within the competitive arena, and the patterns of imitation apparent in some major strategic decisions within this process.

In consequence, when choosing the topic for my PhD, I have quickly decided about the fundamental question that I was interested to address: *Which factors determine an organization's adjustment to a major environmental change?* This is a crucial question in the strategic management literature and involves the consideration of the relationships among the three key aspects in the field, namely, environment, strategy, and performance (Schendel, 1997). Moreover,

under this generic question, I intended to address two specific research questions, each one related to one of the two phenomena above referred.

The first phenomenon was that firms in the same industry seemed to show different degrees of adaptability when facing a major environmental change. More interesting, this differentiation seemed to be based on organizational forms (e.g., specialists versus generalists). So, for this first phenomenon, the fundamental question become:

> **Research question 1**: *Which organizational forms determine a better realized adjustment to a major environmental change?*

To address this question one has to consider a level of analysis (organizational form) that contrasts with the typical focus in the strategic management research. In this field, the determinants of strategy and performance are traditionally analyzed either at the firm-level or at the industry-level (Henderson and Mitchell, 1997). Early strategy developments (e.g., Chandler, 1962; Ansoff, 1965) as well as the dominant theoretical approach in the 1990s, the resource-based view of the firm (Wernerfelt, 1984; Barney, 1991; Grant, 1991), clearly center the analysis at the firm-level. In contrast, the industry structure theory (Porter, 1980) shift the focus towards the industry-level. In result, there is an ongoing debate in the strategy literature whether firm-level or industry-level effects are more important and, more recently, about the conditions under which one of the approaches is most appropriate (e.g., Schmalensee, 1985; Rumelt, 1991; McGahan and Porter, 1997; Mauri and Michaels, 1998). Unfortunately, these theoretical and empirical views in the strategy literature do not include the intermediate level of analysis (at

the organizational form level) that I am interested about here. So, I turned to organizational ecology to borrow a strong conceptual basis to address my first research phenomenon since this theory not only focus precisely on the organizational form level, but also emphasizes the role of inertia within its argument (and inertia and ability to adjust are of course just two sides of the same coin) [1].

Taking a strong emphasis on exogenous factors as determinants of organizational change, organizational ecology research assumed a particular relationship between environmental changes and organizational forms (Carroll, 1983:3), based on *structural inertia* mechanisms (Hannan and Freeman, 1984). Those concepts have been recently challenged by some important theoretical (Tushman and Romanelli, 1985; Winter, 1990) and empirical (Haveman, 1992) work, suggesting some kind of conceptual evolution for the field and within which the Part One of the present study might be included.

The second phenomenon that retained my interest was about the mimetic nature of many strategic moves showed by firms when attempting to respond to large environmental changes. Accordingly, for this second phenomenon the fundamental question becomes

[1] The strategy literature currently includes a branch that recently focused on an intermediate unit of analysis, the strategic group (SG) research. While this stream of research seems particularly useful to describe strategy differences, its use to explain performance differences is far more controversial (Barney and Hoskisson, 1990). Moreover, contrary to organizational ecology, SG analysis does not directly address the issue of inertia that is crucial in this study.

Research question 2: *Does imitation determine the organizations' adjustment choices when facing a major environmental change and what are the consequences?*

Research in strategic management typically addresses this type of questions assuming some kind of differentiation perspective. In fact, central to many writings in strategic management is the idea that firms differ (Schendel, 1996; Hoskisson, Hitt, Wan, and Yiu, 1999). In the field two prominent theoretical perspectives have emerged during last two decades: the industry structure view and the resource-based view of the firm (RBV). They are sometimes viewed as alternatives (Henderson and Mitchell, 1997) and sometimes as complementary (Porter, 1991). In either mode, both theories glorify the virtues of heterogeneity. The IO economics-based industry structure theory stresses the importance of differentiation to achieve and sustain competitive advantage (Porter, 1980). For the RBV, the competitive advantage stems from differences between each firms' unique bundle of resources (Wernerfelt, 1984; Barney, 1991).

However, in this study I am interested on a distinct perspective and I ask whether firms are really so different from each other. Although it is true that their resources often differ, the strategic actions of firms are often quite similar. This similarity in behaviour may mitigate firm differences rather then augmenting them, and have an adverse effect on firm performance.

In consequence, I turned to institutional theory (to borrow its *mimetic isomorphism* mechanism) and, additionally, to cognitive models, and *herd behavior* models. All these diverse views assure the richness of the theoretical

grounds of interorganizational imitation as well as its importance. I center my argument on the mimetic isomorphism concept and then incorporate some elements of those other views in a systematic manner towards a better explanation of the phenomenon. Mimetic isomorphism is particularly relevant in this context since it offers a sound explanation of the relationship between organizations' choices and their environmental conditions, especially when these conditions are changing and involve great uncertainty for decision-makers.

Research question 1 will be analyzed in Part One of this thesis, while research question 2 will be studied in Part Two. By addressing these two research questions, this study has the peculiarity of analyzing for the same setting whether the two alternative determinants of the dynamic process for achieving competitive advantage (Porter, 1991) apply: *initial conditions* and *managerial choices.*

As the research questions explicitly show, this study is particularly focused on contextual conditions characterized by fundamental change. Major environmental changes are usually associated to remarkably consequential events, such as deregulation (Smith and Grimm, 1987) or technological discontinuities (Tushman and Anderson, 1986) and are sometimes, while not necessarily, linked to discontinuous, punctuated organizational changes, as opposed to incremental organizational changes (Tushman and Romanelli, 1985). The focus on major environmental changes as the specific contextual condition in this study offers two important advantages. First, it assures high consistency with the conditions implicit or required by the theoretical views here employed. On the one hand, such conditions imply a more stringent test for the hypotheses that will be

developed in relation to the first research question since theoretical (Tushman and Romanelli, 1985) and empirical (Haveman, 1992) doubts have been recently raised about the appropriateness of the traditional ecological argument in such conditions. On the other hand, mimetic isomorphism, i.e., the institutional mechanism which will be examined to address the second research question, explicitly requires this type of external conditions. Second, by opting for a major environmental change (and namely, for a important deregulation period as explained below) we allow important comparability with a vast stream of extant research along different views on organizational or strategic change, which have made similar choice (e.g., Smith and Grimm, 1987; Zajac and Shortell, 1989; Kelly and Amburgey, 1991; Haveman, 1992; Tan and Litschert, 1994; Sinha and Noble, 1997; Silverman, Nickerson, and Freeman, 1997; Deephouse, 1999).

As referred above, deregulation process involves the kind of environmental change that can be classified as large, dramatic, or fundamental (e.g., Smith and Grimm, 1987; Zajac and Shortell, 1989). I have chosen an industry recently subject to a extraordinary process of deregulation in several parts of the world: banking. More specifically, I have selected the banking industry of an European Union (EU) country member (that is, Portugal), in the turbulent period of 1988-1996, as the research setting. In the next two sections I briefly discuss, first, what made banking so heavily regulated and, then, why and how the EU developed its vast banking deregulation program.

BANKING AND REGULATION

The banking industry is among the most regulated industries in the more developed countries in general, and in the European and US economies in particular. But, the importance of regulation on banking activities stems not only from its level, but also from its successive changes in both sides of the Atlantic.

Why banks are regulated? The answers to this fundamental question can be grouped in two contrasting theories of regulation (White, 1992). The first approach, known as the *public interest theory*, argues for the existence of relevant market failures inhibiting the industry to achieve an optimal competitive equilibrium. Consequently, there is a need for regulation to eliminate or reduce such distortions, by influencing either the structure of the industry or the (individual) bank conduct.

The second perspective, known as the *economic theory of regulation* (or *public choice theory*) follows the seminal work of George Stigler in the 1960s and 1970s (e.g., Stigler, 1971), where he raised the question about the real effects and beneficiaries of regulation, concluding (for a large number of industries) that regulation is not eliminating market failures, but in fact benefiting the existing producers. In general, public choice theory suggests that well-organized groups, as producers, will tend to benefit from regulation in detriment of larger, non-organised groups, as consumers and the general public (Winston, 1993). This happens because regulation is, accordingly to this approach, restricting competition, or in other words, making more difficult new entry. This is done, for example, with the nationwide branching regulation, the heavy capital adequacy requirements and the self-regulation (Capie and Wood, 1991; Shaked and Sutton,

1981). Moreover, this approach sustains that regulatory policy will tend to respond to pressure groups, trying a politically optimal distribution of rents across the better-organized groups (Winston, 1993).

Thus, while the former approach considers regulation as something in favor of public interest, the latter argues that regulation tends to be against the public interest. In the real world, both perspectives may be valid. As White (1992) summarizes, "we can neither assume that financial services regulation is always dealing exclusively with specific market failures problems nor that financial services regulation is solely the result of special interest groups" (idib.:184).

So, the market failures are the cornerstone of the justification for banking regulation and therefore requires a deeper analysis. There are four main market failures generally used to explain the regulation in banking: information-macro externality, market power, depositor protection, and bank runs.

Information-macro externality. One potential market failure is associated with the insolvency of one or more banks and the consequent loss of information on borrowers. These borrowers will have to go to another bank(s) and most probably will get higher interest rates on their new loans. The deteriorated rates are due to the asymmetric information problem (with a reverted direction regarding the above one) that banks face in relation to the new customer: they have insufficient knowledge about the customer/borrower. If the relative size of the bank or banks involved is quite significant, that increase in contractual interest rates, in aggregate terms, could have an important negative effect on the whole economy, namely, on investment and employment.

However, as Baltensperger and Dermine (1990) pointed out, since only large bank failures would produce that effect, if those occurrences are rare, no permanent intervention would be required. Moreover, if insolvent banks are taken over by other banks (as it happened in UK with Barings in 1994), there is no information lost at all.

Market power. Another source of market failure is asserted to be market power. There is a "supposed need to prevent banking institutions from becoming too large and accumulating excessive power, as much from a social point of view as from the perspective of the preservation of the free competition within the sector"(Canals, 1993:9).

The link between the degree of competitiveness of the industry, by one side, and its structure, by the other, is based on the so-called *structure - conduct - performance* (SCP) model (or *industrial organization* (IO) *model*). The SCP model suggests that the degree of concentration has a direct effect on the degree of competition in the industry (e.g., Molyneux and Forbes, 1995): the more concentrated the market, the lower the degree of competition (regardless the degree of efficiency of the firm)[2] . This paradigm states the following sequence of causality:

structure → conduct → performance[3]

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[2] An alternative perspective, the *efficiency hypothesis*(see Demsetz,1973), theorises that a positive relationship between profits and concentration derives not from market power but from the greater efficiency of firms with larger market shares.

[3] *Structure* refers to the degree of concentration in the industry or the number of firms within it, *conduct* to the behaviour of the firms and *performance* to the profitability of the firms.

The main conclusion of the model is that "the more firms that are in the market, the smaller the chances of anticompetitive behaviour, and the greater the chances of high-quality products and services at competitive prices" (Sinkey, 1992: 148).

Yet, some argue that there is no reason why the financial system requires any special treatment regarding this aspect, since this problem is not unique to the financial system in terms of the whole economy (Goodhart, 1995: 5).

Depositors' protection. The asymmetric information problem between depositors and banks is the source of another possible market failure. Depositors are generally unable to evaluate the quality of the assets, particularly loans, included in their bank's portfolio (Mishkin, 1995) or to determine if the value of these assets is sufficient to repay their deposits under all circumstances (Goodhart, 1991). This perhaps might not be particularly the case applied to some groups of professional, wholesale investors, but is likely to be the case for the large majority of small, possibly bad-informed depositors (Goodhart, 1995).

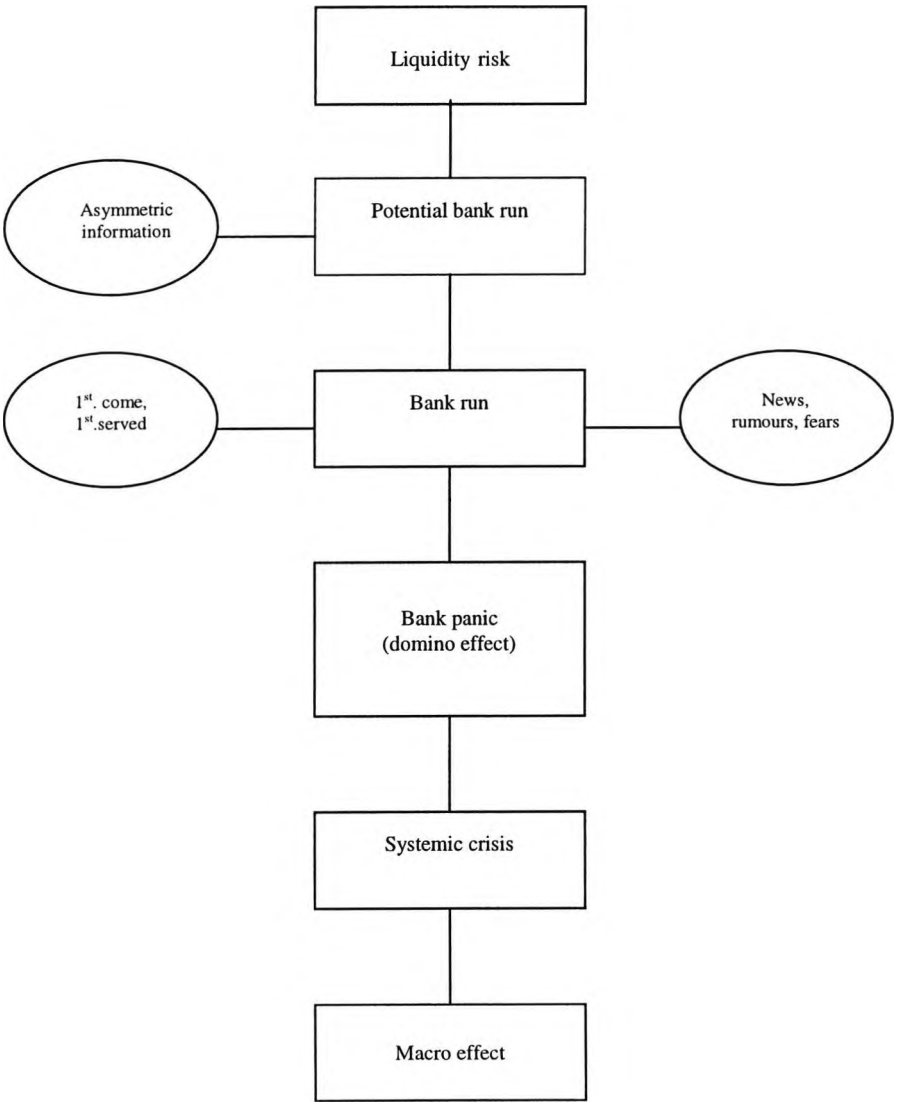
Furthermore, once the evaluation of bank risks is made, depositors can benefit from it at a very low price (Baltensperger and Dermine, 1990). Because that evaluation has a public good nature, one can argue that it should be provided by a public agency or a private rating firm, and not carried out by each depositor individually.

Systemic risk. The fact that the failure of one bank can lead to the failure of another, perhaps the collapse of the whole system, and even the collapse in the stock of money (Capie and Wood, 1991: xiv) raises the fourth possible source of

market failure and certainly the most important one. The argument is illustrated by Figure 1-1.

Figure 1-1

Macro effects of bank runs



Banks usually finance less liquid, non-marketable assets with highly liquid liabilities (Diamond and Dybvig, 1983; Postlewaite and Vives, 1987; Jackin and Bhattacharya, 1988 and Freeman, 1988). This mismatch creates a liquidity risk and a potential uncertainty from the point of view of depositors about the successful withdrawal of their funds, given their asymmetric information situation. Then, bad news, rumors, or unexplained fears about the value of a given bank' assets can trigger a run, forcing the sale at a loss of illiquid assets (Baltensperger and Dermine, 1990). So, the net realizable asset value of the bank could fall below the value of its liabilities, leading to bank insolvency if this was not already the case even before the trigger-events occur.

Anticipating that risk, some depositors will *de facto* withdraw their funds, causing a *bank run*, as termed by Diamond and Dybvig (1983). This can occur because of the "first come, first served" principle (or "sequential service constraint") associated to bank deposits: nobody want to be the last one. In fact, no problem would occur if each depositor believes that others would not withdraw. Yet, as Bhattacharya and Thakor (1993: 24) note, 'if the agent [depositor] believes others will withdraw prematurely, then the sequential service constraint provides an incentive to be early to withdraw; a bank run emerges (...)'. Such incentive creates a market failure.

Worst, the failure of one bank may motivate investors to generalize the doubts and began questioning the solvency of other banks. This could induce a run on those banks. Even healthy institutions could be affected (the *domino effect*). This is also called a *bank panic*, which could generate a *systemic crisis* in the whole industry.

The reasons why this situation may provide special concern are the same that justify the common wisdom that 'banks are special': the social value associated with some functions carried out by banks exceeds their private value (Gual and Neven, 1992: 3). In fact, there are three major rules performed by banks that have been crucial in our economies: as the repository of liquidity, as the core payment mechanism, and as the principal source of finance in the economy (George, 1997: 114). The assumption that the interruption of these services from banks is severely costly for the whole economy has largely justified the existence of significant regulation upon banking industries (Canals, 1993: 8; Saunders, 1997: 55).

However, there still is an ongoing academic debate about the need (and the degree) of the banking regulation. Some, the 'free banking' supporters, still argue that there is no reason to consider the financial services sector as an exception to the general rule that free trade is best and, accordingly, defend that the financial system should be deregulated and the central banks dissolved (Dowd, 1996). In the opposite extreme, others contend that the new financial environment requires improved regulation, not deregulation, adding that free bankers and others do not recognize that the banking system is far more unstable than they assume (Dow, 1996). Both sides believe that historical and empirical evidence supports their arguments. In an intermediate position, others argue for less regulation and more market discipline, while acknowledging the need for some prudential regulation (e.g., capital adequacy requirements) and accepting the existence of government-owned central banks, although they believe private central bankers would be less harmful to economies (Benston and Kaufman, 1996).

In sum, the existence of a higher or lower level of regulation in banking systems has depended (and certainly will) on the prevailing balance point between these diverse theoretical positions (e.g., Winston, 1993).

The EU deregulation

As the previous section suggests, if there is any reasonable consensus regarding the rationale for banking regulation that would certainly be about *systemic risk,* and, with a less degree, *depositors protection.* Accordingly, the objectives of regulation should be to protect the economy against systemic risk and to offer a partial protection to depositors [4, 5]. These objectives are exactly those usually acknowledged by central bankers (Bank of England, 1997: 107).

In practice, banking regulation might have exceeded by far their 'justifiable' scope. Much national regulations become simply protectionist and inefficient; in consequence, an international harmonization might would served as an excuse to reduce national protectionist provisions, limit the tendency of national governments to subsidize their domestic financial services, and cut transactions costs (White, 1994). That is, in this context, international harmonization might would prompt a large-scale efficiency improvement in the involved banking industries.

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[4] The protection to depositors can be viewed either as an objective *per se* or as an intermediate goal to achieve the main objective (protection against systemic risk) given the characteristics of bank runs and domino effects.

[5] The protection should be only partial due to moral hazard consequences (e.g., Saunders, 1997: 367).

The recent deregulation process in the European Union (EU) banking industry is an example of that international harmonization put in practice. The main catalyst of this deregulation has been the 1987 Single Market Act (Mullineux, 1992). Researchers have anticipated a strong impact of the deregulation process on banking industry (Centre for Business Strategy, 1989; de Carmoy, 1990; Gardener, 1990, 1992, 1995; Gardener and Molyneux, 1990; Dixon, 1991; Canals, 1993; Revell, 1994). European bankers also corroborate these views choosing the supranational regulatory developments as the most important force of change to affect financial industry, according to a large survey performed in the early 1990s (Arthur Andersen and Andersen Consulting, 1993).

I defined the period 1988-1996 as the time frame for this framework. A dramatic change had occurred in the EU banking industry in the period considered. Before, the EU national banking markets were almost fully protected with the need of a discretionary authorization to operate in each other member-state, significant differences in national regulations, and restrictions on capital flows. A set of very important regulatory changes was adopted, opening dramatically those markets. The whole process should be designated as a "deregulation process" in *lato sensu* since it includes both 'deregulation' in *stricto sensu* and 're-regulation', while the overall direction was towards liberalization (Sinkey, 1992: 10; Gardener, 1992: 114). In fact, the EU regulatory changes during this period can be divided in two parts: a *stricto sensu* 'economic' deregulation, and a 'safety and soundness' and 'information' re-regulation (Appendix A presents a detailed analysis of this process). As the concerns about the stability of the banking system are particularly relevant in periods of strict deregulation (Baltensperger and Dermine, 1993), there

is a common wisdom that 'economic' deregulation should be followed by a stronger 'safety and soundness' re-regulation (White, 1992). This was exactly the case in the EU regulatory reforms [6].

The most important step towards an internal (banking) market was taken through the 1989 Second Banking Directive. This Directive establishes the *single license* principle that enables any bank authorized in a EU country to automatically carry on a wide range of banking activities in any other EU country. Simultaneously, two other Directives have been issued: the 1989 Own Funds Directive, which has harmonized the definition of the eligible elements of banks' own funds, and the 1989 Solvency Ratio Directive, which specified the rules which determines the minimal amount of capital a bank ought to have given the amount and type of their assets and off-balance sheet items. One year before was issued the Directive laying down the full liberalization of capital flows within the EU, a pre-condition for a full impact of the harmonization of national regulations. Two additional Directives with particular relevance for banking activities were published. The 1992 Large Exposures Directive imposed the limits of the major credit exposures incurred by banks, thus defining the minimum levels of credit diversification. The 1994 Deposit Guarantee Schemes Directive established a deposit insurance system, which has effects on the stability of the banking system and on the interconnected behavior of banks and their customers (via moral hazard effects).

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[6] Indeed, it is not by accident that the Second Banking Directive (the cornerstone of the liberalization process as explained below and in the Appendix A) explicitly refers that this directive can only be implemented *simultaneously* with the directives related to own funds and solvency ratios).

In sum, all these profound changes in the contextual and operating conditions of the industry opened new windows of opportunities but also raise some important threats. New rules of competition were established. Overall, it created an enormous environmental change involving great uncertainty to decision-makers.

Contributions of the thesis

This study provides several theoretical and empirical contributions. In Part One, there are two main contributions. First, it extends the dominant view in the strategy field about the determinants of strategy and performance, usually analysed either at firm-level or industry-level, by suggesting the relevance of an intermediate level of analysis, the organizational form. Second, the study expands selection perspective by providing a new selection approach (selective performance) and a modified role of inertia (contingent inertia concept) in order to reassess which organizational forms or characteristics are selected for or against when a major environmental change occurs. Additionally, Part One offers some other insights. It contributes for the acknowledgement of the importance of inertial mechanisms on firms' strategy and performance, by including one type of non-managerial constrains on strategic change, that is, organizational forms. It also provides empirical evidence for firms' flexibility features which importance has been suggested in recent strategic flexibility literature. Finally, theoretical developments and empirical results within Part One suggest the usefulness of a dual selection model (*relative* versus *absolute* selection) where survival (the outcome of the absolute selection) might be modeled in function of both

continuous performance (the outcome of relative selection) and organizational buffers.

Part Two extends interfirm imitation theories in three ways. First, it demonstrates the existence of mimetic behavior in major strategic choices even in presence of negative payoff externalities, extending previous evidence on imitation with either positive or 'no clear' payoff externalities. Second, it provides evidence that strategic imitation with negative payoff externalities leads to negative contributions for firms' performance. Third, it extends previous works by offering a more generic framework, based on cognitive perspectives and linked to legitimacy dynamics, to explain who follows whom in a mimetic process. More generically, Part Two provides empirical evidence with specific relevance for dominant perspectives in the strategy literature which stress the virtues of strategic heterogeneity: first, it shows that a complete theoretical explanation of business world actions should include imitation strategies; second, it corroborates the normative branch of heterogeneity theories by showing evidence that imitation leads to negative contributions for firms performance.

Previous strategy studies suggested that explanations about the relative success of firms over time might be associated either to *initial conditions* and *managerial choices*. The overall contribution of this dissertation is to suggest that both organizational forms and managerial cognitive structures (that influence imitation) should be considered in the *initial conditions* set. Moreover, regarding the two common views on strategic change – environment relations, the study suggests that both selection and adaptation views are relevant and complementary.

PART ONE

THE IMPACT OF EUROPEAN DEREGULATION ON BANKING STRATEGIES: THE IMPORTANCE OF ORGANIZATIONAL FORMS

CHAPTER 2

Introduction to Part One

Which organizational forms determine organizational adjustment and performance when a major environmental change occurs? This is an intriguing question for the strategy literature since the determinants of strategy and performance are typically analyzed in the field either at the firm-level or at the industry-level (Henderson and Mitchell, 1997).

Pioneering strategy work and recent dominant theoretical approach, the resource-based view of the firm, set the analysis at firm-level. Chandler's (1962) *Strategy and Structure* pointed out that structure follows strategy, that is, organizational structure should differ according the strategic pursuits of each firm. His observation that firms tend to create different divisions when diversify their business scope was based on studies on Du Point and General Motors in 1920s. Ansoff's (1965) *Corporate Strategy*, also directed the attention towards firm-level. Each firm, he asserted, should conceive its own strategy, defined by four components (product-market scope, growth direction, competitive advantage, and synergy), and strategy was regarded as a particularly relevant issue for firm performance. He emphasized the importance of firm-specific competences by stressing, for example, the need to associate strategic moves into new product-markets to the outstanding competences already possessed by the firm or to some

competences that the firm lacks and needs to acquire through that move (1962:111).

More recently, the resource-based view of the firm (RBV) also stressed firm-specific factors as the primary determinants of strategy and performance. More specifically, this perspective argues for the crucial importance of resources in shaping its strategy and profitability (Wernerfelt, 1984). While the term 'resources' is sometimes used in a broad sense, e.g. including capabilities (Barney, 1991), some prefer to distinguish resources from capabilities, while ascribing importance to both type of factors. *Resources* are then 'stocks of available factors that are owned or controlled by the firm" and *capabilities* are seen as "firm's capacity to deploy resources" towards a desired end (Amit and Shoemaker, 1993: 35). As stated by Grant, "[w]hile resources are the source of a firm's capabilities, capabilities are the source of its competitive advantage" (1991:119). The first category includes financial resources, physical resources, human resources, technological resources, reputation, and organizational resources (Grant, 1991), while examples of capabilities include highly reliable services, manufacturing flexibility, or responsiveness to market trends (Amit and Shoemaker, 1993). RBV suggests that sources of competitive advantage are firm's resources and capabilities that are valuable, rare, imperfectly imitable, and non-substitutable (Barney, 1991). Firms generate above-normal rates of return (i.e., rents) if and only if they are able to sustain the competitive advantage provided by its resources and capabilities, and if simultaneously they are able to appropriate

the rents yielded by these resources and capabilities (Grant, 1991) [7].

So, for the resource-based view of the firm, firm's unique resources and idiosyncratic capabilities drive both strategy and performance: the *firm* is the adequate unit of analysis. A contrasting view is proposed *by industry structure perspective*. Based on industrial organization (IO) economics tradition, this line of research focus on *industry* as the unit of analysis. Early studies attempted to show the relationship between industry characteristics (as concentration levels or entry barriers) and firm's profitability (Bain, 1956), in line with the so-called Bain/Mason paradigm (Mason, 1939; Bain, 1956, 1968) or structure-conduct-performance (S-C-P) paradigm. According to this view, a firm's performance is mainly explained by its industry context: structure drives conduct, and conduct drives performance; as conduct is somehow deterministically shaped by structure, it is said that performance is a function of industry structure. The most important contribution from this view to the strategy field was perhaps brought by Michael Porter. His Five Forces Model provided a very influential framework that also stressed the importance of industry structure (Porter, 1980). This model suggests that the collective strength of five basic competitive forces (threat of entry, threat of substitution, bargaining power of buyers, bargaining power of suppliers, and rivalry among current competitors) determines the potential profitability in the industry. The higher the global strength of these forces in a given industry, the fiercest will be the competition and, in consequence, the closer the industry's

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[7] Grant suggests four characteristics of resources and capabilities crucial to the sustainability of competitive advantage: durability, transparency, transferability and replicability (1991: 124). He stresses that appropriability is particularly important in situations where property rights are somehow ambiguous

profitability will be to the economists' risk-adjusted free market return (Porter, 1980: 5). While some branches of this view also recognize the existence of firm-specific effects, the main emphasis is put on the importance of industry forces, which are viewed by this perspective as the primary determinants of firms profitability [8].

In consequence of these two different approaches, there is an ongoing debate in the strategy literature regarding the relative importance of *firm* and *industry* effects on firm's strategy and performance (Schmalensee, 1985; Rumelt, 1991; McGahan and Porter, 1997; Dewitt, 1998; Mauri and Michaels, 1998). Schmalensee (1985) found that industry effects were the most relevant factor. In his pioneering work, he decomposed the total variance of return on assets for U.S. manufacturing in one single year into industry, corporate (which he designated by "firm") and market-share components. The industry effects accounted for nearly 20 percent of variation in business-unit rates of return, and both market share and corporate effects were found negligible. He concluded that his findings supported "the classical focus on industry-level analysis" (1985: 349). Rumelt's (1991) study reached a contrasting conclusion based on a study for U.S. manufacturing firms in a four-year period and considering all business unit effects and not only market-share effects. The four-year period allowed him to distinguish between stable and fluctuating effects. He found that the main factor is attributable to business-unit effects (which explains 44 or 46 percent of the total variation in

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(1991: 128).

profitability – return on assets – dependent on whether or not small firms were included in the sample). Stable industry effects have accounted for only 8 (or 4) percent of the total variation, while corporate effects were negligible (2 or 1 percent, respectively). McGahan and Porter's (1997) research extended these efforts by covering all sectors in the U.S. economy (excluding the financial sector), by using a different statistical approach and by using 'business-segment' data instead of 'business-unit' data chosen by Rumelt's (1991) work. Their findings show that stable industry effects are more important then ackowledged by Rumelt's results (explaining 19 percent of total variance in profitability, i.e., return on assets), but even so less relevant than business-specific effects (which accounts for 32 percent). Their study confirmed the small stable corporate effects (4 percent). Perhaps more important, this study found that the relative importance of industry and firm effects is industry-contingent: in the service sector, industry effects (42 percent of the total) were more important than business segments (33 percent), while in the manufacturing sector business segment effect (35 percent) clearly dominates the industry effects (11 percent). More recently, Mauri and Michaels (1998) expanded this line of research by analyzing the relative importance of firm and industry effects not only on profitability (return on assets) but also on strategy. Performing their analysis for a sample of nondiversified US firms in 69 industries, for 2 different (while overlapping) periods, 5 and 15 years, they found that firm effects were predominant to explain total variance in

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[8] In fact, this view also acknowledge the existence of firms profitability differentials within a given industry, namely due to diverse strategic positions where firms are differently exposed to the five competitive forces.

profitability (about 37 percent of total variance for the 5 years period and about 25 percent for the 15 years period). However, industry effects were more important to explain variation in strategy, namely technology and marketing strategies.

So, dominant streams of strategic management research have proposed to find the determinants of strategy and performance either at the firm or at the industry level. Results suggest that both firm and industry effects are important.

In this study, I attempt to expand this strategy research by suggesting the relevance of an intermediate level of analysis, the organizational form. Since this unit of analysis has received little attention in the strategy literature regarding the profitability differentials explanations, I turned to organizational ecology to borrow a strong conceptual basis to address my research question 'Which organizational forms determine organizational adjustment and performance when a major environmental change occurs?'. Organizational ecology seems particularly suitable for this study for three main reasons. First, it directly addresses the importance of organizational forms in explaining organizational outcome. Second, this theory has developed a specific body of inertial mechanisms to explain the predicted impact of strategy and organizational behavior on organizational outcomes. This is especially relevant here since my research question directs attention towards organizational adjustment in particular contextual circumstances. Third, organizational ecology spotlights the relevance of a more deterministic, exogenous-based view, which is much interesting here given not only my interest on studying the influence of environmental conditions, but also given some parallelism that can be traced with the industry structure

view, and in contrast with more usual strategy streams of strategy research.

The relationship between environmental conditions and organizational evolution has been central in the *organizational ecology* research agenda (e.g., Amburgey and Rao, 1996). Facing the question of how organizations evolve, this theory stresses the decisive importance of environments and organizational forms in detriment of managerial choices. It assumes that managerial decisions are severely restricted by limits imposed by environments and by organizational ability to adapt. Strategic choice is viewed, at best, as "a luxury open only to the largest and most powerful organizations" (Aldrich, 1979: 160). In short, through selection pressures, "as environments shift, some organizational forms become obsolete and others become more viable" (Carroll, 1988: 3). So, adaptation to environmental conditions occurs at the organizational form level, which ecology theorists often define as the "population" level. (There has been sometimes in the organizational ecology literature some confusion due to the use of organizational form and "population" as interchangeable terms. As Young (1988:2-4) first recognized, by "populations" Hannan and Freeman (1977) seem to mean "species" of organizations, that is, organizational forms).

The obsolescence or viability has been analysed through what might be called the *survival criterion*. The survival criterion is as old as the organizational ecology. According to this view, those organizations that match the external environmental conditions will be positively selected and survive, while others will fail or randomly change. This elimination of entire sets of organizations reflects the purest form of environmental selection coined by Aldrich (1979) as *selective*

survival.

However, following the debate in the strategic management literature about industry and firm effects, my interest here is on the significance of organizational forms on continuous performance criteria, namely profitability, not on survival criterion. This is an important issue since recent studies in organizational ecology tradition showed sharp discrepancies in the conclusions when using as the focal organizational outcome either survival/failure or financial performance (Haveman, 1992; Henderson, 1999).

Haveman's (1992) study on savings and loan industry in California in the late 70s and mid-80s examined the impact of changes in strategic investment categories on performance and on survival chances. She concluded that "the direction of change affects financial performance but not survival chance" (1992: 72). This type of inconsistency between using survival or continuous, relative performance criterion was also recently showed by Henderson's (1999) paper. When analysing how firms' outcome vary with age (considering certain types of strategies as moderating factors), Henderson found that the impact was in one direction when using failure rates (i.e., increase failure rates) and in the opposite direction when using a continuous performance variable (i.e., increase sales growth).

Accordingly, to explain the relationships among organizational forms, organizational adjustments and profitability there is a need to reassess the traditional ecology argument since the mere transposition of arguments and empirical evidence from studies on survival criterion to studies on continuous, relative performance criteria would clearly be not satisfactory.

Only recently research in organizational ecology began to develop both theory building and empirical tests of ecological models using continuous performance as the dependent variable (Haveman, 1992; Barnett, Greve, and Park, 1994; Greve, 1999; Henderson, 1999). Only some of these studies began to use profitability as the dependent variable (Haveman, 1992; Barnett, Greve, and Park, 1994), but none seemed to directly have addressed yet the impact of organizational forms on profitability.

This study attempts to offer a contribution in three main areas. First, for the strategy field, it conceptually suggests and empirically tests the relevance of an intermediate level of analysis, organizational form, to be used to explain strategy and performance, going beyond the traditional firm and industry effects. Furthermore, it also provides an insight in one concept often missed in the strategic management literature, that is, inertia (Rumelt, Schendel, and Teece 1994: 532). Second, it extends organizational ecology research by presenting a first attempt to assess both conceptually and empirically the impact of selection forces on major organizational forms using financial performance as the dependent variable and considering a contingent view of inertia. Third, it supports the reconciliation of strategic management and organization theory predictions about the adaptive nature of strategic and organizational change (in response to environmental changes) through the simultaneous use of financial performance as the organizational outcome to be explained and contingent inertia as the intermediating mechanism.

This Part One is organized as follows. In Chapter 3, I review the organizational

ecology theory and I develop the theoretical arguments that lead to specific hypotheses. In Chapter 4, I present the research design, which includes the description of the research setting, the data, the variables and the corresponding measures, and the econometric method. In Chapter 5, I present the empirical results, and in Chapter 6 I discuss the findings and their implications.

CHAPTER 3

Theory

Organizational Ecology

The organizational ecology theory illustrates one important attempt to explain the process of organizational change, namely, to explain how organizations are created, survive, fail or are replicated [9]. Based on the seminal works of Hannan and Freeman (1977) and Aldrich (1979), this view argued that adaptation of organizational structures to environments occurs essentially at the *population* level, either through the replacement of old organizational *forms* by new ones or by the modification of existing forms.

The organizational ecology model is based on the natural selection model of biological ecology, where a three-stage process characterizes the change in living systems: variation, selection, and retention. The same stages are considered relevant to explain the organizational change process.

Variation exists both between and within organizations. Such variations may be either *planned* (the result of deliberate actions of individual organizations and their members) or *unplanned*. What organizational ecologists argue is that,

although the model is indifferent to the source of variation, unplanned variations are expected to be predominant (Aldrich, 1979: 28), given the strong constrains suffered by managers in their strategic choices. Such constrains may be *internal,* as physical infrastructure or human resources, or *external*, as economic and legal barriers to entry and exit.

Selection is environment - contingent: organizations with features that match current environmental conditions are selected and will survive; organizations that don't fit their environment fail or change. In respect to this possibility of change, organizational ecologists stress the point that selection models apply when the match between action and environmental outcomes are random on the average (Hannan and Freeman, 1984), circumstances which they assume as predominant.

Finally, *retention* is defined as the preservation of selected organizational forms or of features of organizations.

Ecological research has used selection mechanisms mainly to study organizational failure, while using variation mechanisms to analyse organizational foundings and, more recently, organizational change; retention mechanisms have been rarely used (Swaminathan, 1996).

One crucial assumption of the ecology theory, as initially stated, was that strong inertial forces characterize individual organizations constraining their change

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[9] We follow here the distinction made by Winter: "the term *population ecology* references, in particular, the 'early Hannan and Freeman' viewpoint, whereas *organizational ecology* refers to the broader and more eclectic school of thought that combines work at the organization, population, and community levels of analysis" (1990: 285).

(Hannan and Freeman, 1977; Aldrich, 1979; Hannan and Freeman, 1984). The contribution of population ecology theories to explain organizational change depended critically on the relative importance of these inertial forces.

Hannan and Freeman (1984) claimed that selection favors organizations characterized by high inertia; that is, inertia is a consequence of the ecological - evolutionary processes rather than one of their preconditions. They emphasize that the existence of structural inertia does not imply that organizational changes are absent or that organizations are always unable to make (even radical) changes in strategies and structures; it only means, they argue, that organizations are relatively slow in reacting to environmental changes.

The relative importance of inertia was also viewed as dependent on the parts of the organization or of its activities that are taken under consideration. Hannan and Freeman (1984) distinguished *core aspects* from *peripheral aspects* of the organization. The core aspects embrace the firms' 'goals', 'forms of authority', 'core technology' (including infrastructure and skills of human resources) and 'marketing strategy'; other aspects, like number and size of subunits, interlocking directorates or joint ventures, fall in the peripheral category (Hannan and freeman, 1984:156-157). Hannan and Freeman argued that inertial forces are weaker on peripheral aspects than on core features (1984: 157) and, consequently, accept that ecological- evolutionary theories are more pertinent to core aspects than to peripheral features of organizations.

The crucial argument of Hannan and Freeman (1984) that selection processes favors organizations whose structures have high inertia rests on three

assumptions. First, it is assumed that selection favors organizations with high capacity for reliable performance and high accountability. Reliability (which, according to this view, may be more important than efficiency in the eyes of potential members, investors and clients) means the degree of variability in the delivery timing and quality of products or services provided by organizations. Accountability means that organizations do have an internal system that can show the criteria and the steps used in the resource allocation process and in the organizational decision process. Second, reliability and accountability require high reproducibility of the organization's structure. That is, organization must be able to reproduce its structure (including structure of roles, authority and communication) continually, without errors or lags, from day to day. Third, high reproducibility creates strong inertial forces. Structures can be highly reproducible through processes of institutionalization and routinization (creation of standardized routines). Both processes make organizations more resistant to change (Hannan and Freeman, 1984: 152-155).

Early ecological theory argued that the degree of structural inertia varies with age, size and complexity. Higher inertia might be associated with older organizations given the assumption that reliability and accountability increase, at least initially, with age (Hannan and Freeman, 1984: 157). Size is also expected to affect inertia: only small organizations "may change strategy and structure in response to environmental changes almost as quickly as the individuals who control them" (Hannan and Freeman, 1984: 158); according, it is expected that inertia increase with size. Finally, complexity, view as patterns of links among subunits, might increase inertia. More specifically, complex structures (i.e., those characterized by

nonhierarchical set of links among subunits) should have slow response time in response to environmental changes and even the rate of change attempt may be lower given the executives knowledge of that fact [10] (Hannan and Freeman, 1984:162).

Since the seminal and most influential works of Hannan, Freeman, and Aldrich, organizational ecology have followed its own evolution in theoretical and empirical grounds.

The evolution of this theoretical view can be classified into three successive phases, according the conceptual and empirical developments occurred (Figure 3-1 and Table 3-1) [11]. In its early days, selection perspective began focusing on 'population' level events, following the analogy with bio-ecological literature. This was an important feature to differentiate this view from competing theories, but also to emphasize the "shared fate" of organizations in a given 'population' in terms of environmental vulnerability (Hannan and Freeman, 1977: 934) [12]. A second important aspect was the early choice of vital rates (entry or exit rates) as the main phenomena to study. This choice was derived from the decisive importance given to processes of organizational selection and replacement (instead of internal transformation and adaptation) to explain population change (Carroll, 1988: 2). Particular attention was directed to the effects of niche width or

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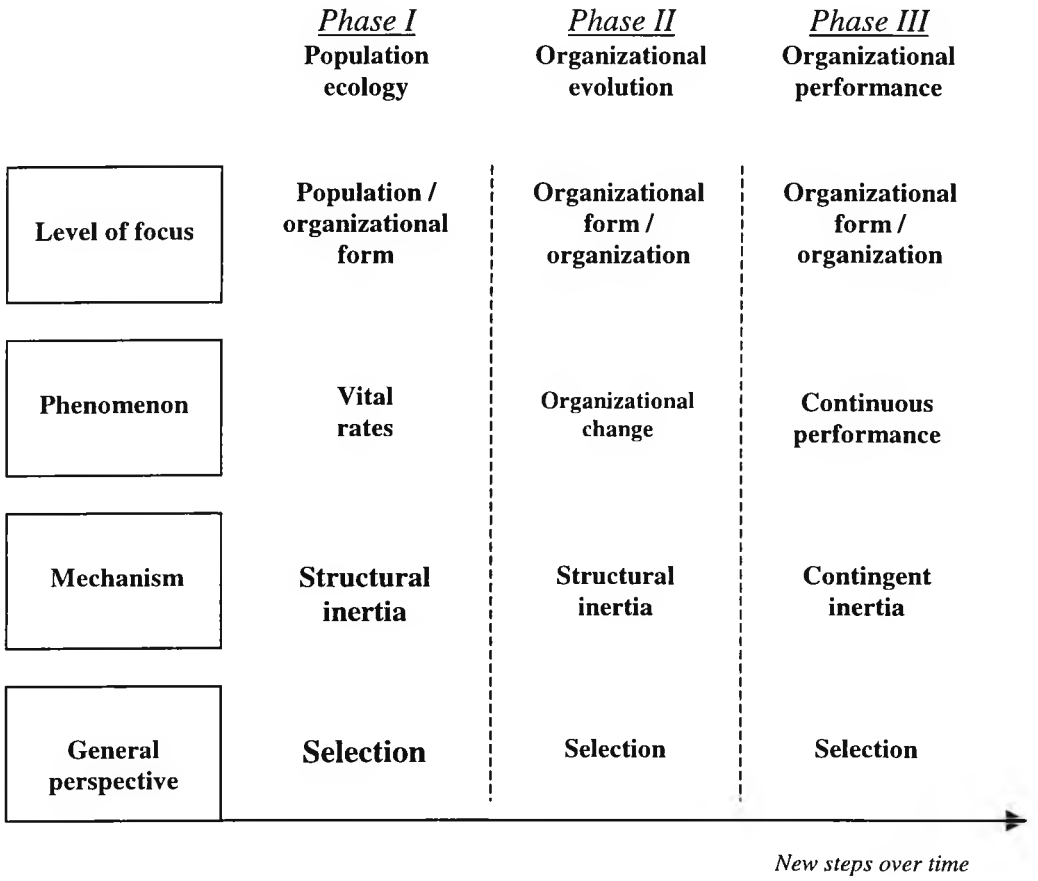
[10] A *hierarchical* set of links among subunits of the organization means that those subunits "can be clustered within units in the fashion of Chinese boxes (what mathematicians call a latice)" (Hannan and Freeman, 1984: 162).

[11] It might be noted that this framework of new phases in ecology research only intend to stress the features that characterized the broadening of this theoretical perspective, rather than expressing any substitution of some elements by others.

organizational age and size on organizational mortality. *Structural inertia* was the mechanism by which organizational forms were considered to be differentially favored by environmental forces.

Figure 3-1

Evolution in the Organizational Ecology Theory



This concept means that environmental forces favor organizations with high inertia; so, the theory predicted that organizational forms (or kinds of organizations) particularly provided by higher inertia properties would be the survivors (Hannan and Freeman, 1984). Overall, the theory stressed *selection*: the

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[12] The first aim is illustrated by this excerpt of Hannan and Freeman: " (...) once the unit of analysis is chosen there is no ambiguity in distinguishing selection from adaptation" (1977: 929).

observable changes (at the population level) in organizations were seen not as the outcome of intended and successful adaptation, i.e., endogenous forces, but rather as the result of selection of surviving forms by environmental forces, i.e., exogenous forces (Hannan and Freeman, 1977). This was the phase I (*population ecology* phase).

In the beginning of 1990s, an important shift was detected in the selection literature, and a new phase (the *organization evolution* phase) arose (Figure 3-1 and Table 3-1). The attention in the field was directed towards rates of change in organizational forms and organizations (Singh, 1990) in addition to usual vital rates. This was an important move in the ecological thinking as stressed by Amburgey and Rao: "organization-level change was, at that time, beyond the frontier of ecological theory" (1996: 1266). In consequence, selection researchers became interested on how individual organizations evolve, and not only why they die or survive. That is, while in *population ecology phase* populations of organizations were considered to change almost only in result of the entry and exit of organizations and organizational forms, within the *organizational evolution phase* it was admitted that populations may change not only in result of such entry and exit movements, but also due to both direct and indirect effects of individual organization or organizational form changes (the indirect effect stems from the assumption that organizational change influence failure rates, which by its turn affect change at *population* level). At this stage, structural inertia concept was not challenged yet.

More recently, some studies began questioning the universal validity of the

structural inertia concept (Haveman, 1992; Zajac and Kraatz, 1993), while others started attempts to explain performance differentials (Barnett, Greve, and Park, 1994; Henderson, 1999; Greve, 1999). From these studies a third phase is emerging (the *organizational performance* phase), one where researchers try to explain continuous, relative performance using a modified view of inertia (which might be called *contingent inertia*, as explained below) and still considering exogenous-based selection view as determinant in the organizational analysis.

Table 3-1
Empirical studies across the Organizational Ecology evolution

Phase I **Population ecology**	***Phase II*** **Organizational evolution**	***Phase III*** **Organizational performance**
- Carroll and Delacroix (1982)	- Singh, House, and Tucker (1986)	- Haveman (1992)
- Freeman and Hannan (1983)	- Singh, Tucker, and House (1986)	- Zajac and Kraatz (1993)
- Carroll (1984)	- Miner, Amburgey, and Stearns (1990)	- Barnett, Greve and Park (1994) *
- Carroll (1985)	- Baum and Oliver (1991)	- Henderson (1999) *
- Hannan and Freeman (1988)	- Delacroix and Swaminathan (1991)	- Greve (1999) *
- Carroll and Hannan (1989)	- Kelly and Amburgey (1991)	
- Barnett (1990)	- Amburgey, Kelly, and Barnett (1993)	
- Barnett and Amburgey (1990)	- Haveman (1993a)	
- Brüderl and Schüssler (1990)	- Makadok and Walker (1996)	
- Tucker, Singh, and Meinhard (1990)	- Lomi and Larsen (1996)	

- Levinthal (1991) - Baum and Mezias (1992) - Baum and Singh (1994a) - Baum and Singh (1994b) - Barron, West, and Hannan (1994) - Lomi (1995) - Swaminathan (1995) - Ingram and Baum (1997) - Silverman, Nickerson, and Freeman (1997)	- Ruef (1997)

(*) These studies are included here just for simplicity, but in fact they cannot be fully considered in this third phase: while they already take in consideration continuous performance as the outcome, they do not assume a contingent inertia concept. So, they perhaps should be considered as in the transition between phase II and phase III.

In the following two sections, first, I discuss the move from structural inertia to contingent inertia and then, I attempt to capture the motivations and usefulness for using continuous performance in the ecological studies.

Third phase: From structural inertia to contingent inertia

Traditional organizational ecology contended that strategic change attempts would increase the failure rate of organizations. This result stems from the fact that selection processes favors firms with high reliability of performance and high levels of accountability. Reliability and accountability require that organizational

structures be highly reproducible, feature that is associated to strong inertia. In consequence, selection favors those organizations that show higher inertia [13]. Hannan and Freeman's structural inertia theory can be summarized by their own words: changes in core aspects of organizations "are both rare and costly and seem to subject organization to greatly increased risks of death" (1984: 156).

There is a remarkably large stream of empirical research based on organizational ecology tradition (as Table 3-1 shows). However, empirical studies testing the structural inertia theory only appeared at the *organizational evolution* phase (phase II), when organizational change began being directly addressed. Till then, structural inertia was assumed as relevant but was not tested. Following the focus of early theoretical work, empirical studies on *structural inertia* (surveyed in Table 3-2) usually considered organizational death/failure/disbanding as the organizational outcome (e.g., Singh, Tucker, and House, 1986; Delacroix and Swaminathan, 1991; Kelly and Amburgey, 1991; Amburgey, Kelly, and Barnett, 1993; Ruef, 1997). However, more recently, others attempted to analyse the effects of change by using continuous performance as the organizational outcome (Haveman, 1992; Zajac and Kraatz, 1993; Greve, 1999). The research settings chosen in these studies are quite diverse, including both non-for-profit (e.g., Singh, Tucker, and House, 1986; Zajac and Kraatz, 1993) and for-profit ones (e.g., Delacroix and Swaminathan, 1991; Haveman, 1992).

Results are mixed: both beneficial and hazardous effects were detected. However,

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[13] The concept of *inertia* was defined by Hannan and Freeman (1984) in relative terms: an organization is

a closer look shows some more interesting patterns. On one hand, when *organizational failure* is the dependent variable, models seem to find more harmful (or at best, neutral) effects for changes in more "core" aspects of the organization (e.g., Singh, Tucker, and House, 1986; Amburgey, Kelly, and Barnett, 1993; Ruef, 1993) while more beneficial effects can be seen in more "peripheral" aspects (e.g., Singh, Tucker, and House, 1986; Amburgey, Kelly, and Barnett, 1993) providing partial confirmation of Hannan and Freeman (1984) predictions. On the other hand, when *continuous performance* is the outcome to be explained, change seems to be, in general, beneficial when major environmental discontinuities arise (Haveman, 1992; Zajac and Kraatz, 1993), while it might be less adaptive and eventually harmful when such extreme conditions do not occur (Greve, 1999).

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characterized by inertia when the speed of its reorganization is lower that the rate of environment change.

Table 3-2
Empirical studies on structural inertia

Author (s)	Outcome explained	Setting	Specific environmental conditions?	Type of Organizational Change(s)	Findings: Impact of change on outcome
		Organizational Evolution Phase			
Singh, Tucker and House (1986)	Organization failure	Voluntary social services organizations (Toronto, 1970-1982)	No.	- Chief executive change - Location change - Change in service areas - Change in goals - Change in sponsorship - Structural change	-Beneficial: chief executive change; location change. - Harmful: service area change; sponsor change. - No effect: goal change; structural change.
Miner, Amburgey, and Stearns (1990)	Organizational failure	Newspaper industry	Yes (some special periods controlled).	- "Prior single change" (change in previous 5 yrs. in one of these areas: newspaper content, coverage, editor in chief, language, layout, location, merger, publisher or responsible editor) - "Prior multiple change" (change in previous 5 yrs. in more than one of these areas: newspaper content, coverage, editor in chief, language, layout, location, merger, publisher or responsible editor)	- Harmful: prior single change; prior multiple changes.

Baum and Oliver (1991)	Organizational failure	Child care service organizations (Toronto, 1971-1987)	No.	- Age-range entry - Age-range exit	- Beneficial: age-range entry. - No effect: age-range exit.
Delacroix and Swaminathan (1991)	Organization failure	Wine industry (California, 1946-84)	Yes (different conditions controlled).	- Brand portfolio change - Product lines change - Land ownership change	- Beneficial: product line increases; land acquisition. - No effect: other changes.
Kelly and Amburgey (1991)	Organization failure	Certified air carrier industry (U.S., 1962-1985)	Yes (major environmental change).	- Product mix change - Diversification - Divestment on subsidiaries	- No effect: none of the cumulative changes have impact on failure rates.
Amburgey, Kelly and Barnett (1993)	Organization failure	Newspaper industry (Finland, 1771-1963)	Yes (some special periods controlled).	- Newspaper content change - Change in frequency of publication	- Complete model: - Beneficial (frequency of publication). - No effect (newspaper content). - Baseline model: - Beneficial (frequency of publication). - Harmful (newspaper content).
Makadok and Walker(1996)	Organization failure	Money market mutual funds (US, 1975-1991)	No.	Cumulative search for - size - product breadth - expense subsidization - product performance	- Beneficial: cumulative search for size. - Harmful: cumulative search for product breadth, expense subsidization, product performance.
Ruef (1997)	Organization failure	Hospital industry	Yes (dynamic	- Number of hospital	- Harmful (number of

		(California, 1980-1990)	environment).	services added or deleted	services added or deleted).

Organizational Performance Phase

Haveman (1992)	a) Organization failure b) Continuous performance - net worth - net income	Savings and loan industry (California, 1977-86)	Yes (major environmental change).	- Changes in eight types of asset categories	a)Failure: -Beneficial (3 in 8 asset categories). - No effect (5 in 8 asset categories). b)Financial performance - Beneficial (6 in 8 asset categories for net-worth; 7 in 8 for net income). - No effect (1 in 8 for net-worth). - Harmful (1 in 8 for both net-worth and net income).
Zajac and Kraatz (1993)	a) Organization failure b) Continuous performance - percentage change in enrollment ('perf. 1') - change in operating margin ('perf. 2')	Liberal arts colleges (U.S., 1971-1986)	Yes (major environmental change).	- Change from single sex to coeducational institution ('change 1') - Add graduate program ('change 2') - Add business program ('change 3')	a) Failure : impossible to estimate the model (none of the school died, 10% of total, had previously undertaken change. b) Continuous performance - Beneficial (for 'change 1' and 'perf.1' in subsequent years 1 and 2; for 'change 1' and 'perf.2' in year 2; for 'change 2' and perf.1'

					in year 1; for 'change 2' and 'perf.2' in year 1; for 'change 3 in both years and measures. - No effect (for 'change 1' and 'perf.2' for year 1; for 'change 2' and 'perf.1' in year 1; for 'change 2' and 'perf. 2' in year 2).
Greve (1999)	Continuous performance - audience market share	Radio industry (U.S., 1984-1992)	No.	3 types of radio format changes: - innovative change - entry in format programmed by satellite - other format changes	- No effect (innovative change). - Harmful ('entry in format programmed by satellite' and 'other format changes').

These patterns may have two important implications for organizational change and strategic change analysis. First, it suggests the need for different conceptual explanations for the relationship between organizational change and organizational outcome, depending whether we opt for failure or continuous performance as the organizational outcome to study. In fact, in an extreme situation, there may even be a trade-off between failure and continuous performance, as recently showed by Henderson (1999). To explain opposing age dependence results whether failure rates or continuous performance are used, he applied the logic of trade-offs between return and risk long recognized in the finance literature and particularly explained by the popular capital asset pricing model, CAPM (Sharpe, 1964; Lintner, 1965). According to the CAPM, investors and managers are in general risk-averse; to accept higher levels of risk, they require higher levels of return. Conversely, to obtain high levels of return, firms have to incur in high levels of risk, since competition tend to eliminate high return-low risk choices and managers have different risk preferences.

This logic might be pertinent for the understanding of the effects of organizational change (or strategic change). Organizational change usually represent an attempt for a better realignment of the focal organization with its environment, which if successful can significantly improve organizational performance (e.g., financial performance). However, while such change can, on average, improve financial performance, it may also increase the variation of financial performance (in both population-based cross section and individual organization-based longitudinal

perspectives), that is, may also increase the risk (at both population and organization levels). Then, change may be adaptive (particularly when large environmental changes occur) and improve the average performance, while simultaneously it may (or may not) increase the probability of failure depending on the degree of the effect of change on the variance or volatility of performance (e.g., financial performance) [14]. Henderson's (1999) results show the extreme case where some strategies produce a positive effect on a continuous performance variable and at the same time increase the risks of failure. The potential disparity between the effects of change on organizational outcome (depending on what outcome variable is considered) is corroborated by Haveman's (1992) study on structural inertia. She concluded that "the direction of changes affects financial performance but not survival chances" (1992: 72). In a similar vein, Zajac and Kraatz's (1993) found that organizational change significantly enhances continuous performance, while none of the failed organizations in the studied population had also be subject to change in the considered preceding years. In sum, this analysis suggests that studying the impact of change on organizational failure seems to be a different task from studying its impact on continuous performance variables: different lines of argument are required for each type of organizational outcome.

Second, the other pattern detected in the surveyed studies suggests that one important aspect to be considered when assessing the impact of change on

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[14] Other factors may affect the nature of the relationship between continuous performance and organizational failure. I will discuss this issue in Chapter 6.

continuous performance is the type of prevailing environmental conditions. Namely, according to the surveyed studies, change seems particularly beneficial (considering the impact on continuous performance) when organizations face significant environmental changes either in for-profit settings (Haveman, 1992) as well as in non-for-profit settings (Zajac and Kraatz, 1993). In Haveman's (1992) study drawn on savings and loan industry in California, a fundamental environmental transformation characterized the period in analysis, namely triggered by "deregulation, a punctuational change that dramatically altered the conditions of competition within the savings and loan industry and between this and other financial services industries" (1992: 55). Also Zajac and Kraatz's work was based on an industry (U.S.liberal arts colleges) subject to major market environment changes, namely in three important areas: shift in the life goals of potential students; increasing specialization in the labor market; and expected dramatic decline in the population of traditional college age students (1993: 86).

This apparent benign nature of organizational change in the presence of new environmental conditions has already been conceptually predicted by critics of the structural inertia universal validity. As a leading evolutionary economist has put it, "it is hard to believe that those firms [which have been among the industry leaders over decades of tumultuous economic and social change] are not adapting successfully to change" (Winter, 1990: 292). Also Tushman and Romanelli have noted that, "if organizations, particularly successful organizations, resist fundamental change, how do they evolve in the face of environmental change?" (1985: 202). They proposed that organizational inertia would generate decreasing performances if the organizations' strategic orientation does not match

competitive conditions or if strategic contingencies change.

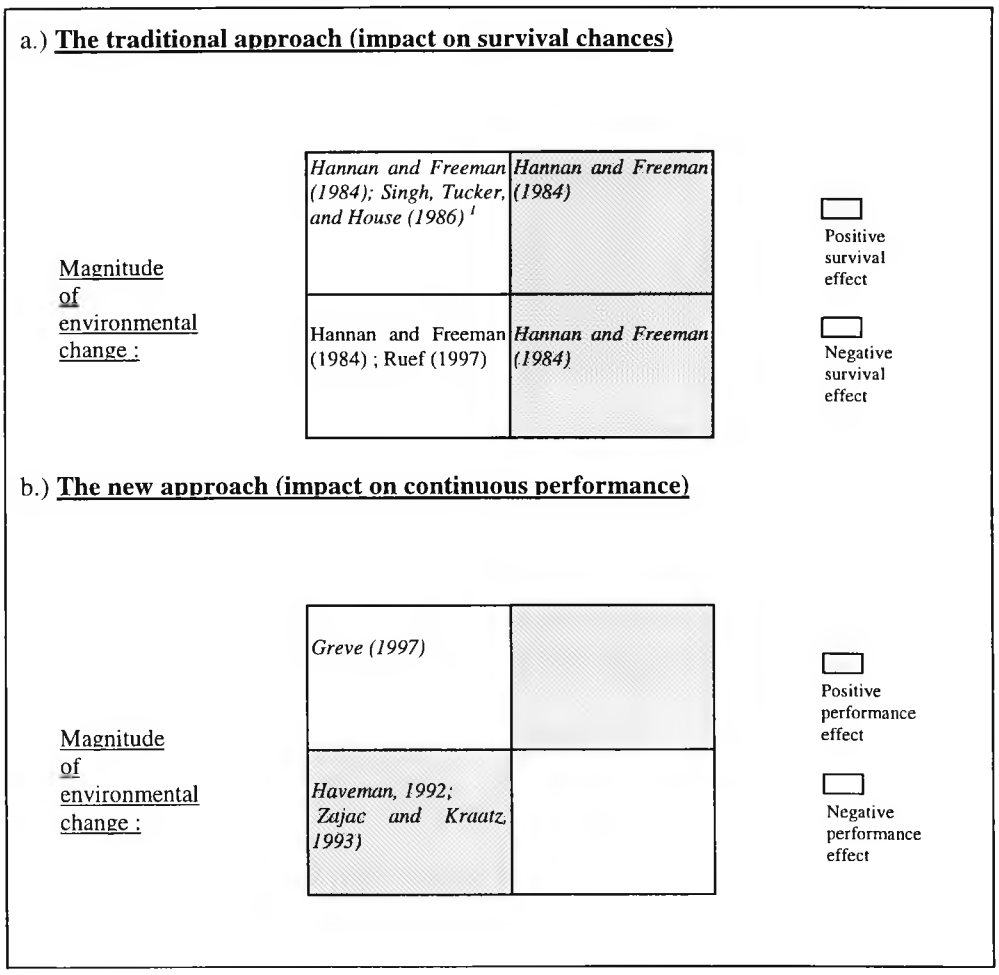
Also Haveman (1992) suggested that, contrary to the traditional organizational ecology belief, organizational change may prove beneficial when organizations face dramatic environmental shifts which threaten its own existence, but only if the changes are based on existing routines and competences. She argued that in large environmental change context strategic change may have a positive impact on performance since the gain from meeting new environmental demands is likely to be greater than the loss of operating effectiveness which Hannan and Freeman (1984) have associated to restructuring.

Thus, we may be compelled to think as Silverman, Nickerson and Freeman (1997) and others that structural inertia is likely to be of the least value and greatest disadvantage in circumstances of important changes. This reasoning can be generalized by reassessing the role of inertia in the ecological view, and by contrasting the traditional (selective survival) approach to the new approach (Figure 3-2). In the traditional view, inertia was considered to have a positive relationship with survival likelihood *regardless* the environmental conditions (Figure 3-2a). In the new perspective, the performance impact of high or low levels of organizational inertia depends crucially on the type of environmental change that affects the industry [15]. When the environmental change is relatively unimportant, inertial pressures may prove to be beneficial: reliability (i.e.,

[15] It should be noted that in this analysis I am considering inertia pressures as competing with adaptive change efforts by some of the organizations in the population; that is, I assume not only that organizational/strategic change attempts do occur, but also that the *content* of some of those attempts is adaptive to changing environment.

products/services on time and with the required quality) is expected to have a high value, and change of *core aspects* of organization should produce more restructuring costs than market benefits. So, in this situation, the impact of different levels of inertia will be similar as predicted by the *old view*: high inertia will have a positive relationship with relative performance (and, eventually, on survival rates) and low inertia will show a negative relationship.

Figure 3-2
The impact of inertia on survival and continuous performance: Organizational ecology revisited



And what if environmental conditions are changing significantly and/or rapidly? Then, inertia may prove to be a serious handicap. Very important environmental shifts mean that some of the *core aspects* (goals, strategy, structure, technology) of organizations will be no longer appropriate to current condition; reliability will not be of great value if, for example, the products or services delivered are no longer *what* customers want or *how* they want. Accordingly, when a large environmental change occurs, the performance effect of high inertia is expected to be negative, while low levels of inertia may prove beneficial (Figure 3-2b). Then, we have a *contingent inertia* concept: its effect on the dependent variable is dependent on the magnitude of the environmental change.

Third phase: From selective survival to selective performance

So, contingent inertia is a key aspect of the emerging third phase in organizational theory. A second key aspect deals with the fact that some recent studies began to explain organizational performance using continuous, relative measures instead (or in complement of) survival/failures measures (Haveman, 1992; Zajac and Kraatz, 1993; Barnett, Greve, and Park, 1994; Henderson, 1999; Greve, 1999). Haveman (1992) studied the impact of organizational change on financial performance (net worth and net income) within the savings and loan industry in California (1977-1986). Zajac and Kraatz (1993) analysed the performance consequences of strategic restructuring in the population of American liberal arts colleges (1971-1986) using two continuous performance measures (percent change in enrollment and change in operating margin). Barnett, Greve, and Park

(1994) modeled the effect of past competition (moderated by types of strategy followed) on performance for banks operating in Illinois (1987-1993). Greve (1999) analysed the implications of changes in the organization's market position on its market share for a sample of U.S. radio industry (1984-1992). Henderson (1999) examined the interactive effects of age and one type of strategy on sales growth.

The mere existence of these studies might acknowledge the relevance of using continuous, relative performance measures. However, at this stage of the evolution of the theory, it seems convenient an attempt to make explicit the usefulness of using such outcome measures for organizational ecology research.

So, why ecological models with continuous, relative performance as dependent variables are interesting? First, it allows the analysis of selection in segments of organizations where the usual form of selection analysis does not work or hardly work, as it is likely to occur, for example, with large firms and state owned companies. The *selective survival* depends upon two assumptions: the existence of a high rate of variation and the existence of a high mortality rate for organizations (Aldrich, 1979: 39). It is precisely the second assumption that poses some questions to this concept of selection. In fact, in contemporary economies there are several important factors inhibiting the exit of organizations even when they should. Those factors constitute *limits* to the selection processes. While not much attention has been given to these constraints, and to their implications, the organizational ecology literature have recognized earlier two characteristics of contemporary economies that limit the exercise of selective survival mechanisms:

the existence of very large organizations and the existence of a public sector (Aldrich, 1979). In both types of situations, organizations with such characteristics are partially or fully protected from the threat of direct elimination by failure. In the European banking industry, the setting of this study, there is a recent and illustrative example of confluence of *both* of these constraints to selection: the Crédit Lyonnais, the largest state owned bank in France met recently all the conditions to fail, but the French government had not allowed the failure, nor even its takeover by another financial institution, despite all recommendations by the European Union (The Economist, 1995, 1996; Financial Times, 1995, 1996).

Second, it enables an evaluation of differential selection pressures on organizational forms even in the presence of moderate environmental changes. This stems from the existence of less dramatic forms of selection that do not require the complete disappearance of an organization and apply to all types of organizations. Aldrich (1979: 44) was perhaps the first to point out this aspect: "particular structures or activities may be eliminated, added, or modified without the destruction of the existing form.

Third, it provides a continuum of possible degrees of positive and negative selection for a given organization, which is a very important issue to both managers and academics. One important feature in the study of organizations, in general, and of firms, in particular, is their diversity in terms of strategies and outcomes (Nelson, 1991). In fact, if differences in outcome at the organizational level are crucial, as it is for the evolutionary perspective (Winter, 1990), then a

continuous variable is required. This could also represent an important improvement in the organizational ecology theory since it can help to overcome some important criticisms, as those summarized by Winter: "Scant attention is given to the possibility that some members of the organizational populations under study may simply be better than others at making a living in the particular way characteristic of the population" (Winter, 1990: 285-286).

Selective survival is the name for the process of environmental selection when the outcome is the whether or not there is an elimination of entire organizations (Aldrich, 1979: 40). So, the process of environmental selection when the outcome is differential (continuous) performance might be called *selective performance.*

Organizational forms

My research question here is 'Which organizational forms determine organizational adjustment and performance when a major environmental change occurs?'. I will address this question by developing specific hypotheses about the relationship between organizational forms and profitability using a contingent inertia mechanism. Before, it is important to recall what *organizational forms* mean in the organizational ecology tradition.

One central tenet of organizational ecology is the existence of selection processes that favors some organizational forms against others. When an important environmental change occurs, some organizational forms are likely to fail, while others become more viable. In consequence, organizational ecology theory predicts that "the founding and mortality rates of an organizational population

depend on both its form of organization and the state of the environment" (Carroll, 1988: 3). Here, I argue that relative performance will depend on the form of organization and on the environmental conditions. So, an important question is about which forms are selected for or against. But first we have to determine what ecology theory mean by *organizational form.*

Hannan and Freeman (1977) provided several approaches to define organizational forms. First, it may be thought as "classes of organizations which are relatively homogeneous in terms of environmental vulnerability" (1977: 934). Second, it may be considered as blueprints "for organization action, for transforming inputs into outputs", where such blueprints can be inferred by analysing the formal structure of the organization, the patterns of activity, or the normative order within the organization (1977: 936). Aldrich defined organizational forms as "specific configurations of goals, boundaries, and activities" (1979: 28).

In conformity with the spirit of these considerations, I will use here the following definition of organizational forms [16]:

> *Classes of organizations that share similar ways of organizing which significantly influence their environmental vulnerability.*

The identification of such classes of organizations might be made *a priori* "using information on characteristics of organizations or on the location of social boundaries" (Hannan and Freeman, 1988: 9). This is exactly what I shall do in this

[16] In the strategy literature, organizational form is often considered in terms of organizational structure. My ecological-based definition clearly includes such concept of organization form.

study. In the following sections I identify some of these consequential classes of organizations as generalists/specialists, stateowned/private, foreign/local given their specificities in doing business and, in consequence, in their exposure to environmental changes. Interestingly, these organizational forms have received a very diverse treatment in previous literature. While generalists/specialists forms have been central and frequently used in the field, liability of foreigness was only recently proposed (Zaheer and Mosakowski, 1997), and the liability of stateownedness here proposed was almost ignored despite the early explicit classification of its main bureaucratic nature as a form (Hannan and Freeman, 1977: 937).

From one of the previous sections, it became clear that to address the link between organizational forms and profitability, as my research question requires, one couldn't simply transpose the ecological arguments used to explain survival/failure. In consequence, there is a need for a conceptual reassessment and expansion of the ecological arguments. I attempt to contribute to such task by developing specific hypotheses regarding different organizational forms (and organizational characteristics, as age and size, following the ecological tradition) according their peculiar way to respond to environmental conditions.

Generalists vs. specialists

Back to my question of which forms are favored by selection processes, we first have to determine which organizational forms should be considered. *Generalists*

and *specialists* are probably the most referred forms in the organizational ecology theory (Freeman and Hannan, 1983; Carroll, 1985; Lambkin and Day, 1989; Tucker, Singh, and Meinhard, 1990; Kelly and Amburgey, 1991; Sinha and Noble, 1997; Ruef, 1997). Their importance stems from the *niche width theory.* Based on general ecology models, Hannan and Freeman (1977) proposed this theory to explain how a particular form (generalism / specialism) is selected according certain environmental conditions. *Niche* is a resource space of *n* dimensions within which a population of organizations can survive. One characteristic of niche is its *width.* By *niche width* ecologists mean the range of environmental dimensions across which a population of organizations exists (Carroll, 1985). If populations of organizations depend on a wide range of environmental resources for survival they are called *generalists.* Therefore, *specialists* are the populations of organizations that survive within a narrow range of environmental resources. These definitions have two important types of implications for organization research. First, it means that generalists can reproduce in diverse states of environments, while specialists are suited to specific enviromental conditions (Freeman and Hannan, 1983); in other words, specialists maximize their fitness to a particular environment and take the risk of a change in the environmental conditions, while generalists chose a lower degree of fitness with the compensation of a much smaller cost from eventual environmental changes (Hannan and Freeman, 1977). Second, those definitions are assumed to parallel the distinction between organizations that compete in a variety of domains simultaneously - the generalists - and organizations that focus on one or few domains - the specialists (Carroll, 1985).

According to the theory of niche width, generalists and specialists have different chances of survival that depends on the prevailing environmental conditions. The definitions above discussed lead to an intuitive conclusion: when environment is stable, specialist should outperform generalists; but when environmental conditions shift outside the range to which specialists are suited to, then generalism may yield better chances of survival.

Applying some mathematical models of general ecology to the organizations phenomena, Hannan and Freeman (1977) demonstrated that the form selected depends on (a) the magnitude of environmental change, and (b) the frequency of environmental changes.

When the environment is stable, specialism will be optimal, regardless whether the changes are very frequent or not. When environment is clearly unstable and changes are very frequent, generalism will be optimal if changes are relatively small, while specialism will be optimal if large changes occur. When environments are unstable with large, but not very frequent changes occuring, generalism will be optimal regardless whether environmental changes are small or large. So, in general, the outcomes of the mathematical model coincide with the predictions of the intuitive analysis [17].

The niche width theory predicts that generalists are usually more flexible than specialists. Generalists have a larger range of routines and internal skills. Also

important, they usually have more slack (Freeman and Hannan, 1983: 1119). Recent research corroborates the positive association between generalism and strategic change (Barker and Duhaime, 1997). Moreover, generalists can better handle changing external conditions, namely when different organizational resources become favored by selection pressures. Consistent with the contingent view of inertia, this means that generalists might perform better than specialists when important changes occur in the external environment.

According,

> Hypothesis 1: *When a large environmental change occurs, generalist firms will be favored by* selective performance *processes; thereby, generalists will exhibit higher profitability then specialists.*

Liability of stateownedness

One important advantage of my *selective performance* approach is that it opens the possibility of studying selection mechanisms even for stateowned firms. Public sector was seen by organizational ecology as one of the limits to selection: there, one cannot expect that selection make an impact on survival (Aldrich, 1979). That is, using the traditional selective survival approach it was not possible to analyze stateowned organizations or compare them with other organizations. In contrast, as explained above, the selective performance approach does allow such

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[17] The exception is the case when environmental changes are both frequent and large. In this case, somewhat unexpectedly, specialism is the optimal state of form. The explanation advanced by Hannan and Freeman is that in such circumstances - rapid changes among very different states - generalists bear a higher cost given the need to spend most of their time and energies adjusting structure (1977: 935).

analysis. Not surprisingly, and at the best of my knowledge, there is no empirical study regarding selective processes upon stateowned firms. I shall argue here that there is a liability of stateownedness. I use some institutional-based arguments to derive this proposition for two main reasons: first, because institutional economics theory have already provided tools to analyse stateown firms; second, because the conclusions of institutional-based arguments about the characteristics of stateown firms allows a clear link to my previous discussion about the inertia's role within selective perspective.

The *new institutional economics* criticizes the traditional reluctance of economic theory in recognizing the importance of the details of organizations or what Williamson designated as "the widespread conception of the modern corporation as a *black box*" (1985: 15). He argued that organizational form matters and, consequently, urged for the need to identify the structural features of organizational forms and their economic consequences. Stateownedness, I suggest, is a good example to be studied in this context.

Economic institutionalism is focused on the constraints imposed to individual and organizational behavior, which makes it complementary to the choice-based neoclassical economic theory (North, 1990). These constraints may be either formal - as well-defined, written rules - or informal - as codes of behavior or conventions. Accordingly, North (1990) defines institutions as "the rules of the game in a society" (p. 3) and emphasizes the distinction between institutions (rules) and organizations (players). We can understand an institutional framework as something that provides a salient (external) characteristic to organizations that

operate within such framework, and simultaneously as something that constrains their evolution.

The benefit of those constraints is the reduction of uncertainty because institutions provide a "stable (but not necessarily efficient) structure to human interaction" (North, 1990: 6).

Good example are stateowned firms. Which are "the rules of the game" in this type of organizations? It is their bureaucratic system, according to Crozier's (1964) influential "The bureaucratic phenomenon". He defines a bureaucratic system of organizations as "any system of organizations when the feedback process, error-information-correction, does not function well" and the bureaucratic organization as one that "cannot correct its behavior by learning from its errors" (1964: 187).

This bureaucratic system has two crucial characteristics: completely impersonal rules and centralization. The impersonal rules intend to determine the behavior of the organization specifying in a great detail what should be done by whom in all known situations (Crozier, 1964). This provides predictability to the organizations, which is very similar to (above referred) the reliability concept of Hannan and Freeman (1984).

A second characteristic is centralization. The bureaucratic organization, to keep a climate of impersonality, have to assure that all decisions not contemplated by the rule-based behavior will be made "at a level where those who make them are protected against personal pressures from those who are affected by them"

(Crozier, 1964: 189). This implies that the decision-maker power will be more and more apart from the field where decisions will be applied, in a process that Crozier called as a "tendency to escape from reality" and which may create the so-called "ossified" organizations (Aldrich, 1979: 46) and have two mirror aspects: on the one hand, decision-makers do not have full and timely information about the organization activity and its environment; on the other hand, members of the organization which are potentially able to hold such information do not have the power to use it, nor the mechanisms to transmit it to decision-makers. This means a 'distance problem'. The 'distance problem' is exacerbated in the case of stateowned firms given that a significant part of the effective decision power remains outside the firm boundaries: in many cases, stateowned firms look like an application of the M-form, where the government (or a state agency) plays the role of the corporate headquarters and the firms 'represent' the operational divisions (Carroll et al., 1988).

The obvious consequence of these characteristics of the bureaucratic organizations is rigidity. So, my inertia-based argument about the differential performance implications on stateowned firms can be applied. That is, such rigidity may not be harmful to organizational performance (and may even be positive) when environments are stable. However, when environmental conditions shift significantly, 'distance problem' and exhaustive ruling are likely to constitute a serious disadvantage in the marketplace. This is consistent with some classical discussions regarding this kind of organizations. Burns and Stalker (1961) were among the first to point out the inadequacy of what they called "mechanistic management systems" (characterized by a bureaucratic way of doing business) to

environments where change is common. As Tushman and Romanelli concluded, in this type of organizations "while performance of routine work is efficient, the ability to handle new situations is stunted"(1985: 192). With their bureaucratic system, where the feedback process does not work (or do not work at least reasonably), these organizations are not able to recognize and respond timely and accurately the changes in external conditions and their on-going consequences on them and, therefore, are not able to benefit from organizations changes in response to those shifts in the environment. Thus, I suggest the existence of a liability of stateownedness:

> Hypothesis 2: *When a large environmental change occurs, private-owned firms will be favored by* selective performance *processes; thereby, stateowned firms will exhibit lower profitability than private-owned firms.*

Liability of foreignness

The inclusion of a liability of foreignness (i.e., higher failure rates for foreign firms) in the organization ecology theory was recently proposed (Zaheer and Mosakowski, 1997). This suggestion was based on the proposition of international business theory that foreign firms investing in a given country suffer from some disadvantages when compared with local firms.

I intend to extend here this new concept of liability of foreignness: a) by arguing for its existence also within *the selective performance* approach, and b) by establishing its theoretical link with environmental change, in a line of reasoning

consistent with my previous arguments.

First, it should be asked why after all are there systematic disadvantages to foreign firms. The reason is the existence of *local knowledge*. The concept of local knowledge can be described as the set of "information and know-how about the local economy, politics, culture and business customs of a region, information on local demands and tastes; as well as information on how to access the local labor force, distribution channels, infrastructure, raw materials and other factors required for the conduct of business in a region" (Makino and Delios, 1996).

The existence of local knowledge creates a potential disadvantage to foreign firms given that, to obtain this local knowledge, those firms must incur in significant costs which are not borne by their local rivals. As noted by Mariotti and Piscitello (1995), some of this knowledge can be captured at a low cost (as may happen with the general information regarding raw materials, market areas, transportation costs or distribution channels); other types of knowledge (as customer behavior, institutional networks or cultural habits) may be much more costly. Furthermore, foreign firms must bear an additional monitoring and control costs associated to the distance between the headquarters and the subsidiaries abroad (Mariotti and Piscitello, 1995).

The magnitude of these informational disadvantages for foreign firms depends on the amplitude of cultural and business behavior differences between their home market and the host market. The international business theory associate these differences to the concept of *psychic distance*. While several definitions of this concept exists, an eclectic (and recent) one considers it as "a firms's degree of

uncertainty about a foreign market resulting from cultural differences and other business difficulties that present barriers to learning about the market and operating there" (O'Grady and Lane, 1996: 330). The theory implies that the longer the *psychic distance* between the market/country of the parent company and the host market/country the higher will be the amount of information costs required to foreign firms.

Another determinant of the magnitude of the informational disadvantage suffered by foreign firms is experience. In general, it is argued that while the process of learning may take time, after a period of years dealing with a host country environment a foreign firm's local knowledge will be similar to that of domestic firms (Tschoegl, 1987). However, experience should not be overstated. As Makino and Delios recently contended, "the literature generally ignores the fact that some forms of local knowledge or resources are difficult to internalize by themselves through the mere accumulation of experience in a host country" (1996: 907). As examples of these local firm-specific assets, they refer capacity to negociate with local governments, ability to establish relationships with the local elite or capacity to deal with local labor force and unions.

Thus, the international business theory predicts the existence of informational asymmetry costs between foreign firms and local firms. It also predicts that the magnitude of this asymmetry depends on the *distance* between home and host country (cross section analysis) and on the amount of accumulated local experience (time series analysis). The time effect, however, may be limited given the fact that some costs are not variable with experience.

This theory explains where we might expect a liability of foreignness: in foreign firms with a relatively recent presence in host markets quite "psychically distant" from the home market. Yet, this theory does not explain whether one should expect a liability of foreignness (in terms of profitability) when a large environmental shift happens. Or, in other words (and more specifically), whether foreign firms are expected to be selected *against* in a significant environmental shift (using a selective performance approach).

This theoretical gap can be covered considering the aspects of liability of foreignness just discussed and by noting the similitude between the selection mechanisms that operate on foreign firms and those found in the stateowned firms case. In fact, while for different reasons (in respect to stateowned firms), foreign firms also tend to present a detailed system of rules and a high degree of 'distance' between their main decision-makers and the host market. More important, I argue, they tend to show these characteristics in a more prominent way than their local rivals ceteris paribus. The subsidiary nature of foreign firms implies a more comprehensive system of rules to compensate the physical and 'psychical' distances and serve as the basis for the monitoring and control activities which costs increases with 'distance' (Mariotti and Piscitello, 1995). Ceteris paribus, foreign subsidiaries do need more rules then local firms, and those rules are usually set down by people who are 'distant' from the host market.

This last aspect links to the second important selection mechanism: the 'distance' between the ultimate decision-makers and the market. The structure of headquarters - foreign subsidiaries means that the ultimate decision-makers

usually are removed from the reality of the foreign subsidiaries' markets. This distance, as argued above, is not only (and probably not mainly) a physical one. More important is the lack of embedded local knowledge that the ultimate decision-makers may show in these contexts. (It should be noted that this means not the *amount* of information they have, but essentially the degree of local understanding capacity to discern what the information they have really means in the host market context). Like in the stateowned firms case, in this situation the ultimate decision-makers do not have fully and timely understanding of what happens in the market, and those members of the organization who are potentially able to fully and timely understand do not have the power to immediately decide.

These two characteristics of foreign firms may not be particularly relevant for their relative performance when environmental conditions are quite stable. However, when an important environmental modification comes about, the more detailed ruling and the longer 'distance' in the decision-making chain are likely to be decisive in the relative (in)ability of foreign firms to change in response to those external conditions. Accordingly, and recalling the contingent inertia concept, I hypothesize:

> Hypothesis 3: *When a large environmental change occurs, local firms will be favoured by* selective performance *processes; thereby, foreign firms will exhibit lower profitability than local firms.*

Organizational characteristics

The new perspective here used has several important implications for the organizational ecology, particularly in terms of the conventional wisdom about the role of certain organization-specific characteristics on organizational outcomes. In fact, if structural inertia is *not* likely to be beneficial to profitability in some circumstances, then we should expect *a priori* some conceptual reassessment of the relationship between firm-specific characteristics which organizational ecology theory has usually related to inertia, by one side, and profitability, by another. In the following paragraphs I discuss the effects of each of these characteristics (namely, size and age) and formulate the respective hypotheses.

Size

Hannan and Freeman hypothesized that structural inertia increases with size (1984: 158). Large organizations tend to have more routines and more complex and bureaucratic structures. Routines can be seen as the "source of continuity in the behavioral patterns of organizations" (Nelson and Winter, 1982: 96) and they "define a set of things the organization is capable of doing confidently" (Nelson, 1991: 68). That is, routines increase reliability in the organization activities (Hannan and Freeman, 1984). Organizational behavior becomes predictable and unflexible (Quinn and Cameron, 1983). The same factors that make the organization more reliable make it also more resistant to change (Hannan and

Freeman, 1984). There is a well documented link between size, complexity, formalization and resistance to change (Thusman and Romanelli, 1985). Small organizations are more likely to change strategy and structure in response to environmental changes because they can be better seen as "extensions of the wills of dominant coalitions or individuals" (Hannan and Freeman, 1984: 158). Thus, in the traditional ecology view, selection favors organizations characterized by higher inertia; structural inertia increases with organizational size; survival likelihood increases with size.

However, as discussed above, when large environmental change occurs selection may *not* favor those organizations holding high inertia; on the contrary, organizational change may be beneficial at least to performance (measured by continuous variables). Then, as size is considered as an inertial factor, should we expect that size should have a negative relationship with relative performance? The answer would be *yes* if only the usual (and above mentioned) arguments were included in the analysis. Yet, I suggest that one important aspect discriminating large firms against small firms has been largely ignored in the literature (with the exception of Haveman, 1993a): organizational *slack*. If slack is included in the analysis, as I suggest it should, the expected relationship between size and relative performance should then be *positive*.

In fact, recent research found that availability of financial resources provides more options for strategic change, and that, inversely, firms without financial slack might face constraints on strategic change (Barker and Duhaime, 1997); the results of that study showed that financial slack do increase the ability to change.

Other scholars (e.g., Ginsberg and Buchholtz, 1990) have discussed some trade-off that could characterize the effect of organizational slack on change: by one hand, slack makes it easier to implement change, but, by the other hand, as contended by Cyert and March (1963), it may lower the motivation to undertake change. I accept here the existence of these contradictory aspects, but I further argue that they are contingent to the magnitude of environmental change: slack may reveal its change-inhibiting properties when environmental conditions are relatively stable; however, as long as a large environmental change develops, slack may become a change-facilitator factor.

It is here that an important difference exists between large firms and small firms: large firms generally have more financial slack than small firms (Barnett, 1997: 133). This differential slack may lead to a differential inertial behavior, with large firms more able to question, study and initiate change than smaller firms *ceteris paribus*. Accordingly, when a large environmental shift occurs, the *slack effect* on large firms may overcome the *routine effect*, producing an higher (rather than lower) probability of change for larger firms than for smaller firms. Recent studies seem to support the existence of a positive relationship between size and change, in contrast to the early ecological predictions (Kelly and Amburgey, 1991; Haveman, 1993a; Barker and Duhaime, 1997; Boeker, 1997).

Therefore, given the existence of two contrasting predictions, I turn this to an empirical question considering, thus, both competing hypotheses [18]. If the slack

[18] See Zajac and Kraatz (1993) for a recent example of this type of hypotheses formulation and testing.

effect is predominant, then:

> *Hypothesis 4: In a context of significant environmental change, larger firms will be favored by* selective performance *processes; thereby, larger firms will exhibit higher profitability than smaller firms.*

If the routine effect overweighs the slack effect, then:

> *Hypothesis 4(ALT): In a context of significant environmental change, smaller firms will be favored by* selective performance *processes; thereby, larger firms will exhibit lower profitability than smaller firms.*

Age

Age is another organization-specific characteristic which organizational ecology has traditionally predicted to be related to structural inertia. Four interconnected explanations have been developed for the relationship between organizational age and organizational mortality rates. Each explanation rely on specific assumptions about the main processes driving such complex relationship. The first and the simplest view is based on the argument that older organizations have more time to establish the relationship with third-parties, to develop the routines to operate, and to spread the organization-specific skills among their members (Hannan and Freeman, 1984). These organizations have higher reproducibility of their

structures and thus, higher reliability of performance. According to this argument, the older the organization the higher will be its survival likelihood. This effect is known in the literature as the "liability of newness" (Stinchcomb, 1965)and was corroborated by earlier research within population ecology (e.g., Carroll and Delacroix, 1982). Subsequent studies proposed more complex effects, suggesting a "liability of adolescence", where failure rates have an inverted U-shaped relationship with age (Brüderl and Schüssler, 1990). This second type of age dependence suggests that after some initial years (after founding) with very low mortality rates, organizations experience accelerating failure rates till reaching somewhere a peak point (adolescense period) and, then, start enjoying declining failure rates as they age. More recently, two additional mechanisms were suggested when several studies found a *positive* relationship between age and failure rates after controlling organizational size (e.g., Barron, West and Hannan, 1994; Silverman, Nickerson and Freeman, 1997; Hannan, 1998): one mechanism, called the "liability of senescence", mean that older organizations might have an higher probability of failure since their accumulated structures, rules and routines reduce their ability to benefit from new challenges associated to changing environments; another mechanism, the "liability of obsolescence", explain higher failure rates showed by older organizations not in result of their age itself, but due to the dual assumption that (a) environmental conditions at founding might determine in a fundamental way main organizational routines (which are hard to change), and (b) the probability of occurrence of very different environmental

conditions, in comparison to those in place at founding, increases with age, leading to a mismatch between the organization and the environment [19].

As explained above, my perspective here is different. I intend to explain profitability (not failure rates) using a contingent inertia view (not a structural inertia view). Accordingly, the importance of the above referred lines of age research to this study steams mainly from its consideration of the role of inertia. Interestingly, all those different approaches share a common belief about the main relationship between age and inertia. For instance, the 'liability of newness' stream assumes a positive relationship between age and inertia (Hannan and Freeman, 1984). As they age, organizational routines and skills diffusion are stronger, assuring high reproducibility of the organization's structures and, in consequence, their inertia. Yet, this argument is not refuted by proponents of "liability of senescence". What these authors argue is about the direction of the effect of such link between age and inertia. They suggest that older organizations might be in worst position in result of their accumulated rules, routines and structures, since these were built in the past and might be particularly inappropriate to deal with the current situation after certain environmental modifications.

So, first, it can be assumed that older organizations do have higher inertia. Second, the effects of this higher inertia on profitability, according to the contingent inertia concept, are fully consistent with the interpretation of the

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[19] Others began to test the relationship between age and failure rates by including moderating factors, as

'liability of senescence' proponents: when some important environmental shift occurs, inertia and reliability have a much lower relative value. Ability to adapt gains greater importance. Being positively related to inertia, age becomes a liability from a profitability point of view. So,

Hypothesis 5: In a context of significant environmental change, younger firms will be favored by selective performance *processes; thereby, older firms will exhibit lower profitability levels than younger firms.*

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strategy (e.g., Henderson, 1999).

CHAPTER 4

Research Design

Research Setting

This study tests the selective performance approach and the impact of selection forces on organizational forms and organizational characteristics (with a reviewed role of inertia) in the Portuguese banking industry during the period of 1988-1996. This context seems particularly suited to this study for several reasons. First, Portugal is member of the European Union, which has experienced a dramatic deregulation process in the banking industry in the period considered, i.e., a major environmental change. Second, the Portuguese banking industry was in the mid-1980s one of the most regulated in the European Union area; with the European regulatory changes that started in the late-1980s, the Portuguese banking industry was certainly one of the most deeply affected by the deregulation process and one undergoing a very fast change in very short time span (Borges, 1990). In consequence, this national market might have suffered the environmental change with a particular emphasis. Third, Portugal is one relatively small country in the European Union, fact that might also have increased the prevailing selection pressures. Fourth, the Portuguese banking sector presents a very rich research population with small versus large banks, old versus recently installed banks,

important stateowned versus fast-growing private sector banks, and foreign versus local banks. That is, a context characterized by a interesting range of organizational forms and organizational features.

Next, I provide a more detailed explanation of these reasons through a brief description of the nature and implications of the changes developed in the European banking industries in the 1988-1996 period.

The European Union (EU) undertook a set of very important regulatory changes regarding the banking industry since the late 1980s. The most important step towards an internal (banking) market was built by the 1989 Second Banking Directive. This Directive establishes the *single licence* principle that enables any bank authorised in a EU country to automatically carry on a wide range of banking activities in any other EU country. Simultaneously, other Directives have been issued: the 1988 Directive laying down the full liberalisation of capital flows (by June 1990, with special deferring periods till 1992), the 1989 Own Funds Directive, which defines the eligible items of banks' own funds, and the 1989 Solvency Ratio Directive, which specifies how to calculate the solvency ratio and establishes its minimum level (8%). All of these regulatory changes were inter-related [20]. The Second Banking Directive were passed through the national legislations, in several countries including the one I choose as the setting for this research (Portugal), in the end of 1992.

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[20] In this study, following the analyses of Baltensperger and Dermine (1993), Canals (1993) and White (1992), I consider these EU regulatory changes as integrating an overall *deregulation* (in *latu sensu*) process.

There was an almost unanimous view that these regulatory changes would have a great impact on banks' conduct and performance (Neven, 1990; Mullineux, 1992; Gardener, 1992; Canals, 1990, 1993; Molyneux et al., 1994). European bankers also corroborated these views predicting 'EC regulatory developments' as the most important force of change to affect the structure of financial markets, according a large international survey developed in the early 1990s (Arthur Andersen and Andersen Consulting, 1993).

The 1988 Directive on liberalisation of capital flows had a two-fold direct effect: first, it increased the (domestic) buyer power, by allowing residents in one EU country to make transactions in other Member States markets which were previously interdicted; second, it opened markets for other Member States' banks in terms of cross-border services, in result of the capital flows freedom.

The impact of the Second Banking Directive was likely to be much significant. The combination of home country control, single licence and the removal of any capital requirements for establishing branches abroad as defined in the Directive, altogether with the open market effect of Directive on liberalisation of capital flows might have produced the most important implication of this deregulation process, opening the door for the cross-border expansion strategies within the EU and changing the rules of competition within the different national markets.

However, unlike domestic-oriented responses, several limitations may exist against cross-border expansion intents. First, the new regulation (including the Own Funds and the Solvency Ratio Directives) make banking strategies more capital-dependent, producing two crucial indirect effects: on the one hand, it

represents a restrictive factor against growth strategies, not only affecting the pace of growth of banks pursuing expansion strategies, but also selecting which banks can pursue such strategic routes; on the other hand, this means an higher priority to profitability goals (to assure an ongoing supply of capital by shareholders and capital markets), which in many cases would also constitute a conflicting factor against growth.

Second, very few institutions were able, at least in the earlier post-deregulation years, to reach a real pan-European status, given the enormous scale of resources and the range of skills needed to follow such an option (e.g., Dixon, 1991). Yet, the mere threat of potential entry by other Member States banks could cause a major change in the way those well capitalised and more efficient banks saw their own domestic market and their domestic competitors. Thus, these banks might have tried to gain domestic market share (by organic growth or by merger and acquisitions) in anticipation to moves from other Member States' banks. In the case of banks of the largest Member States, market penetration could represent significantly more than a defensive positioning: this type of approach can be often an interim strategy to prepare a subsequent (cross-border) expansion (Henderson, 1993).

Third, persisting national differences (cultural, administrative and others) were likely to make domestic expansion easier than cross-border expansion (e.g., Canals, 1990, 1993).

Fourth, the adoption of defensive strategies in response to the deregulation might have been especially relevant for the smaller banks in the largest EU countries and

the majority of banks in the smallest countries. The situation faced by these banks could be illustrated with the case of Portuguese banks. The largest Portuguese bank (Caixa Geral de Depósitos - CGD), in 1990, ranked only in the 66th position in the Top 500 Europeans built by the specialized magazine *The Banker*, despite holding at that time a domestic market share higher than 20% in all major balance-sheet items, including assets; any of the nine largest European banks have assets representing more than ten times those of CGD (and the proportion is more than five times in terms of the Tier One Capital estimation by *The Banker*). But the disproportion was even more substantial if one considered the other largest Portuguese banks (also in 1990), contrasting with its European counter-parties; the third French bank was bigger more than 30 times than the third largest Portuguese bank (Banco Espírito Santo) in assets and more than 20 times in Tier One Capital (according the estimated values from *The Banker*).

This situation, frequently forgotten in the literature, had important strategic implications. Banks in the small countries of the EU have less strategic options. They had no choice at all to try a pan-European geographic expansion strategy, and even an European-wide specialisation (which is viable in other industries) seemed very difficult given the stringent capital requirements and the national market size differences. So, banks in the small countries might have suffered stronger selection pressures.

Besides growth implications, another important impact of deregulation should have been an increase in the degree of effective and potential competition (Canals, 1990,1993; Gardener and Molyneux, 1990). The added competition caused some

pressure upon banks' profitability (Gual and Neven, 1992; Gardener, 1995).

The pressures on banks' profitability stemmed mainly from declining financial margins (Canals, 1990,1993), which might have induced strategic changes by many institutions in order to minimize that problem. Product development strategies (that is, selling new products to existing markets) and diversification (selling new products to new markets), as well as geographic expansion, were potential responses in this context.

Thus, the banking industries in the EU countries were exposed in this period to a large environmental change, with the consequent strong pressures to organizational change. Important selection forces were likely to be present in this field, with special emphasis to the small countries-members.

Data

The cornerstone of the European banking deregulation, as discussed in the previous section, was the Second Banking Directive, approved by the European Union in 1989. In the same year, two other important regulatory pieces, the Own Funds Directive and the Solvency Ratio Directive were published. The Directive on full liberalization of capital flows was published one year before. Thus, the period of 1988-1996 was chosen for the study of the selection mechanisms with the intention of being a period sufficiently large to allow the development of the selection effects and a sufficiently short one to avoid a mixture of environmental conditions (namely, other important steps in the Economic and Monetary Union). The sample is composed by all of the 26 banks that were operating during the

entire period considered.

The sample data was built by the researcher based on information from several sources given the absence of a database concerning the chosen setting. The financial data, as well as the branch network data, were collected from each yearly issue of the Boletim Informativo series of Associação Portuguesa de Bancos (APB), the Portuguese banking association, and from individual banks annual reports. Other non-financial data was obtained through the individual banks annual reports and, when needed, by a direct contact with the banks involved.

Variables and measures

The set of variables (dependent, independent and control) and respective measures used in this study is described in Table 4-1, where I also present the hypotheses associated to each of the independent variables and the predicted direction of each relationship.

Profitability

The dependent variable in my model is profitability. I measure profitability by return on assets (ROA), yearly calculated as net income divided by averaged assets. ROA is one of the most commonly used measures of performance in the strategy and organizational literature, not only within the recent organizational ecology and evolutionary studies (Barnett, Greve and Park, 1994; Silverman, Nickerson and Freeman, 1997), as well as in recent studies within the strategic choice view (Wiersema and Bantel, 1993; Iaquinto and Fredrickson, 1997; Geletkanycz and Hambrick, 1997), and also in strategy studies on banking

industry (Reger, Duhaime and Stimpert, 1992; Barnett, Greve and Park, 1994; Magnan and St-Onge, 1997; Wiseman and Catanach, 1997; Sinha and Noble, 1997; Ramaswamy, 1997). ROA is the indicator most closely watched by banks analysts and bankers themselves (Reger, Duhaime and Stimpert, 1992: 195). It allows comparisons of firms of different sizes (Sinha and Noble, 1997). Another advantage of ROA is not being as sensitive as some alternatives (e.g., ROE) to capital structure differences and time series changes, an important issue in this setting. Most important, using ROA enables this study to fulfill one of its main objectives as early expressed in Chapters 1 and 2: to suggest some important implications to the ongoing debate in the strategy literature about the relevant level of analysis of determinants of firm profitability.

Table 4-1
Variables description and hypotheses

Variable	**Measure**	**Hypothesis**	**Predicted sign**
Dependent variable:			
- Profitability	PERFORM: return on assets		
Independent variables:			
- Generalist	GEN: dummy variable ('1' for generalist banks and '0' otherwise).	H_1	+
- Stateowned	ST_OWN: dummy variable ('1'	H_2	-

	for stateowned banks and '0' otherwise).		
- Foreign	FGN: dummy variable ('1' for foreign banks and '0' otherwise).	H_4	-
- Size	SIZE: real assets (in thousands of millions escudos).	H_4	?
- Age	AGE: n° of years bank *i* is operating since 1975.	H_5	-
Interaction terms:			
- "1992 effect" (I) (model 3)	PRE_1992: dummy variable ('1' for years till 1992 and '0' otherwise).	H_1 (*)	
- "1992 effect" (II) (model 3)	POS_1992: dummy variable ('0' for years till 1992 and '1' otherwise).	H_1(*)	
- Specialist (model 3)	SPEC: dummy variable ('1' for specialist banks and '0' otherwise	H_1 (*)	
Control variables:			
- "1992 effect"	POS_1992: dummy variable ('0' for years till 1992 and '1' otherwise).		
- Branch Network Choice	B_CHOICE: natural log of the n° of branches of bank *i*		

(*) Used in the interaction terms of Model 3. POS_1992 is used in Model 1 as a control variable.

Size

The variable *size* is operationalized as the amount of total real assets hold in each

year by each bank (SIZE). The price effect on this measure is removed by adjusting the nominal amount of assets (expressed in thousands of millions of Portuguese escudos) by the appropriate annual GDP deflator. Thus, I measure size as a scale of operations, focusing on the actual activity of the organization (Barron, West and Hannan, 1994). This operationalization has been extensively used in recent organizational ecology and evolutionary studies (Kelly and Amburguey, 1991; Barnett, Greve and Park, 1994; Barron, West and Hannan, 1994; Sinha and Noble, 1997), in strategy studies based on banking (Magnan and St-Onge, 1997; Wiseman and Catanach, 1997; Sinha and Noble, 1997), and in strategic choice literature (Geletkanycz and Hambrick, 1997).

Age

We measure age as the number of years of activity presented by each bank since 1975 (AGE). This year was chosen as a start-the-clock reference (Silverman, Nickerson, and Freeman, 1997) because it relates to a starting point of a new era in the Portuguese banking industry: at that time, in result of the 1974 political revolution, all local banks were nationalized and new merged institutions were created. It was actually a re-founding of these banks and of the national banking system.

Generalist and Specialist

Niche width, as discussed above, means the range of environmental dimensions which organizations depend on. It can be seen as the strategic scope (market scope, product scope or geographic scope) of an organization. Organizational

ecology designated by *specialists* those organizations characterized by a narrow niche width (scope) and by *generalists* those organizations that present a large niche width (scope). In the banking industry, this parallels the usual distinction between retail and wholesale banks.

Retail banks are generalist organizations: they usually cover a large number of market segments, offer a wide range of products and spread its physical presence over a broad geographic area. By contrast, wholesale banks are typical specialist organizations: they are generally oriented towards few market segments, offering a narrower scope of financial instruments and/or using a smaller physical distribution network. The size of each bank's branch network is a natural criterion to differentiate between retail and wholesale banks. In my study, I define wholesale/ specialists banks as those which only have three or less branches. In fact, in my research setting (the Portuguese banking industry), the wholesale banks typically have one branch in the capital and perhaps one or two additional ones in one or two other important cities just as a physical base to support their otherwise branchless activities. On the other hand, retail banks have extensive branch networks, with some banks maintaining several hundreds of branches each. Similar criterion was used in recent evolutionary perspective literature (Barnett, Greve and Park, 1994). The dichotomy between wholesale and retail banking is seen in the strategy literature as crucial to analyze the banks strategy (Ramaswamy, 1997). Accordingly, I use a dummy variable, *GEN*, which takes the value '1' in case of generalist banks and '0' in case of specialist banks. For the construction of some interaction terms in Model 3, I also used SPEC, a dummy which assumes the value "1" for specialist banks (see below).

Stateowned

Portugal began an important privatization process in its banking industry in 1984. Despite no standard solution has been followed in the different privatization cases, one characteristic was generally present: the division of the shares' selling process in several phases. Because the decision power of each involved bank was effectively shifted to the new shareholders in the first phase, I define ST_OWN as a dummy variable assuming the value '1' when one hundred per cent of the equity was hold by the government and '0' otherwise.

Foreign

We defined a foreign bank as one controlled by a shareholder whose headquarters are located in a country other than Portugal. This definition is consistent with the one used by Zaheer and Mosakowski (1997) in their test of the liability of foreigness (the first one in the organizational ecology literature). Thus, FGN is a dummy variable that assumes the value '1' if the bank is controlled by a foreign shareholder and assumes '0' otherwise. In this study, all the banks classified as 'foreign' operate clearly as subsidiaries of some well-known international bank.

"1992" effect

While all the major regulatory changes here analyzed were approved by the European Union by 1988/89, these changes were brought into force the Portuguese legislation only at 1992, mythic year for a wide economic liberalization step in the EU (Centre for Business Strategy, 1989). To control an eventual discrepancy of the impact of selection pressures before and after that

year (e.g., Kelly and Amburgey, 1991), a dummy variable (POS_1992) was used in Model 1. This dummy is equal to '1' for the years after 1992 and '0' till that year. This variable was also used, as its complementary PRE_1992, to form interaction terms in Model 3. PRE_1992 is a dummy that assumes the value "1" for years till 1992 and "0" otherwise.

Branch network choice

In the period in analysis, branch network decisions were probably the most notorious strategic choice made by the Portuguese banks, as a whole. Given the importance this choice can have in terms of the organization's profitability, I control this factor by including in the model the variable *Branch Net*work Choice (B_CHOI). This variable is measured by the natural logarithm of the number of branches bank *i* hold in each year.

Method

To test the hypotheses above formulated within the selective performance approach, I use a generalized least squares (GLS) model. This model allows us to deal with pooled cross-section and time series data. Specifically, I use a cross-sectionally heteroskedastic and timewise autoregressive model (Kmenta, 1997). By this way, I apply a two-stage procedure, first correcting firm-specific autocorrelation (frequently found in time series data) and then removing heteroskesdasticity among residuals (usually found in cross-section data).

The base model is (Kmenta, 1997: 616)

$$Y_{it} = \beta_1 X_{it,1} + \beta_2 X_{it,2} + \ldots + \beta_k X_{it,k} + \varepsilon_{it}$$

(i = 1,2,...,N; t = 1,2,...,T)

where Y_{it} is the value of bank i's performance in the year t and $X_{it,1}$ is the value of the independent variable 1 for the bank i in the year t.

First, the ordinary least squares method is applied to all N x T observations to generate the regression residuals that will be used to calculate consistent estimates of ρ_i:

$$\hat{\rho}_i = \frac{\sum e_{it} e_{i,t-1}}{\sum e_{i,t-1}^2} \qquad (t = 1,2,...,T)$$

Then, these estimates of ρ_i are used to obtain transformed (dependent and independent) variables and a new regression where the autocorrelation of errors for individual banks is removed.

Next, the cross-section heteroskedasticity is removed by running a new regression where the dependent and independent variables are the previously transformed ones divided by the variance of the residuals of the latter regression.

Table 4-2 presents descriptive statistics and correlations for the variables included in the models used to test the hypotheses above formulated. I took several steps to investigate the existence of any multicollinearity problem (Hair, Anderson, Tatham and Black, 1995; Norusis, 1993) for both models with and without considering organizational form variables. For model 1 (see next chapter), I first examined tolerance levels and variance inflation factors. Tolerance levels for each

variable included were all well above the recommended cutoff value of 0.10 (the minimum value occurred was 0.408) and the variance inflation factors were all far below the maximum recommended cutoff value of 10, being the highest value 2.45 (Hair et al., 1995, Kennedy, 1992), suggesting no multicollinearity problem. I also analyzed the condition indices, being the highest one 8.615, that is, well below the usual cutoff value of 30 (Hair et al., 1995; Kennedy, 1992). Similar analysis was made on models 2 and 3. For model 2, the minimum tolerance level was 0.113, the maximum variance inflation factor was 8.838 and the maximum conditional index was 18.486. For model 3, the minimum tolerance level was 0.111, the maximum variance inflation factor was 8.929 and the maximum condition index was 20.979. Again, no serious multicollinearity problem was detected in these models.

TABLE 4-2

Descriptive Statistics and Correlations

Variable	Mean	s.d.	1	2	3	4	5	6	7	8	9	10
1. Profitability	0.009	0.015	1									
2. Size x 10^{-6}	0.51	0.70	-0.08	1								
3. Age	13.50	5.48	-0.43	0.34	1							
4. Generalist	0.81	0.39	-0.25	0.33	0.45	1						
5. Stateowned	0.28	0.45	-0.14	0.26	0.27	0.30	1					
6. Foreign	0.32	0.47	0.07	-0.44	0.56	-0.55	-0.43	1				
7. (Specialist) * (PRE_1992)	0.12	0.33	0.46	-0.25	-0.50	-0.77	-0.23	0.38	1			
8. (Generalist) * (PRE_1992)	0.43	0.50	0.05	-0.04	-0.08	0.43	0.38	-0.28	-0.33	1		
9. (Specialist) * (POS_1992)	0.07	0.25	-0.22	-0.18	-0.06	-0.56	-0.17	0.36	-0.10	-0.24	1	
10. POS_1992	0.44	0.50	-0.36	0.21	0.41	0.09	-0.23	0.03	-0.34	-0.78	0.30	1
11. Branch Choice	3.74	1.85	-0.28	0.69	0.56	0.80	0.35	-0.69	-0.62	0.19	-0.44	0.2

N= 234

CHAPTER 5

Results

Tables 5-1, 5-2 and 5-3 present the results of this study. We test the hypotheses above formulated in different models. Model 1 (Table 5-1) is the baseline model: it shows the power of the model without considering the organizational forms. Model 2 (Table 5-2 presents the analysis of Hypotheses 1,2,3,4, and 5. Model 3 (Table 5-3) allows a more fine-grained analysis of Hypothesis 1.

Table 5-1
GLS regression on bank profitability (Model 1)

Variable	β	***s.e.*** (β)	**p values**
Intercept	*0.02031*	*0.002*	*0.000*
POS_1992	*-0.00209*	*0.001*	*0.013*
B_CHOICE	*-0.00173*	*0.001*	*0.009*
SIZE x 10^{-6}	*0.00232*	*0.001*	*0.008*
AGE	*-0.00044*	*0.000*	*0.007*

F value = 26.543	Signif. F = 0.000
$R^2 = 0.367$	Adj. $R^2 = 0.353$
N= 234	

Hypothesis 1 predicts that selective performance processes will favor generalist organizations when a serious environmental change occurs: generalists should show higher profitability levels than specialists. Accordingly, the coefficient of GEN should be positive and significant. No support was found for this hypothesis within model 2. This result might be due to the fact that I tested the hypothesis considering the whole period of time here studied, *including* years either before and after the particular legislation which triggered the environmental change was brought into force; thus, I re-examined the hypothesis with a more fine-grained model (Table 5-3): in Model 3, I build a set of three interactive terms (SPEC x POS_1992, SPEC x PRE_1992, and, GEN x PRE_1992) to clearly differentiate the performance impact of selection *before* and *after* a main de-regulatory event was brought into force (1992), given the theoretical nature of the predictions made about specialists versus generalists (and above discussed in the formulation of the hypothesis 1). Due to the way I have constructed this set of variables, the implicit comparison (or reference) group is 'generalists after deregulation'. Therefore, the coefficient associated to 'SPEC x POS_1992' measure means the differential performance of specialist banks *after* the deregulation over the performance of the generalist banks *after* the deregulation. Model 3 (Table 5-3) shows that this differential is negative, that is, generalist (retail) banks did outperform specialists (wholesale) banks after deregulation. This result clearly supports Hypothesis 1 while also stressing the importance of distinguishing periods before and after the application of the crucial regulatory changes. This last aspect is corroborated by the conclusion that specialist (wholesale) banks outperformed generalists *before* the de-regulatory event, an indirect conclusion derived by comparing the

differential performance of both groups (the coefficient of SPEC x PRE_1992 is more than four times the coefficient of GEN x PRE_1992 and both are significant).

Table 5-2
GLS regression on bank profitability (Model 2)

Variable	β	*s.e.* (β)	p values
Intercept	*0.029836*	*0.003*	*0.000*
POS_1992	*- 0.002846*	*0.001*	*0.001*
B_CHOICE	*- 0.003038*	*0.001*	*0.001*
SIZE x 10^{-6}	*0.004341*	*0.001*	*0.000*
AGE	*- 0.000504*	*0.0001*	*0.002*
GEN	*- 0.001397*	*0.003*	*0.627*
ST_OWN	*- 0.003685*	*0.001*	*0.000*
FGN	*- 0.010021*	*0.002*	*0.000*

F value = 37.090	Signif. F = 0.000
$R^2 = 0.568$	Adj. $R^2 = 0.552$
N= 234	

The existence of a *liability of stateownedness* is tested with Model 2. This proposed liability is formulated in Hypothesis 2 and means the occurrence of negative selection over stateowned organizations when large environmental

discontinuities occur: stateowned organizations should show lower profitability levels than private-owned organizations. In fact, in Model 2 (Table 5-2), the coefficient of ST_OWN is negative and significant. This study, therefore, provides a strong support for the proposed existence of a *liability of stateownedness.*

Table 5-3
GLS regression on bank profitability (Model 3)

Variable	β	*s.e.*(β)	**p values**
Intercept	*0.027220*	*0.004*	*0.000*
B_CHOICE	*-0.003355*	*0.001*	*0.000*
SIZE x 10^{-6}	*0.004486*	*0.001*	*0.000*
AGE	*-0.000516*	*0.000*	*0.000*
SPEC * POS_1992	*-0.008206*	*0.004*	*0.042*
SPEC * PRE_1992	*0.009118*	*0.003*	*0.006*
GEN * PRE_1992	*0.001994*	*0.001*	*0.011*
ST_OWN	*-0.002716*	*0.001*	*0.000*
FGN	*-0.008273*	*0.002*	*0.000*

F value = 70.511	Signif. F = 0.000
R^2 = 0.738	Adj. R^2 = 0.728
N= 234	

The existence of a *liability of foreignness* is formulated in Hypothesis 3, which

states that foreign firms will be negatively selected: these firms will have lower profitability than local firms when an important modification arises in the organizational environment. This hypothesis is tested with Model 2 (Table 5-2). If the hypothesis is correct, the coefficient of FGN should be negative and significant. The result provides strong support for Hypothesis 3, confirming the existence of a liability of foreignness.

Regarding the direction of the impact of size on profitability, two contrasting hypotheses, Hypothesis 4 and Hypothesis 4 (ALT), were considered given the *a priori* relative importance of theoretical considerations supporting each one. Hypothesis 4 predicts that larger organizations will be favored by selective performance processes when significant environmental changes occurs; that is, on average, larger organizations will show higher profitability levels than smaller organizations. If Hypothesis 4 is correct, the coefficient of the variable SIZE in the multiple regression on profitability should be positive and significant. Model 2 provides strong support for Hypothesis 4: on average and *ceteris paribus*, larger organizations do perform better than smaller ones when environment experiences relevant changes.

The Hypothesis 5 is also supported. This hypothesis predicts that younger organizations will be positively selected in a context of a major environmental change, that is, older organizations should show lower profitability levels than younger ones. Thus, if Hypothesis 5 is correct, the coefficient of the variable AGE should be negative and significant. We found strong support for Hypothesis 5, which means that, other things being equal, the older the organization the lower

will be the performance in changing external contexts.

In sum, using the selective performance approach, the findings of the empirical analysis supported the proposed hypotheses. Accordingly, organizations favored by selection forces in this setting are those characterized by being generalist, private-owned, local, larger, or younger.

Generalists showed higher profitability levels after the main deregulation package was brought into force, while specialists were best before those events. This result gives a very strong support to the niche width theory (Hannan and Freeman, 1977) applied to a selective performance approach. It also confirms that specialists maximise their fitness to a given environment, but suffers the most (vis-à-vis to generalists) when that environment experiences a substantial change given their lower strategic flexibility. This finding is consistent with Ruef's (1997) results that generalists were more capable of change than specialists.

The results confirm the existence of a *liability of stateownedness* as suggested in this study. When external conditions change, stateowned organizations show lower profitability levels than private-owned organizations apparently because their system of exhaustive rules and centralization (with the consequent "distance problem") inhibit them to timely and accurately recognize environmental changes. Stateowned organizations are too slow to be positively selected in these circumstances.

The prediction of a *liability of foreignness* in terms of profitability in changing environmental conditions was also clearly supported by the results. Foreign

organizations showed lower levels of profitability in such turbulent conditions, apparently due to inertial effects of their more detailed system of rules and higher degree of "distance" (physical and so-called "psychical"). This result and the associated reasoning expand the understanding of the liability of foreignness concept recently proposed by Zaheer and Mosakowski (1997) in two directions: first, it supports the existence of such liability when the focus of interest is profitability (rather than survival); second, it complements extant international business theory and research by formulating an argument to explain why a liability of foreignness may be anticipated in the presence of a large environmental shift.

The simultaneous support of the liability of stateownedness and the liability of foreignness suggests a greater attention to the *distance from reality* concept. *Distance from reality* revealed as a crucial selection mechanism either from stateowned firms (against private-owned firms) as well as for foreign firms (against domestic firms) when facing a major environmental change: for different reasons, both organizational forms suffer from what I termed the *distance problem*, that is, a deliberate or forced gap between the actual level and the proper level of knowledge of the reality (internal and external environmental) hold by the decision-makers. We think that these arguments and results are consistent with the recent recognition by some leading authors of the merits of a "new corporate form" based on a ultra-decentralised global organization (Ghoshal and Bartlett, 1998).

I also tested whether larger organizations exhibit higher or lower profitability

levels than organizations in the presence of important environmental changes. Two competing and alternative hypotheses were offered: one, states that the slack effect associated to larger organizations overweighs their routine effect; another, considers that, conversely, routine effect is predominant. The findings strongly support the slack hypothesis that there is a positive relationship between size and profitability. This result is similar to those of Zajac and Kraatz (1993) that financial performance is positively related to size for US high-education industry. However, this results contrasts with those of Haveman (1992) on US savings and loan industry, where she found a negative relationship between size and financial performance measures. Overall, these results suggest that the relative importance of the routine versus slack effect may depend on more specific circumstances. These circumstances might not depend on the degree of stability of the environmental conditions since in all these studies a major environmental change was involved. The slack effect is likely to be triggered by modifications of environmental requirements. While this may be a pre-condition for the beneficial impact of size, as supported by this study, other factors may reveal themselves as important in other settings: for instance, in some circumstances, the rigidity of the installed routines may be so strong that not even the slack effect can compensate and avoid size from being a liability; or it might be that the dimension of the slack effect depends on the type of main organizational or strategic changes required by the specific environmental change in study.

Finally, the prediction that older organizations would have lower profitability level than younger ones was also strongly supported here. Older organizations are apparently more inert than young organizations due to their long established

structures, routines and rules, missing the abilities to change when in presence of major environmental changes. This finding is consistent with previous studies that showed a negative association between age and change (Kelly and Amburgey, 1991; Amburgey, Kelly and Barnett, 1993). Studies on structural inertia, using financial performance as the explained variable, showed either negative effect (Zajac and Kraatz, 1993) or no effect (Haveman, 1992) of age. These results may lead to the conclusion that, in general, the impact of organizational age on financial performance might be non-positive. Moreover, such impact may vary from being neutral to extremely negative in result of the intensity of some moderating factors, such as the number of environmental shocks previously suffered by the industry (since the higher this number is, the larger could be the misfit of the routines and rules within the older organizations).

However, beyond the support for the individual hypotheses, the findings (namely, contrasting the adjusted R^2 obtained in model 1 with those associated to models 2 and 3) also give strong overall evidence for our suggestion that organizational forms are a relevant determinant of firm profitability and should be considered as complementary to industry-effects and firm-effects by the strategy literature.

CHAPTER 6

Discussion

The aim of this study was to address the question of whether and which organizational forms were particularly relevant for the strategy and performance of organizations facing a large environmental change. The findings show that specialism, stateowness and foreigness significantly affect organizational profitability, as hypothesized here. The insights provided by the conceptual development and empirical results of this work are threefold. First, it offers to the **organizational ecology** a conceptually consistent framework about the impact of selection forces on organizational forms focused on selective performance and based on a contingent view of inertia. Second, it demonstrates for the **strategy field** the need and usefulness of incorporating an intermediate level of analysis (organizational forms) in addition to current predominant approaches for a better explanation of firms' strategy and profitability. Finally, it suggests that strategic management and organizational ecology predictions about the benefits of strategic and organizational change are not so apart as they are usually considered. In the following section, I attempt to develop these implications.

Implications for Organizational Ecology

For the organizational ecology theory, this study represents simultaneously a move back to its origins, by focusing on an issue particularly salient in the early

days of this field – organizational form (Hannan and Freeman, 19077) - and a step forward towards new challenges (use of continuous performance and contingent inertia concepts). These different aspects involve meaningful implications for this literature.

First, why continuous performance might matter for ecological research? Continuous, relative performance–focused analysis should be seen as complementary to the traditional survival / failure models. *Selective performance*, i.e., the process of environmental selection when the outcome is differential continuous performance, does not preclude or negate the traditional *selective survival* (i.e., the process of environmental selection when the outcome is about the elimination or not of entire organizations). The inclusion of continuous performance as one type of dependent variable in this field adds explanatory power of selection perspective for a broader range of organization phenomena and of organization populations.

Selective survival processes allow the answer to the questions like 'Why are there these kinds of organizations?' *Selective performance* processes enable us to answer to complementary questions such as 'why these kinds of organizations are *better adjusted* to environmental conditions than those other kinds of organizations?' That is, to an absolute measure (survival) it is suggested to add a relative measure of success (continuous performance). Survival was early chosen as the selection criterion given the origins of population ecology drawn on bioecological theory. However, as the proponents of the theory themselves acknowledge, organizations have a greater degree of adaptability than bio-

organisms (Hannan and Freeman, 1977:937). In consequence, the analogy has some decisive limits: survival is an important criterion to assess important selection processes, but is not the only one. So, equating survival to fitness as the only way to capture selection in the organization world was perhaps forcing too much the biological analogy. This was probably justifiable in the early steps of the field given the need to differentiate it from other theories (Amburgey and Rao, 1996: 1269). Some difficulties in data availability for alternative criterion to measure fitness may have helped that trend: Silverman, Nickerson and Freeman recently admitted that "given the immense difficulty of obtaining performance measures for each organization in a population, most ecological research has either ignored performance or analysed size" (1997: 38). By using consecutively survival also as fitness measure, ecological research tended to forget that these are not synonymous concepts.

In fact, survivals can be in some circumstances an incomplete measure for fitness due to two main reasons. First, survival is a discrete (and dichotomous) variable, while fitness is a continuous reality (only dramatic selection effects which leads to failure are captured by this measure). Second, survival measure itself has important theoretical and practical drawbacks: theoretically, because there are circumstances, as with large organizations, state owned organizations (Aldrich, 1979), or agency problem situations (Jensen, 1993), when selective survival concept does not work at all given such barriers to failure; and in practice, because many so-called "failures" are not necessarily unfit cases (Winter, 1990: 279-280). So, while selective survival method offers a dichotomous outcome (survival/failure) to provide information about fitness we may have problems in

taking conclusions regarding the impact of selection forces on the later: among "surviving" organizations, not all are equally adjusted to environmental conditions, and some may even be misfits; among "failed" organizations some could have been fit when they became "failed" in the data set (due to acquisition or else).

The use of continuous performance as the dependent variable can overcome those significant problems. First, it reflects selection pressures even within segments of organizations where the *selective survival* concept does not work or hardly work (large firms, stateowned firms, *agency problem* situations). Second, it illustrates differential selection pressures on organizational forms even when environmental changes are not strong enough to generate complete failure. Third, it does not present the identification problems researchers have experienced when trying to differentiate in their samples the 'real failures' from pseudo failures'. Fourth, it allows the study of selection in a continuum of positive and negative degrees of selection – i.e., not only in a dichotomy-based selection – which is crucial for strategic management study.

The selective performance approach may solve a potential paradox faced by traditional selective survival approach: if organizations that should exit do not actually exit (whatever the reasons as referred above), should we conclude that no selection process arises even when dramatic environmental changes occur? The selective performance may avoid potential misunderstanding of empirical results if the phenomena of interest is relative degree of adjustment to the environmental conditions. For example, Kelly and Amburgey (1991) surprisingly found no

significant effect of deregulation on the probability of failure in their study on US certificated air carrier in industry. Does such results mean that no overall selection forces associated to such deregulation has been at work in such circumstances? Selective survival method would say: "yes, no selection effect". Yet, a selective performance approach could eventually show a significant effect of deregulation as expected. The absence of effect in this example could be explained by the fact that the deregulation impact, while existent, was not strong enough to generate failures, while it could have affected the fitness level. Or, alternatively the absence of effect could have been due to some of the above referred barriers to failure. Another empirical example of the selective performance method advantages can be given using the conclusions of Haveman (1992)'s study on savings and loan industry. She found that diversification was beneficial to financial performance, while the effect on failure was not clear. This shows that the use of a selective performance approach may clarify the fitness effect of organizational changes in circumstances where the use of a selective survival method would underestimate the involved effects. Another aspect of the continuous performance method can be highlighted with the study of Kelly and Amburgey (1991). They found that specialist air carriers and generalist air carriers did not show differential survival changes despite the "discontinuous environmental changes" that affect the industry. This outcome may be due to the lost of information (for fitness purposes) associated with the case of a dichotomous measure as survival /failure. By introducing the data input of the dependent variable in a 0/1 basis, the method is not capturing all the richness of differential fitness information incorporated in a continuous measure as relative performance.

The second important aspect in this study related to organizational ecology is about the adoption of a contingent inertia view. Incorporation of contingent inertia concept within organizational ecology may overcome some crucial drawbacks associated to the structural inertia mechanisms. Hannan and Freeman (1984) proposed that selection favors organizations whose structures have high inertia based on three assumptions: first, selection favors firms with high reliability of performance and high accountability; second, reliability and accountability require reproducible structures; third, high levels of reproductibility generate strong inertial pressures. Beyond a problem detected in the logical articulation of these assumptions used to derive the proposition (Young, 1988), the main problem with structural inertia may be located in its difficulty in explaining organizational world where there are large environmental changes and where selection forces become more and more demand-driven (rather than competitors-driven).

Contingent inertia not only overcome these shortcomings as contribute also to solve some internal inconsistency existing between the structural inertia concept and the several arguments used to predict which organization forms or characteristics would be selected for or against. A good illustration of this weakness is probably the case of generalists versus specialists. The derivation of the ecological prediction about generalists and specialists is eventually the best-elaborated link between organizational forms and selective survival. However, the reasoning involved in such link is more associated to a continuous performance criterion than to a survival/failure criterion, and stresses more the virtues of flexibility and slack, rather than those of inertia. Moreover, this kind of reasoning is not easily consistent with the one used, for example, in predicting the impact of

organizational size. With contingent inertia, I believe, the internal consistency of the whole theory may improve significantly.

The third (and perhaps the most important) implication for organizational ecology from this study is the use of the selective performance approach and the contingent inertia concept to make specific predictions about the selection effects on organizational forms and characteristics (Figure 6-1).

Figure 6-1

Organizational forms and characteristics favored by selection forces

	Selective Survival view	**Selective performance view**
Focus	Survival rate	Continuous performance level
Environmental conditions required	Any	Large environmental change
Organizational forms or characteristics favored by selection forces	• Large (against small) • Old (against young) • Complex (against simple) • Generalist (against specialist) [1]	• Large (against small) • Young (against old) • Generalist (against specialist) • Privateowned (against stateowned) • Local (against foreign)

[1] Dependent on certain environmental conditions as described in Chapter 3.

This may reveal an important contribution of this work for organizational ecology since a main criticism raised on ecological research (Davis, 1996) was that it has distanced from the original question 'Why are there so many kinds of organizations?' made by Hannan and Freeman (1977: 936). Davis ascribed this

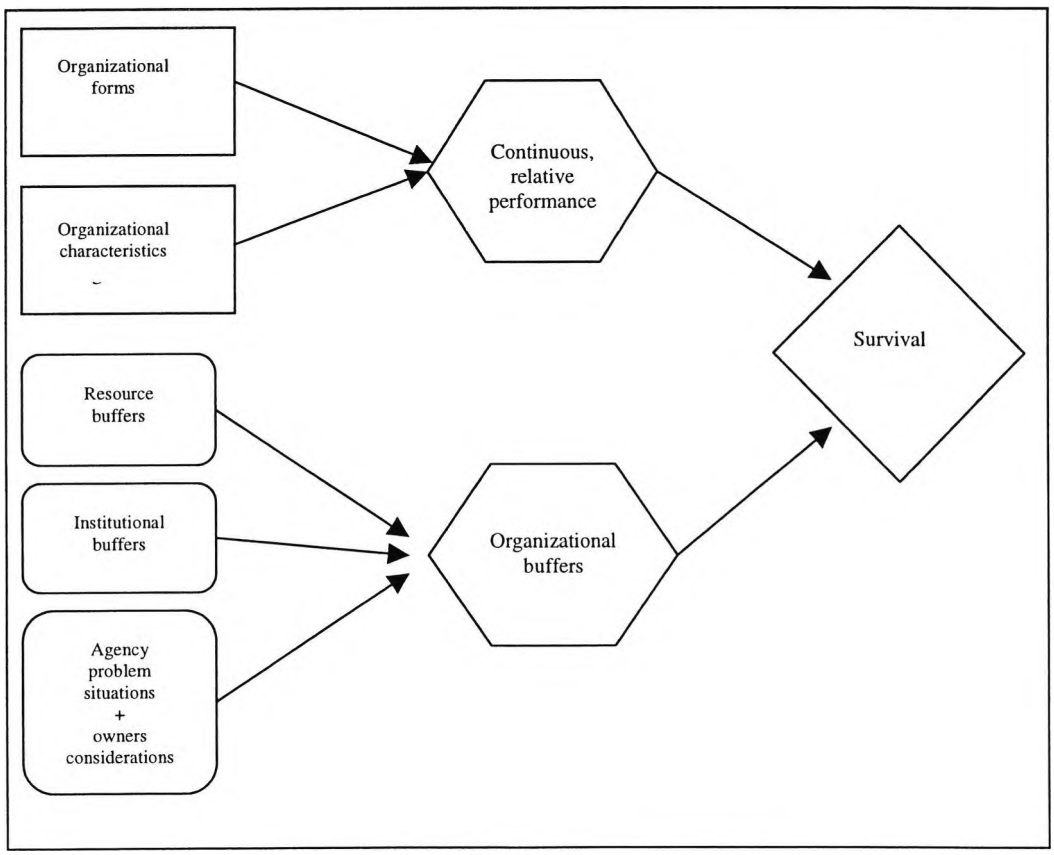
outcome to the "focus on births and deaths per se" while leaving less attention to organizational form issues: "Remarkably, one observes few vigorous debates over typologies of form in ecology"(1996: 540). In this sense, this study has gone back to the origins of the field and has re-analyzed the selection impact on organizational forms and organizational characteristics early studied in the ecological research (generalists/specialists, size, age), as well as new organizational forms (foreign vs. domestic, stateowned vs. privateowned). The selective performance method may have opened promising avenues to research in this area.

Another implication of this study is about the need and interest in developing a richer model of organizational evolution. On the one hand, from this study and others, it seems clear that organizations are subject to selection processes which not necessarily include the complete disappearance (formal or effective) of organizations (we might coin this process as *relative selection* given its focus in the relative degree of organizational adjustment to environmental conditions). On the other hand, from past work within organizational ecology it results unequivocal that organizations are also subject to more dramatic selection processes which outcome is survival / failure (which might be called *absolute selection*). So, a perhaps crucial implication of this study is to suggest that organizational evolution is subject to two levels of selection and that one of them (absolute selection) is dependent on the other one (relative selection). In fact, by building the selective performance concept on the significant limits of application of the traditionally used selective survival approach, not only the virtues of the new approach become apparent, but also the existence of such dual selection

process turned to be clear. In consequence, I suggest that survival / failure phenomena can be modeled as the result of two complementary factors, relative performance (as financial performance) and organizational buffers (Figure 6-2). This formulation may be important because it explicitly emphasizes the independent role fulfilled by continuous performance and organizational buffers to influence survival chances, as well as enables the identification of interactions between these two main forces. This framework may explain many apparent inconsistencies among the observed and predicted impact of given organizational forms or characteristics on survival chances can be explained, by distinguishing their effect through continuous performance from their eventual effect through organizational buffers, and by establishing the specific conditions where these relationship might occur.

Figure 6-2

A new organizational survival model



This model is fully consistent with some recent research within selection perspective. Miner, Amburgey and Stearns (1990) suggested the existence of resource buffering and institutional buffering, while demonstrating empirically the existence of the former. They define resource buffering as the "insulation based on access to material resources, information, or technology", and institutional buffering as "the insulation the organization has to legitimacy" (1990: 690). They also found that interorganizational linkages, one type of resource buffer, reduce failure. Baum and Oliver (1991) found evidence that institutional linkages, which can be included in the institutional buffering concept, lead to a significant survival advantage.

Agency problem situations (Jensen and Meckling, 1976) may also mediate the effect of financial performance on survival chances. The effectiveness of internal or external mechanisms to solve or minimize agency problems affects significantly the actual survival outcome (Jensen, 1993). While agency problem relates of potential conflicts of interests between owners and managers of organizations, owners themselves can affect in a decisive way the relationship between financial performance and organizational exit. Gimeno, Folta, Cooper and Woo (1997) found that the entrepeneur's human capital characteristics may significantly change the relationship that financial performance would otherwise had on new ventures survival.

In this modeling, I recognize that some variables that influence relative performance may also eventually affect organizational buffering. For instance, organizational size may constitute an institutional buffer regardless it direct effect

on financial performance. Barnett (1997) found that large organizations survived, despite some were weak competitors, and explained the fact given that "institutional legitimacy benefits large organizations by placing the favor of other powerful institutions, including government regulators, the professions, and powerful organizations that provide access to capital, factors of production, and markets" (1997: 138). Also stateownedess may provide a specific resource buffer (and eventually also a institutional buffer) given its intrinsic nature.

All these situations explain the virtues of the dual selection modeling, were organizations (e.g., stateowned organizations) can be negatively selected in one given level (relative selection) and be positively selected on the other (absolute selection). That is, a given form can improve survival chances, while reducing financial performance. In many cases this means the survival of the misfit. These examples also show that the model should discriminate three types of factors: a) those which only affect financial performance; b) those which only determine organizational buffer; c) those which are associated to both forces.

Implications for strategy research

The implications of this study for the strategic management literature are two-fold. First, it suggests the need for inclusion of an intermediate level (organizational form) in the set of main determinants of profitability, usually grouped in this field in only two levels (firm and industry). Second, it stresses the importance of considering inertia mechanisms in explaining firm outcomes (strategy and performance) and calls for further research along these lines.

Particularly strong support emerges from this study for the importance of organizational forms on organizational profitability. Previous strategy research showed that both *firm* and *industry* effects are important determinants of profitability. This study suggests that an intermediate level (organizational form) should be included within the main set of profitability drivers. Such suggestion may be especially relevant given the fact that an important portion of profitability variation remains unexplained when considering only industry and firm-level factors, as reported in all studies addressing the debate about the relative importance of these two levels of analysis. In Schmalensee's (1985) work on one year US manufacturing industries, about 80 percent of total variance was not explained by the model. Schmalensee attempted to capture firm-level effects by using a market share variable and industry-level effects by using nominal industry categories. In result, part of the unexplained variance might be due to the failure to consider all firm-effects (and not only those captured by a market share variable). Rumelt's (1991) study on US manufacturing industries overcame this weakness and also considered a multi-year period (1974-1977) that enabled to distinguish between stable and transient effects. In consequence, the unexplained variance dropped significantly although still remaining at a high level (about 37 percent). Both Schmalensee and Rumelt's studies used data from the US Federal Trade Commission's Line of Business Reports. More recently, McGahan and Porter (1997) used the Compustat Business Segment Reports data and considered a longer period (1981 - 1994); their results for manufacturing industries showed that the portion of total profitability variation which remained unexplained was even larger than that presented by Rumelt's (1991) model.

Accordingly, my findings suggest that organizational form effects may explain part of this large unexplained profitability variation. The industry effects might reflect differences in industry characteristics such as entry barriers, rates of growth, demand concentration or competitive behavior, while firm effects might result from firm's unique bundle of resources and capabilities such as qualified human resources, technological process, reputation, or marketing ability. In complement, what type of effects might organizational form level imply? The findings and arguments involved in this study suggest that organizational form effects should arise in general from differences in firms environmental vulnerability shared across similar organizational forms. Similar to industry effects (Mauri and Michaels, 1998: 213), these shared organizational form characteristics may be seen in two complementary views. First, a static view according to which there are some commonalities within each organizational form which significantly affects firms' environmental vulnerability, such as similarity in sets of routines, scope of skills, slack, kind of organizational centralization and internal system of rules. Second, a more dynamic view might see those shared organizational form characteristics as the result of processes of imitation, where as some firms develop a certain kind of visible strategies, others with similar organizational form tend to adopt similar patterns of behavior. Existing characteristics and these imitation processes may maintain and reinforce the commonalities within each organizational form and accentuate the differences across organizational forms.

One contribution of the above referred McGahan and Porter (1997) study was to cover all sectors of the US economy rather then using only one sector (the

manufacturing sector) as previous studies did. In result, they found significant differences in the unexplained portion of the total profitability variation. While this unexplained variance was found significant in all economic sectors, it assumed much higher proportions in some sectors (e.g., manufacturing and agriculture/mining) than others (e.g., wholesale/retail trade, and lodging and entertainment). In the same vein, the relative importance of organizational form drivers may vary across industries. As discussed in the present study, organizational forms are characterized by their environmental vulnerability and this differentiated vulnerability may reveal more important in certain environmental conditions than in others. So, industries with different degrees of environmental (in)stability may show differences in the relative importance of organizational forms for the profitability variation.

A second major implication of this study for the strategy research is about the importance of inertial mechanisms for firms' strategy and performance. It is well recognized that despite its likely relevance, namely to explain why organizations differ so much in quality, inertia has often been a missed issue in strategy research (Rumelt, Schendel and Teece, 1994: 532). In this field, inertia is sometimes seen as the level of commitment to current strategy (Huff, Huff, and Thomas, 1992) and some research has been developed in conformity. For example, Hambrick, Geletkanycz, and Fredrickson (1993) analysed several determinants of top management commitment to the status quo related to the executives' characteristics (e.g., firm tenure or age) or perceptions (e.g., perceptions of current performance); following similar lines, Geletkanycz (1997) examined the influence of cultural values on top management open-mindness toward change.

This stream of strategy research has usually focused on only one component of inertia, that is, on *managerial* constraints on strategic change. Yet, other important inertial sources of constraint exist within firms, namely the non-managerial constraints, such as organizational age and size (Miller and Chen, 1994). My study extends previous work by suggesting organizational forms as another important source of non-managerial constraint. In fact, especially in changing environments, some characteristics associated to organizational forms provide differing ability to change. The acknowledgement of such characteristics, as well as the development of proper ways to take advantage of them (or minimize its effects in case of ability-reducing features), becomes then a key aspect for strategy-makers.

Moreover, as this study provides empirical support for the relevance of organizational forms in terms of realized organizational adjustment to environmental changes, it also suggests the relevance of the specific flexibility features associated to these forms. This means that my findings also have implications for the strategic flexibility literature, which have received recently some important contributions. For example, this study corroborates Sanchez's (1995) argument that strategic flexibility in product competition means *resource flexibility* and *coordination flexibility*, where the former concept focus on the existence of firm's flexible resources that enable alternative courses of action in response to changing environments, while the later stresses the degrees of freedom in *using* the firm's available resources in alternative combinations. The flexibility features suggested in the present study are not only consistent with Sanchez's (1995) concepts but also demonstrate its usefulness in a much broader

sense than product creation. Those two second-level concepts of flexibility seem to parallel the distinction between resources and capabilities within the resource-based view of the firm (Grant, 1991) since *resources* are seen as firm's stocks of available factors (human, financial, physical, technological, reputation, or organizational), while *capabilities* are seen as firm's ability to deploy resources (Amit and Schoemaker, 1993). Accordingly, the diverse flexibility features inherent to the organizational forms analyzed in this study (broaden-scope routines, less-older routines, broader-scope skills, financial slack, lower degree of centralization, and less exhaustive system of rules) should be seen as elements of either resource flexibility or coordination flexibility. Specifically, broaden scope of skills might be included in the resource flexibility category, while broader-scope routines, lower degree of centralization and less exhaustive internal system of rules might be associated to coordination flexibility [21]. Financial slack contributes to both resource and coordination flexibilities.

My findings are also consistent with another recent development in the flexibility literature brought by Volberda (1997). He argues that organizational flexibility depends on managerial capabilities, particularly in turbulent environments, and on organizational design. Accordingly, he suggests two tasks to improve flexibility: on the one hand, the *managerial task*, that is, to settle the *flexibility mix* composed by the firm's *operational flexibility* (capacity to change volume), *structural flexibility* (capacity to change current decision and communication processes) and *strategic flexibility* (capacity to change organizational activities); on the other

[21] Routines, for example, have been explicitly associated to capabilities (Grant, 1991: 122).

hand, the *organizational design task*, that is, to increase the firm's overall potential for flexibility given by firm's technology, structure, and culture. Considering different combinations of the flexibility mix dimension and the overall potential for flexibility ("controllability"), Volberda built a typology of forms (rigid, planned, chaotic, and flexible). My findings corroborate Voberda's (1997) insights at two different levels: first, by providing evidence of the superiority of domestic, private or generalist firms over foreign, stateowned, or specialist firms, the study supports the idea that "flexible forms" should be more successful than "rigid forms" when firms face turbulent environments; second, at a more specific level, my study seems to confirm the relevance of both "organizational design task" and the "managerial task" by providing evidence of the superiority of organizational forms which were particularly associated, respectively, to lower degrees of the "distance problem", i.e, lower centralization and lighter system of internal rules (e.g., domestic or private firms versus foreign or stateowned firms) and to broader scope of skills and routines (e.g., generalist firms versus specialist firms).

Managerial implications

This study provides some insights that may prove beneficial for organizational management. First, by developing a selection model focused on financial performance (rather than survival/failure), it offers a set of answers related to a variable that is very close to managerial concerns. Stakeholders require not only that its organization should be maintained alive but also that it should show signs of relative advantage in its degree of adjustment to environmental conditions (i.e.,

relative success). Shareholders or members of the organization for example are (in general) supposed to benefit more from a better succeeded (i.e., suited) firm than from a less succeeded firm. Second this study gives some conclusions about the types of organizational forms and characteristics that might be best suited for circumstances with a substantial change on external conditions, as in the regulation processes, for example. By knowing which are these organizational forms and characteristics favored by selection forces in such circumstances, managers and other decision makers can contrast them with their current situation and take in advance appropriate decisions (if they are available) to fill the gap or minimize its effects. Third, regarding the surviving goal, the suggestion for the existence of a dual selection process directs the managerial attention towards organizational buffers, when their organizations failed at the relative selection level. The dual selection model suggests that, for survival purposes, organizations can compensate lower levels of financial performance by recurring to some resource or institutional buffers. Fourth, the results suggest that structural flexibility and slack might be very important aspects an organization should have for periods of major environmental changes. Overall, the results remind managers about the significant constraints they have in pursuing organizational goals.

Implications for Public Policy

One innovation in this study regarding the selection perspective is about the detection of a liability of stateownedness. This liability is apparently due to the *distance problem* associated to excess of rules and to decision-making centralization, which inhibits a timely and accurately recognition by stateowned

organizations of large exogenous changes and the consequent response. This description is very close to recent conclusions of the OECD's Public Management Committee based on a five years work. This Committee recommended for the public sector organizations of the OECD countries "the replacement of highly centralised, hierarchical organisational structures by decentralised management environment where decisions on resource allocation and service delivery are made closer to the point of delivery, and which provide scope for feedback from clients and other interest groups" in order to "enable the public sector to respond flexibly and more strategically to external changes" (1995: 7-8).

Deregulation is a typical major environment change. The findings of this study drawn on an important deregulatory process also have some implications for regulators since they call their attention for the organizational forms and organizations characteristics that are particularly vulnerable to changing external conditions. The model of dual selection process here proposed may also help regulators and supervising bodies to develop efforts in order to distinguish whether the factors of observed differential survival changes are primarily due to financial performance variables or to organizational buffers' variables, enabling them a better monitoring of the industries and / or the production of more adequate regulation.

Limitations and Suggestions for Future Research

Although the results of this study provide a valuable contribution to several literatures, some cautions should be noted. First, the time span involved (nine years) may be considered too short to capture all the effects in analysis. Yet, while

this might be relevant, it seems that the nature of the research question here considered (the impact of a well-defined regulatory change) suggests that not only the time span considered might be reasonably enough to capture the most important patterns of results, as well as it might avoid a mixture of effects that could produced by other factors if a longer period was used.

Second, the choice of a particular European banking setting may limit the generalizability of the study. For example, it can be argued that the results here found are due to effects on organizational forms that are specific to this setting. Yet, the theoretical arguments and the choice of organizational forms were carefully built in order to minimize these potential limitations. Future research taking into consideration different settings might shed some light on this issue.

Third, the reasoning about the gain from lower inertial properties was based on the argument that, in such contextual conditions, the gains from a better environmental alignment more than compensate the eventual reestructuring costs. But is that always the case when environments shift significantly? Or does this depend on particular conditions, namely, on dramatic contextual changes as happen in this setting?

Fourth, I used a for-profit making setting (a banking industry) as several other recent studies in this field. Would the predictions still hold in a non-for-profit making setting (such as schools or hospitals)? For example, would contingent inertia concept be still valid in such context? All these questions can be considered in future research.

The measurement of profitability by an accounting financial measure (ROA) can also be seen as a potential limitation. It could be suggested that a capital market-based measure, such as market value change or market-book value ratio, would have been a better choice. However such measures were not possible since many banks were not listed.

Another potential limitation is related to the (deliberate) focus of this study on the outcome of the selection forces rather than on the processes of adaptation. Accordingly, it does not address complementary questions such as how (and how hard) a specialist firm could become a generalist firm in order to benefit from the selection pressures. Such adaptive efforts seems likely, even in the setting here considered; the analysis of such phenomena certainly deserves more attention in the future.

While many avenues for future work in this field are implicitly or explicitly included in the above discussion, some additional suggestions perhaps should be made (given their importance) regarding organizational forms and the method proposed. Considering the selective performance approach and the dual selection modeling, many questions emerge as interesting for future research: Which other organizational forms are relevant in the selection process? When an organization form affects both financial performance and organizational buffer, is there a constant directional relationship between these two effects (i.e., for example when survival chances are improved through organizational buffer, is performance usually reduced)? Or does this directional relationship depend on given forms or

characteristics? And what is the relative importance of the survival impact of organizational buffers vis-à-vis financial performance?

All these and other ideas about future research seem to assure that there is no risk of this field remain inert in the coming years.

PART II
THE IMPACT OF EUROPEAN DEREGULATION ON BANKING STRATEGIES: THE IMPORTANCE OF IMITATION

CHAPTER 7
Introduction to Part Two

Does imitation determine firms' adjustment choices when facing a major environmental change and what are the consequences (if it happens)? This question involves a central topic of concern for strategy researchers, that is, differentiation (Schendel, 1996; Hoskisson, Hitt, Wan, and Yiu, 1999). In the field there are two important theoretical perspectives about differences: the positioning view and the resource-based view of the firm (RBV), and they are sometimes viewed as alternatives (Henderson and Mitchell, 1997) and sometimes as complementary (Porter, 1991). In either mode, both theories glorify the virtues of strategic heterogeneity. The IO economics-based positioning theory stresses the importance of differentiation to achieve and sustain competitive advantage (Porter, 1980). For the RBV, the competitive advantage stems from differences between each firms' unique bundle of resources (Wernerfelt, 1984;Barney, 1991).

This study starts from a distinct perspective and asks whether firms are really so different from each other. Although it is true that their resources often differ, the strategic actions of firms are often quite similar. This similarity in behaviour may mitigate firm differences rather then augmenting them, and have an adverse effect on firm performance. This study looks at whether firms in the same industry really do differ, by examining their response to a set of external shocks. If firms behave in a similar fashion, known in the literature as imitation, then resource differences

and positioning differences may be under-exploited. The similarity of behaviour may result in firms performing less well than they should.

Several recent studies have demonstrated the existence of interorganizational imitation. Fligstein (1991), for example, found imitation pattern in the adoption of diversification strategies by large US firms. Haunschild (1993)'s study shows that managers imitate other firms in corporate acquisitions. Haveman (1993b)'s results show imitation on diversification strategies in the savings and loan industry. Burns and Wholey (1993) found existence of mimetic forces in the adoption of matrix structures in hospitals. Haunschild and Miner (1997) found the existence of different modes of imitation on the choice of investment banker as advisor in an acquisition. Greve (1998) detected mimetic adoption of market positions based on observability and relevance. Kraatz (1998) found that liberal arts colleges imitate each other to adapt to changing environments.

While several typologies of imitation can be considered, one taking into account the economic incentives associated to the mimetic process itself seems highly appropriate when the phenomena involves major strategic choices since these are more (economically) consequential for organizations in contrast, for example, to administrative innovations (O'Neill, Pouder, and Buchholtz, 1998). Herd behavior theories from financial economics provide such typology based on the kind of payoff externalities generated in the mimetic process (Devenow and Welch, 1996; Greve, 1998). Then, three types of imitation can be considered: imitation with positive payoff externality, imitation with negative payoff externality, and imitation with no clear payoff externality, according to whether the payoff of such

behavior increases, decreases or shows no clear pattern as more firms adopt similar conduct. There is some evidence in the literature about the existence of imitation with positive payoff externality (e.g., Wade, 1995) and of imitation with no clear payoff externality either for major strategic choices (e.g., Haunschild, 1993; Greve, 1998) or administrative innovations (e.g., Westphal, Gulati, and Shortell, 1997). However, there seems to be a lack of evidence about imitation with negative payoff externality.

From the strategic management perspective, the study of imitation phenomena should not be confined to whether or not mimetic behavior exists, but should also involve the analysis of its performance consequences. Yet, there has been little attention paid to the performance effects of imitation. Only recently two studies began to build some evidence on this topic. Westphal, Gulati, and Shortell (1997) found that mimetic isomorphism on an administrative innovation (in US hospitals) produced negative effects on efficiency. Deephouse (1999) found that strategic similarity (in US banks) might generate negative effects on profitability. However, no evidence seems to exist about the performance implications of imitation with negative payoff externalities (namely, on major strategic choices).

Another important issue regarding the interorganizational imitation is the determination of who follows whom in these processes. Different criteria for the choice of the 'models' (those who will be imitated) have been proposed. Some studies used network peers as the 'models' (Haunschild, 1993; Westphal, Gulati, and Shortell, 1997; Kraatz, 1998). Similar size has also been hypothesized as the criterion used by imitators to choose their referents (Fligstein, 1991; Haveman,

1993b; Haunschild, and Miner, 1997). The most successful organizations may serve as models according other studies (Haveman, 1993b; Burns and Wholey, 1993; Haunchild and Miner, 1997). While all these studies and others demonstrate the relevance of important aspects in the determination of the 'models' for mimetic behavior, it seems apparent the need for a more generic and systematic framework to explain how firms imitate, which may incorporate all or at least some of those aspects in a coherent manner.

This study attempts to make a contribution in this field by extending previous work in three ways. First, the study examines whether there is imitation with negative payoff externalities, i.e., when the payoff of adoption decreases as more firms adopt such behavior, and which are the underlying theoretical explanations. Second, if there is imitation with negative payoff externalities, it is further investigated which are the performance implications of such process. Third, the study attempts to evaluate whether a more generic framework, based on cognitive perspectives and linked to legitimacy dynamics, applies for the determination of who follows whom in the intraorganizational imitation.

I test my three hypotheses (about the existence of imitation with negative payoff externalities, the perverse performance effects of such imitation, and the cognitive categories relevant for the development of the process) using the Portuguese banking industry in the period of 1988-1996 as my research site. Following previous suggestions in the literature (Haunschild, 1993), I select a major strategic decision and use a direct procedure to test imitation hypotheses.

CHAPTER 8

Theory

Institutional theory and herd behavior models represent two theoretical views offering complementary explanations of mimetic behavior patterns. Institutional theory suggests that organizations imitate others in order to gain or maintain legitimacy, i.e., to conform to a socially constructed system of norms, traditions, values and beliefs (Meyer and Rowan, 1977; DiMaggio and Powell, 1983; Scott, 1987; Suchman, 1995). Herd behavior models show the existence of different sources of imitation based on incentives and on externalities associated to each actor's behavior (Diamond and Dybvig, 1983; Scharfstein and Stein, 1990; Banerjee, 1992; Devenow and Welch, 1996). Next, I briefly introduce these perspectives on imitation.

Institutional theory

The idea of imitation within the institutional theory stems mainly from the institutional isomorphism concept proposed by DiMaggio and Powell (1983). They observe that the literature shows a vast amount of research attempting to explain variation in structure and strategy among organizations, while there is a clear deficit of analysis of a contrasting and growing phenomena: homogenization.

To the question raised by Hannan and Freeman in their seminal paper on organizational ecology (1977), "Why are there so many kinds of organizations?", DiMaggio and Powell asks: "Why there is such startling homogeneity of organizational forms and practices" (1983: 148)? They proposed *institutional isomorphism* (a process by which organizations suffer institutional pressures to resemble other organizations in order to conform to environment) as one possible answer. They further suggest three main processes leading to homogenization: coercive isomorphism, normative isomorphism and mimetic isomorphism. *Coercive isomorphism* corresponds to the process of organizational change in result of pressures made by third parties upon which the focal organization depends. DiMaggio and Powell (1983) emphasized the role fulfilled by governments and regulators, by one side, and parent companies, by another, in these coercive pressures. A different type of homogenization is associated to *normative isomorphism*, where organizations tend to conform not by imposition, but voluntarily. DiMaggio and Powell (1983) emphasize here two important sources of this process: decision-makers' formal education and professional networks.

The third mechanism proposed by DiMaggio and Powell (1983), *mimetic isomorphism*, is central to this study. It characterizes organizational change based on what other organizations have done or are doing. This mimetic behavior is more likely to happen when managers face ambiguous situations with unclear solutions (Cyert and March, 1963). In those situations, legitimacy becomes crucial in order to assure survival (Meyer and Rowan, 1977). *Legitimacy* plays a central role not only in the mimetic isomorphism process, but also in the institutional

theory. According to this perspective, legitimacy means that organizations tend to conform with prevailing norms, traditions and social pressures in their environments; such behavior assure to organizations the support of their stakeholders, and consequently, the way to success and survival (Meyer and Rowan, 1977; Scott, 1987). In fact, there is some evidence that (a) institutional isomorphism provides legitimacy to the organizations engaged in such strategies (Deephouse, 1996) and that the acquisition of legitimacy generates a higher probability of organizational survival (Singh, Tucker and House, 1986).

Thus, according to the institutional view, interorganizational imitation is a legitimacy-seeking activity.

Herd behavior models

In the financial economics literature, *herd behavior* - that is, someone doing what others have done - is not a new concept. Keynes (1936) early predicted that investment managers might tend to "follow the herd" when reputation aspects are important. As he pointed out, "worldly wisdom teaches that it is better for reputation to fail conventionally than to succeed unconventionally" (1936: 158). The economic literature refers anecdotal evidence of this pattern of behavior not only in capital markets, but also in corporate decisions (Scharfstein and Stein, 1990) and even in non-economic situations (Banerjee, 1992). Several probabilistic models have been developed to explain such patterns of decisions. These studies can be classified according three main sources of herding (Devenow and Welch, 1996): informational externalities, payoff externalities, and managerial reputation.

In informational externalities models, also termed as "informational cascades" models (Bikhchandani, Hirshleifer, and Welch, 1992), economic agents pay attention to what others are doing (without knowing why they are doing) and imitate simply because they assume those actions convey some private information. So, imitation may occur even in detriment of the private information hold by imitators. These models may apply to such different situations as corporate takeover bids (when a first takeover bid triggers several other bids) and intention of vote in politics (when higher poll results for a given candidate make people to evaluate him more positively afterwards).

In payoff externalities models, the payoff of an adopting economic agent is affected by the similar behavior of other economic agents. This is the case of the choice of the stock exchanges where investors want to trade, given that the more the newcomers, the more liquid will be the market, the more a potential newcomer will gain (in liquidity). The payoff externality also exists in the case of bank runs, where depositors run on banks after observing other depositors doing so, in result of the joint effect of the principle of "first came, first served" applied to deposit withdrawals and of the liquidity mismatch between assets and liabilities usually experienced by banks (Diamond and Dybvig, 1983).

In reputation-based models, managers have an incentive to follow the herd for the sake of their reputation in the labor market. Managers may benefit from adopting similar decisions as others rather than making idiosyncratic choices due to the so-called *sharing-the-blame effect* (Schaferstein and Stein, 1990). This effect means that if the manager chooses a bad investment, but their rivals also make similar

decisions, he could share the blame that they were victims of a completely unpredictable factor and would be seen by the labor market as having received a informational signal that was correlated with their best rivals. However, if he had chosen a bad investment and in a contrarian position, he will be perceived as a 'dumb'. As consequence, managers will imitate others: doing what they do even if the decisions may have a negative value according their own private information; refusing to do what others refuse to do even if the decision to go forward had a positive private information.

In sum, herd behavior models in financial economics suggest that imitation is triggered when the behavior of some agents seems to generate incentives to be followed (namely, through information gains, payoff gains, or managerial reputation gains).

Environmental uncertainty

It is interesting to note that uncertainty plays an important role in both these theoretical perspectives about imitation. According to institutional theory, the more uncertain the relationship between means (strategy, for example) and ends (performance, for example), the higher the need for legitimacy, and consequently, more likely will be imitation (DiMaggio and Powell, 83). Institutional theorists also suggest that some intermediate bodies, such as consultancy firms, as well organizational internal changes, such as managerial turnover, can trigger the mimicry process (DiMaggio and Powell, 1983). These factors, yet, do not prevent the key need of uncertainty for the development of the imitation process according to the institutional argument.

Similar importance occurs for the financial economics' herd behavior models. This literature suggests that, in general, herding is more likely in situations and decisions for which "many pieces of information are relevant, and for which limitations of time and natural intelligence prevent each individual from individually discovering all relevant information" (Shiller, 1995: 181). The mathematical models of herd behavior in the financial economics literature usually assume the existence of certain types of uncertainty, which determine the occurrence of imitation. In the Banerjee's (1992) sequential model, for example, there are two modes of uncertainty: first, uncertainty about the appropriateness or quality of the information ('signal') received by the focal organization or individual; second, uncertainty about the quality of information underlying the choices (which are observed) of other players in the game.

Another herd behavior model shows how the number of existing uncertainty dimensions may be decisive for the occurrence of imitation. Studying the relationship between asset prices and herd behavior, Avery and Zemsky (1998) demonstrate such importance when removing the price inflexibility usually incorporated in the "informational cascades" models. In fact, they demonstrate that when only one dimension of uncertainty exists (that is, uncertainty about the impact of a shock to the asset value) the adjustments on price prevent herd behavior. However, when two dimensions (the existence *and* the impact of a shock to the asset value) or even three dimensions of uncertainty (the existence of a shock, its impact, *and* the quality of trader´s information) are considered, herding can occur.

In the Scharfstein and Stein (1990) mathematical (herd behavior) model, uncertainty plays also a crucial role. In their model, managers make decisions by taking into consideration that the labor market evaluate them on the grounds not only of the profitability of their investment, but also of the similitude of their behavior compared with their rivals behavior. The relative importance of the second criterion (similitude of behavior) increases as the first one (profitability of investments) depends more on unpredictable conditions. Thus, the more important the systematically unpredictable factors which affect the realized value of managerial decisions, more important will be the need for a similar behavior, and more likely will be imitation.

Thus, according both perspectives here analysed, imitation is particularly associated to uncertainty. This is of most relevance for strategic choice making since strategic management and organization theory literatures have long attempted to link uncertainty, environmental conditions and decision-making. Several dimensions of the environment were identified as determinants of the degree of uncertainty faced by organizations in their process of decision-making. The most important dimensions probably are dynamism (Thompson, 1967), complexity (Thompson, 1967) and lack of munificence (Pfeffer and Salancik, 1978). When studying the effects of two main dimensions of environment on uncertainty (the simple-complex dimension and the static-dynamic dimension), Ducan (1972) found two important conclusions: first, decision-makers in dynamic-complex environments face the greatest extent of uncertainty in

decision-making; second, the static-dynamic dimension is a more important factor of uncertainty than the simple-complex dimension [22]. Pfeffer and Salancik (1978: 68) argued that munificence (i.e., the availability of critical resources in the environment to support the organization survival) also affects the degree of uncertainty faced by decision-makers: when the environment becomes less munificent, organizations may face a higher degree of uncertainty.

Thus, imitation of strategic choices (whatever its underlying driver) might occur especially when environments are dynamic, complex and less munificent. This should be the case whenever environments suffer dramatic changes, and namely when these changes go in the direction of lower barriers to competition, as occurred with several major deregulation processes in the last two decades (e.g., Smith and Grimm, 1987; Zajac and Shortell, 1989; Reger, Duhaime and Stimpert, 1992).

Accordingly,

> **Assumption 1:** *Imitation of major strategic choices is more likely within more dynamic, complex, and competitive environments, like major deregulation contexts, than in less dynamic, complex and competitive environments.*

[22] The simple-complex dimension was represented by the number of factors considered in decision-making; the static-dynamic dimension was represented by the degree of change of those factors over time.

Types of Imitation

Herd behavior models (from financial economics), as early stated, focus its analysis of imitation on the existence of incentives. Namely, these models show that a typology of imitation can be built based on the kind of payoff externalities that exists in an imitation process (Devenow and Welch, 1996). Then, for strategic decisions or organizational changes developed within uncertain environmental conditions (where there is no clear idea about the outcome generated by such practice), three types of imitation can be considered according to the different competitive dynamics involved: **imitation with positive payoff externality**, when there is a positive payoff externality associated to each mimetic behavior, i.e., the payoff of such behavior increases as more firms adopt similar conduct; **imitation with no clear payoff externality**, i.e., when there is no obvious relationship between the payoff of an adopter and previous adoptions; **imitation with negative payoff externality**, i.e., when the payoff of the focal behavior is negatively affected as more firms adopt similar conduct.

The first type of imitation is common, for example, for technological innovations. The adoption of a particular technology by a growing number of firms increases the benefits of a subsequent similar choice by other firms (Wade, 1995). The second type of imitation, where no clear payoff externality arises as more firms follow the same route, is also well documented in the literature either for major strategic choices (Haunschild, 1997; Greve, 1998), administrative innovations (Westphal, Gulati, and Shortell, 1997) or adoption of new organizational structures (Burns and Wholey, 1993).

In contrast, little attention has been given to the third type of imitation, when the payoff of a mimetic behavior is negatively affected by previous similar choices. This may be due to the fact that such kind of imitation is clearly more intriguing (Greve, 1998) since to the initially uncertain value of the focal behavior a dynamic negative incentive is added. In fact, why should one observe intra-organizational imitation in such circumstances? I suggest that this kind of strategic conduct occurs in result of legitimacy-driven forces, that is, this may be the kind of situation where mimetic isomorphism applies: under high-uncertainty conditions, namely about the outcome of a given organizational practice, the legitimacy-based incentives more than outweigh the negative externality-based incentives existent in the process.

Firms seek legitimacy to obtain credibility and continuity (Suchman, 1995). On the one hand, they gain credibility since they become "more meaningful, more predictable, and more trustworthy" (Suchman, 1995: 575). On the other hand, legitimacy-driven activities favours organizational continuity because important stakeholders become more supportive to organizations that appear appropriate and desirable by conforming with prevailing social pressures in their environments (Meyer and Rowan, 1977). Accordingly, organizations make isomorphic attempts to gain legitimacy (Westphal, Gulati, and Shortell, 1997) and institutional isomorphism does provide legitimacy (Deephouse, 1996). The ultimate consequence is that a legitimated organization improves significantly its probability of survival (Singh, Tucker, and House, 1986; Baum and Oliver, 1991).

The case of *imitation with negative payoff externalities* is particularly intriguing for major strategic choices (in contrast to administrative innovations) since the former are more (economically) consequential for the organizations (O'Neill, Pouder, and Buchholtz, 1998). Only powerful forces could compensate the anti-mimicry incentives provided by negative payoff externalities in order to assure that imitation of major strategic choices could develop in such conditions. Legitimacy-driven forces have such power since they influence organizational survival likelihood. Thus, one can expect the occurrence of imitation driven by legitimacy even in the presence of negative payoff externalities.

> **Hypothesis 1**: *There is interfirm imitation on major strategic choices even when the adopting firms face negative payoff externalities.*

Performance implications

The previous section has uncovered the close link that might exist between strategic imitation with negative payoff externalities and legitimacy. However, it also suggests some kind of trade-off between economic incentives and social incentives. This seems to correspond to recent influential arguments that social pressures affect the firms potential to earn economic rents (Oliver, 1997). More specifically, it is argued that legitimacy-driven forces may lead firms to suboptimal strategic decisions, which means the existence of a 'normative rationality' in contrast to 'economic rationality': "As opposed to economic rationality which is motivated by efficiency and profitability, normative

rationality refers to choices induced by historical precedent and social justification" (Oliver, 1997: 701).

The existence of a potential trade-off between legitimacy and efficiency /profitability stems from the classical works on neoinstitutional theory and isomorphism. DiMaggio and Powell claimed "institutional isomorphic processes can be expected in the absence of an increase in organizational efficiency" (1983: 153). Meyer and Rowan stressed that isomorphic behavior allows organizations to "incorporate elements which are legitimated externally, rather than in terms of efficiency" (1977: 348). They argued that "conformity to institutionalized rules often conflicts sharply with efficiency criterion and, conversely, to coordinate and control activity in order to promote efficiency undermines an organization's ceremonial conformity and sacrifices its support and legitimacy" (1977: 340-341).

This trade-off is due to the fact that, by one side, legitimacy-based isomorphism enables organizations to increase their probability of survival (Meyer and Rowan, 1977: 349; DiMaggio and Powell, 1983: 155), and by the other, survival likelihood can be obtained at expense of continuous performance, and vice-versa (Henderson, 1999). This means that a given legitimacy-seeking activity may give a negative contribution to organizational performance while assuring at the same time that the support of certain stakeholders will be given somewhere in the future when and if the organization is caught in particular adverse circumstances.

While surprising little attention has been paid to this subject in the literature, the only empirical study made so far seem to support those theoretical predictions. In their study on TQM (total quality management) adoption by US hospitals,

Westphal, Gulati, and Shortell (1997) found that hospitals that tried to conform to isomorphic pressures have obtained legitimacy benefits in detriment of organizational efficiency. Their study address imitation on an administrative innovation and represent a case of imitation with no clear payoff externalities [23]. Westphal et al. (1997) work shows that imitation with no clear payoff externalities occurs on administrative innovations driven by legitimacy forces and affects negatively organizational performance. As "most strategic choices will tend to have greater economic impact on an organization than administrative innovations" (O'Neill, Pouder, and Buchholtz, 1998: 98), imitation on these kind of choices may eventually be less likely (than on administrative innovations), but when they occur they should be harmful to firms performance too:

> **Hypothesis 2**: *Interfirm imitation on major strategic choices (when the adopting firms face negative payoff externalities) is negatively associated to firm performance.*

Who follows whom?

One important issue regarding the phenomena of inter-organizational mimetic behavior is about the determination of the relevant actors in the process: Who follows whom? In the case of imitation with negative payoff externalities given its

[23] Deephouse (1999) also found some evidence of trade-off between legitimacy and performance. While his study is about conformity (i.e., *stock*) rather that about imitation (i.e., *flow*) in the sense of imitation defined by Hauschild (1993: 567), the type of phenomena he analysed (bank asset composition) could anyway be considered as associated to *no clear payoff externalities*.

close link of legitimacy incentives, it should be expected some kind of relation between the 'models' chosen for mimicry and the provision of legitimacy. I suggest here a particular framework based on cognitive perspectives which take into consideration both managerial and legitimacy providers perceptions of intra-industry categorization of firms.

Strategic management literature has long recognized the importance of environmental conditions on firms' strategies (Thompson, 1967; Hofer, 1975; Child, 1972; Porter, 1980; Bourgeois, 1984; Fiegenbaum, Hart, and Schendel, 1996). But, according Weick (1979), instead of some objective 'external environment' it is the 'enacted environment' that matters because the decision-makers enact the environment to which the organization then adapts, in a mutual dependent process. Such phenomena evolve through cognitive models.

Cognitive models explain how decision makers, given the limited human capacity and the scarce time available to decide, deal with that massive, complex and ambiguous amount of information they face continuously. According to a growing body of strategic management research and organization theory (e.g., Kiesler and Sproull, 1982; Schwenk, 1984; Huff, 1990; Porac and Thomas, 1990; Schwenk, 1988; Reger and Huff, 1993) managers use cognitive *simplification* processes to overcome that problem. Specifically, they can categorize like elements of the environment. In terms of competitor analysis, this would mean creating categories or groups of firms in line with relevant similarities shared by those included in a same category or group (Porac, Thomas and Baden-Fuller, 1989; Porac and Thomas, 1990; Reger and Huff, 1993).

Two cognitive approaches can be used to specify groups or categories of managerial thought: the personal construct theory and the categorization theory (e.g., Dutton and Jackson, 1987; Huff, 1990).

The *personal construct* theory proposes that individuals organize, simplify and interpret the environment through bipolar 'constructs' (Reger and Huff, 1993). The 'constructs' are patterns that individuals create and then use to frame the realities of the world surrounding them, and are defined in terms of similarities and differences (Kelly, 1955). Applying this theory to strategy, it can be said that managers frame the environment through some filters, the 'constructs', which they build and then try to adjust over the 'material aspects' of the environment (Ginsberg, 1989).

The 'constructs' (dimensions) represent things, 'elements' (firms, for example) that are alike in certain aspects and different in others. The personal construct theory anticipates a link between the cognitive structure of individuals and firms' actions: these perceptions facilitate and constrain the organizational behavior (Dunn and Ginsberg, 1986).

On the other hand, the *categorization* theory relies upon the hierarchical organization of concepts: individuals form cognitive categories, i.e., sets of objects with similar perceived features or attributes (Dutton and Jackson, 1987; Porac and Thomas, 1990). Those categories, in this view, are related to each other in a specific type of (cognitive) structure: they are hierarchically distributed along several levels (originally, three levels: the 'superordinate' level, the 'basic' level and the 'subordinate' level). The first level (the highest one) is formed by the

most abstract categories and each one of these, in their turn, comprises categories situated in the subsequent lower level, and so on (Dutton and Jackson, 1987).

The attributes, that is, the similarities and differences that constitute the raw material for the formation of categories, have two important characteristics: first, it is not required that one single attribute is perceived to belong to all members of a certain category, nor any member of one category have necessarily all attributes of that category (e.g., Porac and Thomas, 1990); second, there are attributes that are relevant to differentiate categories and there are others that are common to different categories (Dutton and Jackson, 1987). The set of differentiating attributes of a specific category serves to characterize a prototypical category member (Dutton and Jackson, 1987; Porac and Thomas, 1990).

Both theories, applied to firms and their strategies, suggest that the very demanding environmental analysis task is simplified by grouping the firms in a given industry in differentiated levels of attention and interpretation efforts. Irrespective of which of the above referred cognitive theories we prefer, it can be said that "the interorganizational comparisons can be performed not on the attributes of individuals organizations, but on the typical attributes of categories of organizational forms" (Porac and Thomas, 1990: 228).

So, managers create cognitive categories and identify themselves with other firms in the same category. If they imitate strategic decisions of others, they are likely to imitate those they consider as more observable and relevant (Greve, 1998), i.e., they are likely to imitate those who belong to their cognitive category (Spender, 1989; Porac and Thomas, 1990).

Accordingly,

> **Assumption 2:** *Firms imitate those their managers perceive to be similar.*

In the case of imitation with negative payoff externalities, which is the object of this study, legitimacy plays a crucial role as discussed above. This means that a particular attention should be dedicated to the importance of *legitimacy providers*, i.e., those that assess the conformity of firm behavior to a specified standard in order to provide legitimacy. Here I suggest a particular role for legitimacy providers within the dynamics of the imitation process.

To explain this argument it seems worthwhile to go back to the concept of legitimacy. A fine definition of legitimacy was recently formulated by Suchman: "Legitimacy is a *generalized perception* or assumption that the actions of an entity are desirable, proper, or appropriate within some *socially constructed* system of norms, values, beliefs, and definitions" (1995: 574, emphasis added). In this definition, notions like "generalized perception" or "socially constructed system" rightly emphasize the dependence of legitimacy on collective observers and on cognitive process. Legitimacy is a *perception* since "it represents a reaction of observers to the organization *as they see it*" and is a *socially constructed* since "it reflects a congruence between the behaviors of the legitimated entity and the *shared* (or assumedly shared) beliefs of some social group" (Suchman, 1995: 574, emphasis added). Then, legitimacy depend on how those observers, i.e., the legitimacy providers, perceive the organizations' behavior against socially constructed standards.

But how legitimacy providers construct their reference standards? I suggest that, given the enormous amount, complexity, and ambiguity of involved information, legitimacy providers (like managers regarding their specific tasks) also need to simplify the environment within which potential candidates to legitimacy evolve (Schwenk, 1984; Huff, 1990) in order to fulfill their own tasks. Specifically, to set the standards against which they can infer their assessments, legitimacy providers also need to categorize the diverse set of involved firms (Porac and Thomas, 1990). I suggest that they share among them in some degree this intra-industry categorization as managers in different firms within a given industry widely share perceptions about intra-industry categories. In fact, Reger and Huff (1993) found that executives from different firms share perceptions about intra-industry groupings and explained this as the result (a) of interaction of company executives within their industry associations and other meeting events and (b) of commonalities in information sources such as trade publications or similar consultants.

Furthermore, I suggest that not only it is likely that legitimacy providers share among them in some degree their perceptions about intra-industry categorization as well as they will tend to share them with companies executives, and this might be a two-way process. This perceptions sharing process between legitimacy providers and managers closely parallels the process characterized by Reger and Huff (1993) among managers. This similarity can be better understood by recalling who are the legitimacy providers. Hybels (1995) identified four main groups of organizational constituencies (the crucial social actors in the legitimization attribution process). These legitimacy providers were the state

(both directly, through contracts or grants, and indirectly, through regulation and legislation), the public (the several lobbying groups, as consumer groups), the financial community (through their periodical or occasional assessments of the financial and accounting situation of organizations), and the media (by reporting "illegitimate" actions and by establishing criterion for appraisal of decision-makers). To these relevant groups, others can be added such as professional bodies, and unions, at the external side, and workers and managers, at the internal side (DiMaggio and Powell, 1983; Rueff and Scott, 1998). The literature already found evidence for the role of media and regulators as sources of legitimacy in banking (Deephouse, 1996).

Thus, in the case of a banking industry, for example, the mechanisms through which legitimacy providers and managers develop shared perceptions (about intra-industry categories) should be quite direct since interaction and information sources sharing are intense and frequent. Managers, media and regulators frequently interact and periodically exchange formal and informal information. On the one hand, it is easy for the media, for example, to capture the basic categorical perceptions of managers through their frequent mutual contacts; these categories are then used in reports, editorials and performance tables where the relative assessments of organizations are expressed. Reports of industry associations may also reflect the categories that managers have in their minds, given the obvious link between managers ideas and the content of those publications. Regulators tend to use managers' cognitive categories since many of them come exactly from the industry. On the other hand, the categorization used by "observers" may tend to influence managers' perceptions given the legitimacy

process itself. In sum, each party has strong incentives to understand the others' perspective.

Accordingly,

> **Assumption 3:** *Both managerial and legitimacy providers' perceptions about the relevant intra-industry categorization are reflected in the writings and views of legitimacy providers such as the press and regulators.*

So, taking into consideration all these arguments and specifically Assumption 2 and Assumption 3,

> **Hypothesis 3:** *Firms imitate those that are defined as similar in the writings and views of legitimacy providers.*

CHAPTER 9

Research Design

Research Context

In this study, I use data from Portuguese banking industry in the period between 1988 and 1996. As explained below, this setting was associated with a significant environmental change, resulting in a long period of high uncertainty, where firms faced major strategic choices and where herding effects were likely.

The Portuguese banking system experienced a kind of re-foundation in 1975 when, in result of a political revolution, all banks (with the exception of foreign ones) were nationalized and new merged institutions were created. Only in 1984, following a shift in the internal political balance, it became again possible to launch new domestic private banks. Some new foreign banks also obtained authorization to enter in the market after several unsuccessful attempts. In 1989, started an important process of privatization involving the largest banks in the system.

Most of the recent changes occurred in the Portuguese market were associated with the European banking evolution. Portugal is one of the members of the enlarged European Union, which has experienced a dramatic deregulation process in the banking industry. Until the late 1980s it was one of the most regulated in

the European Union area and banks had few degrees of freedom: for instance, interest rates and total lending amounts to be offered by individual banks were administratively conditioned.

The situation changed radically in the late 1980s when the European Union (EU) undertook a series of important regulatory changes regarding the banking industry, starting with the 1989 Second Banking Directive. This directive established the single license principle by which any bank authorized in an EU country can automatically carry on a wide range of banking activities in any other EU country. Almost simultaneously, the 1988 Directive set down a several-stages process of full liberalization of capital flows (to begin in June 1990). In 1989, the Own Funds Directive and the Solvency Ratio Directive defined how to calculate the solvency ratio, placing all banks on an equal footing. After that more changes were to come under the 1992 single market initiative and later to built up the launch of the single currency in 1999 (Appendix A details the deregulation process).

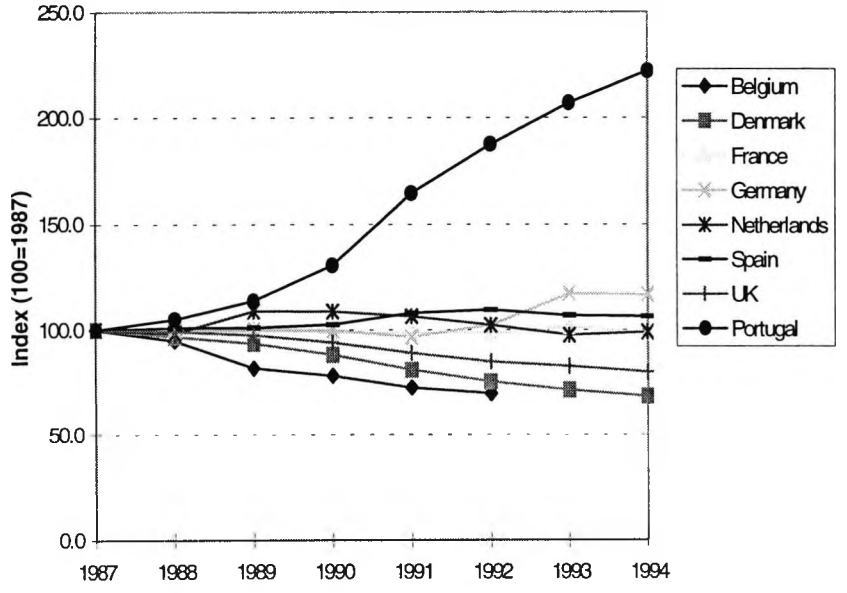
The cumulative result of these changes was to cause general uncertainty among players and open the possibility of new strategic choices (Canals, 1993; Gardener and Molyneux, 1990; Gardener, 1995; Gual and Neven, 1992). Uncertainty yields the possibility of change and the forces for change were evident. But the problem faced by bankers in such dynamic and complex context was to identify the range of possible choices and determine which were the best for their banks. Obviously, banks altered products, range of services, customer segmentation, promotion, and

prices practices. Not so obviously, banks altered their branch networks: "where to compete".

There has been considerable similarity of circumstances between Portugal and other European countries with respect to the banking legacy and the general patterns of evolution. But there have been differences. Unlike other countries, the Portuguese banking industry experienced a high rate of branch growth (see Figure 9-1). This was not observed elsewhere and is not easily explained by "rational factors".

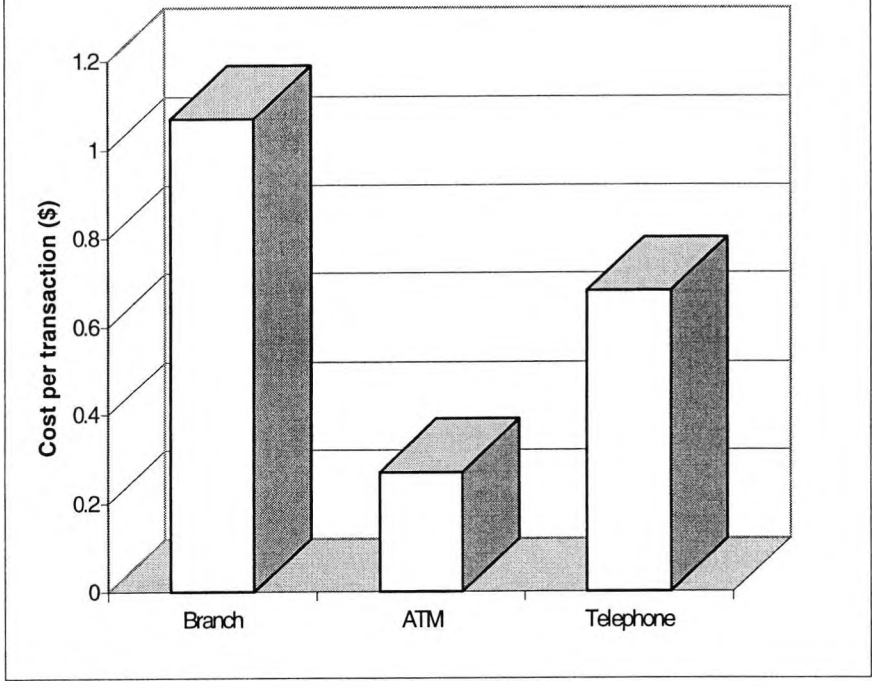
The Portuguese choice seems odd. Portugal enjoyed free access to new technology such as telephone banking, computer-based banking, EFTPOS (electronic funds transfer at point of sale), and ATMs. On the last point, Portugal was well advanced having a large and unique ATM network standardized for all

FIGURE 9-1
Branch Network Size
(European countries)



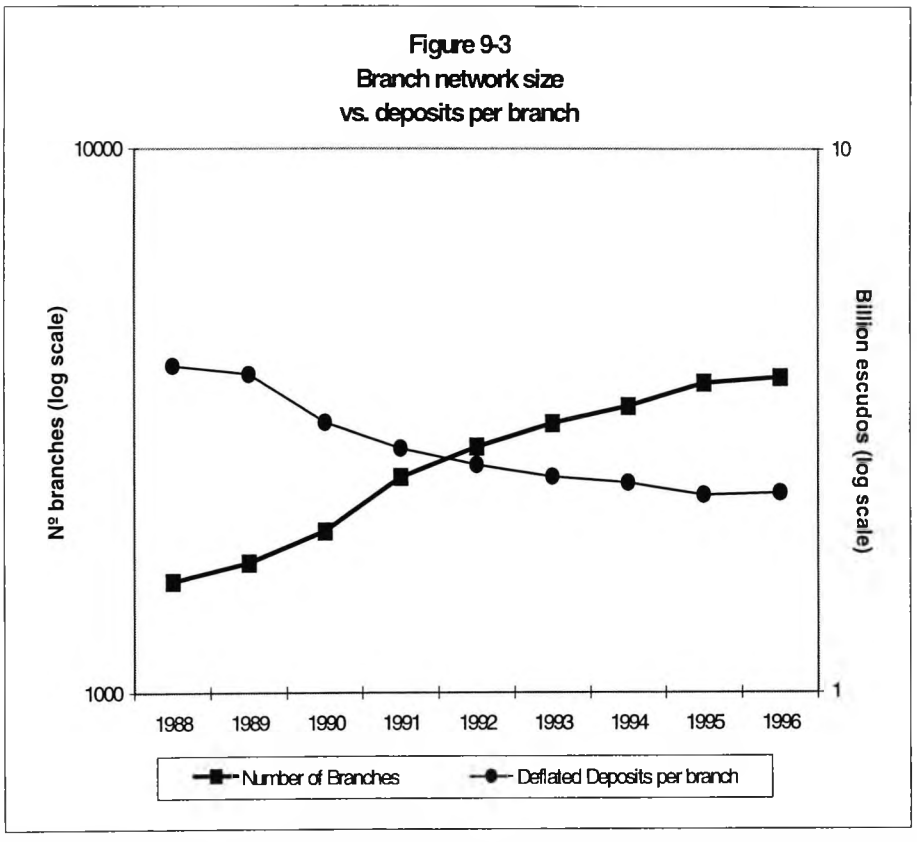
banking players, allowing any customer to use any bank's ATM and reducing the comparable level of branching needed. Given the change in bank clients habits, the use of better segmentation procedures and the significant cost differential between branches and other distribution channels (Figure 9-2), the role of bank networks have been increasingly questioned by bank experts. All this suggests that the need for expanding the branch network was questionable. Others have also noted that the Portuguese banking industry is in counter-cycle with what is

FIGURE 9-2
Comparative costs of distribution channels (US)



occurring in Europe and in the United States" (Fonseca, 1995: 18).

The consequence of this behaviour has been to lower potential returns (Miller,



1997: 72). As Figure 9-3 shows, deposits per branch consistently declined as the branch network size has been increasing [24]. Deposits per branch is a crucial measure of efficiency of branches given that fund gathering is the main (while obviously not exclusive) purpose of branch expansion.

Data

Our study period (1988-1996) spanned the whole timetable of change. I built a database about the number of branches held by each of the 26 banks present in

[24] The eventual negative impact of branch expansion on overall profitability is more serious when the typical banking problems of *moral hazard* and (customer) switching costs are taken into account in banking expansion (particularly in geographic expansion).

each year, based on data from the Associação Portuguesa de Bancos, the Portuguese banking association. I also collected detailed data for 1990 and 1991 on the location of branches. This required us to allocate the branches of all 26 banks into the 305 geographic areas.

I also collected standard economic data such as bank ownership, bank profits, and organizational age (starting from 1975 the date of founding of modern banks). Our sources include annual bank reports, further cross-checked with directs contacts with the banks involved and publications of the Portuguese banking association and Portuguese Finance Minister.

Measurement

It has been already noted that most research on interorganizational imitation tended to adopt indirect measures of the existence of mimetic behavior, such as the use of the percentage of adoptions of some organizational change or innovation, or the relationship between adoption and density of previous adoptions (Haunschild, 1993). A stronger test of imitation may satisfy the three conditions proposed by Haunschild (1993: 567):

a) the occurrence of a certain behavior by the "models" for imitation, at time period t;

b) the observability of such behavior by other economic agents;

c) the replication of the referred behavior by other organizations at time period $(t + x)$.

In this study, I will use this stronger test of imitation with x equal to 1 (a relatively stringent condition which enlarges the validity of the results).

Defining Cognitive Groups

I hypothesized that firms imitate those which are perceived as similar by managers and legitimacy-providers and which are defined as such by the writings and views of those legitimacy-providers. Hybels (1995) identified several groups that might be relevant in the legitimization attribution process, namely, regulators, lobbies, financial community, and media. Deephouse (1996) demonstrated that media and regulators are important sources of legitimacy in banking. So, in the Portuguese banking setting, I looked for media reports, the Portuguese banking association publications, the banking analysts comments and regulators assessments. All were in complete agreement about three dimensions, or attributes as termed by the categorization theory, the cognitive approach I used here to capture cognitive goupings. Categorization theory relies upon a hierarchical organization of concepts: individuals form cognitive categories, which are sets of objects with similar perceived features or attributes (Dutton and Jackson, 1987; Porac and Thomas, 1990). Those categories are related to each other in a specific type of cognitive structure. They are hierarchically organized along several levels, where the highest one is formed by the most abstract categories and each one of these, in their turn, includes categories in a subsequent lower level, and so on (Dutton and Jackson, 1987). There are attributes that are relevant to differentiate

categories and there are others that are common to different categories. The set of differentiating attributes of a specific category serves to characterize a prototypical category member (Dutton and Jackson, 1987; Porac and Thomas, 1990).

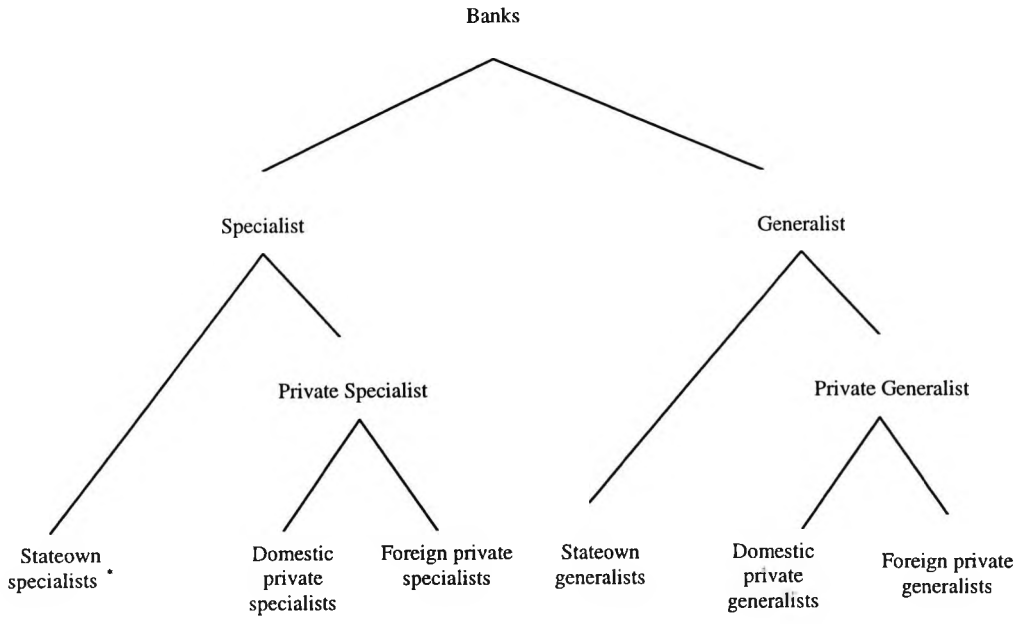
In my case, the attributes or dimensions were the degree of specialism (which leads to generalists banks and specialists banks), the ownership structure (stateown banks versus private banks), and the origin (domestic banks versus foreign banks). The Appendix B details examples of the dimensions used by legitimacy providers in this setting. Following Porac and Thomas (1990), Figure 9-4 illustrates how my sources saw the industry based on such dimensions. It shows that there are five relevant categories: state-owned generalists banks; domestic private generalist banks; domestic private specialist banks; foreign generalist banks and foreign specialist banks (it should be noted that the state-owned banks were all generalist banks).

I also set up a control test of group behavior by identifying the high performers in the overall sample. In previous studies on legitimacy-driven imitation, it was conceptually suggested that firms might follow the most successful firms (DiMaggio and Powell, 1983) and some empirical studies tested such proposition (Haveman, 1993b; Burns and Wholey, 1993; Haunschild and Miner, 1997). Haveman (1993b) also suggested similar size as possible criteria when firms choose whom to imitate. In this study, I will test the relevance of cognitive categories against top performers, but I will not consider similar size criteria. While top performers can be clearly seen as an alternative conceptual criteria to

cognitive categorizations of similarity since they can be completed different from the focal firm, similar size criteria can be viewed as representing no more than a proxy (or a subset) of the cognitive criteria of similarity.

FIGURE 9-4

Intra-industry categories
(applying categorization theory)



(*)This category is empty in the Portuguese case.
Note: "Private" in the Portuguese setting means "non-stateown".

The high performing group is composed by banks belonging to the top two deciles ranked by performance, following the procedure suggested by Haveman (1993b).

Strategic choice and Variables

Our macro picture needs a proper micro-analysis. This study's goal is to test a particular mode of imitation and its implications using major, consequential

strategic choice. Thus, the Portuguese banking industry provides an excellent subject to study: growth choice (namely, branch growth choice).

Studying branch growth allows us to examine deliberate, i.e. branch growth (rather than realized growth, i.e., assets growth) which is appropriate for imitation analysis, given the focus on the role of the decision-makers. Most important, branch growth choice involves negative payoff externalities if a process of inter-organizational imitation develops. Furthermore, this branch growth strategic choice has a useful feature from a research perspective. It is highly visible to competitors and external observers, clearly defined in time and in space, and also highly consequential in terms of the organizational performance (given the extent of resources required, the internal areas affected and the direct financial flow generated).

Growth will be measured in two different ways: *basic growth choice* (which related to the bankers' option on whether to open or close new branches) and the *location growth choice* (which relates to the bankers' option of choosing the geographic location where to grow).

Dependent variables on branching. The dependent variables vary according each hypothesis. *Basic growth choice* of individual banks indicates the basic direction of the strategic choice here studied. It is a dichotomous variable which assumes the value "1" when banks decide to increase their branch network size and assumes the value "0" when they remain static (or retrench).

Location growth choice is a dichotomous variable which assumes the value '1' for the counties to which a certain bank i decided to expand its network in 1991 and assumes '0' otherwise. Portugal is divided into 305 geographic areas (counties).

Independent variables on branching. *Basic growth choice of similar cognitive category* is a dichotomous variable which takes the value '1' when the majority of organizations which belongs to the same cognitive group as the focal bank have expanded their branch networks in the previous year, and takes the value '0' otherwise.

Location growth choice of similar cognitive category is the independent variable in the Hypothesis *1c* and *1d*; it takes the value '1' for the counties where one or more organizations which belongs to the same cognitive group as the focal bank have expanded their branch networks in the previous year; otherwise, it assumes the value '0'.

Cummulative growth choice. I sought to measure the cummulative effect of branch growth in the period in analysis where imitation may have occurred. Normal economic models of rational behavior would predict that the larger the expansion, the higher the performance. I predict the opposite: the larger the imitation-driven expansion, the larger the negative impact on performance. So, this independent variable represents the accumulated branch growth since 1988 (the first year of the hypothesized mimetic period) and is measured by the number of new branches accumulated since 1988 for each bank till each focal year.

Dependent variables on Performance. Performance is measured by return on assets (ROA), yearly calculated as net income divided by averaged assets. ROA is one of the most commonly used measures of performance in the strategy and organizational literature. It appears in the strategic choice stream (e.g., Iaquinto and Fredrickson, 1997; Geletkanycz and Hambrick, 1997), as well as in recent organizational ecology and evolutionary studies (e.g., Sinha and Noble, 1997; Barnett, Greve and Park, 1994), and also in strategy studies on banking industry (e.g., Wiseman and Catanach, 1997; Ramaswamy, 1997). ROA is the indicator most closely watched by banks analysts and bankers themselves (Reger, Duhaime and Stimpert, 1992: 195), allowing comparisons between firms of different sizes and not being as sensitive as some alternatives (e.g., ROE) to capital structure differences and changes. The net income and the total assets figures were collected from the Boletim Informativo series of Associação Portuguesa de Bancos (APB), the Portuguese banking association.

Control variables. In Part One of this thesis I demonstrate that organizational forms and organizational characteristics affect organizational profitability. Accordingly, I use those organizational forms and characteristics as control variables here. *Organizational size* is operationalized as the amount of total assets held by the bank adjusted by the appropriate annual GDP deflator. This operationalization has been extensively used in recent strategy studies based on banking (Magnan and St-Onge, 1997; Wiseman and Catanach, 1997; Sinha and Noble, 1997), in strategic choice literature (Geletkanycz and Hambrick, 1997) and

in organizational ecology and evolutionary studies (Sinha and Noble, 1997; Barnett, Greve and Park, 1994; Kelly and Amburguey, 1991),

Organizational age is measured as the number of years of activity presented by each bank since 1975. This year was chosen as a start-the-clock reference (Silverman, Nickerson and Freeman, 1997) because it relates to a starting point of a new era in the Portuguese banking industry as explained above.

Specialism. In the banking industry, the distinction between specialists and generalists parallels the usual distinction between retail and wholesale banks, which is seen in the strategy literature as crucial to analyze the banks strategy (Ramaswamy, 1997). Accordingly, I use a dummy variable to characterize the specialism type, which takes the value '1' in case of generalist (retail) banks and '0' in case of specialist (wholesale) banks.

Foreign. Consistent with Zaheer and Mosakowski (1997) I define this variable as a dummy variable which assumes the value '1' if the bank is controlled by a foreign shareholder and assumes '0' otherwise. In this study, all the banks classified as 'foreign' operate clearly as subsidiaries of some well-known international bank.

Stateowned. Portugal began an important privatization process in its banking industry in 1989. I define state-owned as a dummy variable assuming the value '1' when one hundred per cent of the equity was held by the government and '0' otherwise.

Methods

The SPSS statistical package was used to perform contingency table analysis and generalized least squares analysis. For contingency tables, the Pearson chi-square and the likelihood-ratio chi-square tests were used to determine if there is a dependence relationship between the dependent variables and the independent variables. The Goodman and Kruskal tau was used to assess the relative importance of alternative types of imitation (De Groot, Ferber, Frankel, Seneta, and Watson, 1982; Norussis, 1993) when both occur (if that happens). To test for performance effects, a generalized least squares (GLS) model was used, which allows us to deal with pooled cross-section and time series data. Following several recent studies on strategic choice (e.g., Hambrick, Cho, and Chen, 1996) and isomorphism (Miller and Chen, 1995), I used a two-stage cross-sectionally heteroskedastic and timewise autoregressive model (Kmenta, 1997) first correcting firm-specific autocorrelation (frequently found in time series data) and then removing heteroskesdasticity among residuals (usually found in cross-section data).

The base model is (Kmenta, 1997: 616):

$$Y_{it} = \beta_1 X_{it,1} + \beta_2 X_{it,2} + \ldots + \beta_k X_{it,k} + \varepsilon_{it}$$

($i = 1,2,\ldots,N$; $t = 1,2,\ldots,T$)

where Y_{it} is the value of bank i's performance in the year t and $X_{it,1}$ is the value of the independent variable 1 for the bank i in the year t.

First, the ordinary least squares method is applied to all N x T observations to generate the regression residuals which will be used to calculate consistent estimates of ρ_i:

$$\hat{\rho}_i = \frac{\sum e_{it} e_{i,t-1}}{\sum e_{i,t-1}^2}$$

(t = 1,2,...,T)

Then, these estimates of ρ_i are used to obtain transformed (dependent and independent) variables and a new regression where the autocorrelation of errors for individual banks is removed.

Next, the cross-section heteroskedasticity is removed by running a new regression where the dependent and independent variables are the previously transformed ones divided by the variance of the residuals of the latter regression.

Table 9-1 presents descriptive statistics and correlations for the variables included in the GLS model tested for the Hypothesis 2.

This table shows an important correlation level between growth choice and size. Several steps were taken to investigate the existence of any multicollinearity problem (Hair, Anderson, Tatham, and Black, 1995; Norussis, 1993). First, I examined tolerance levels and variance inflation factors. Tolerance levels for each variable included in the model presented in Table 6 are all well above the minimum recommended cut-off value of 0.10 (the minimum realized value is

0.233) and the variance inflation factors are all well below the maximum recommended cutoff value of 10, being the highest realized value 4.292 (Hair et al., 1995; Kennedy, 1992), suggesting no multicollinearity. I also analyzed the condition indices, being the highest one 10.07, that is, far below the maximum recommended cutoff value of 30 (Hair et al., 1995; Kennedy, 1992). Accordingly, no multicollinearity was detected.

TABLE 9-1

Descriptive Statistics and Correlations

Variable	Mean	s.d.	1	2	3	4	5	6
1. Performance	0.009	0.014						
2. Size x 10^{-6}	0.54	0.72	- 0.07					
3. Age	14.00	5.35	- 0.44	0.32				
4. Specialism	0.82	0.38	- 0.19	0.32	0.40			
5. Foreignness	0.32	0.47	0.02	-0.45	-0.36	-0.54		
6. Stateowness	0.25	0.44	-0.12	0.25	0.28	0.27	-0.40	
7. Cummulative growth choice	74.02	121.7	-0.08	0.81	0.19	0.28	-0.28	-0.08

CHAPTER 10

Results

Tables 10-1 to 10-4 present the results of the tests of hypotheses 1 and 3. All these four tables are related to hypothesis 1 since they examine whether there is (or not) imitation with negative payoff externalities. Table 10-1 and Table 10-3 tests whether there is imitation based on cognitive groups, using the two types of growth choice analysed (*basic* growth choice and *location* growth choice).

TABLE 10-1

Bank basic growth choice:
Banks that follow the behavior showed
by their cognitive group in the previous period
in terms of branch opening [a]
(1990- 1996)

	Actual Number of cases	**Randomly expected number of cases**
Those that follow the cognitive group in any period	150 ***	109.4
- from which:		
- (when the cognitive group have chosen to grow)	(116)	(95.7)
- (when the cognitive group have chosen not to grow)	(34)	(13.7)
Those that do not follow the cognitive group	32	72.6
Total (26 banks – 7 years)	**182**	**182**

[a] The behavior of the cognitive group is represented by the actions taken by the majority of them.
* p <.05; ** p <.01; *** p <.001
Significance levels are those obtained using both Pearson chi-square and likelihood ratio tests.

Tables 10-2 and 10-4 examine whether there is imitation on these two types of choices but based on top performers, as an alternative to the cognitive groups. Finally, Table 10-5 presents the results of the test of hypothesis 2.

Table 10-1 reports the results of the test about imitation on basic growth choice based on similar cognitive group when firms try to respond to changing environmental conditions.

Pearson chi-square and likelihood ratio tests show that there is a significant dependence between basic growth choice of individual banks in period *t* and basic growth choice of banks of similar cognitive category in the previous period (*t-1*). Near 82% (150 cases in a total of 182) of the cases (bank/periods), irrespective of the growth choices made, indicate imitation. Considering the specific strategies chosen, we can see that near 89% (116 cases in a total of 131) of cases where a choice to grow was made have decided in such direction after identical decision have been taken by the banks of similar cognitive category in the previous period. Thus, there is strong support for Hypotheses 1 and 3.

As a counter-test of results of Table 10-1 (regarding hypothesis 3), I challenge its strength by testing whether banks also follow top performers. Results (Table 10-2) show no statistical dependence between basic growth choice of individual banks in period *t* and basic growth choice of top performers: no imitation of top performers had occurred at this level.

TABLE 10-2

Bank basic growth choice:
Banks that follow the behavior showed
by the top performers in the previous period
in terms of branch opening [a]
(1990- 1996)

	Actual number of cases	**Randomly expected number of cases**
Those that follow the top performers in any period	79	85.2
- from which:		
- (when the top performers have chosen to grow)	(53)	(56.1)
- (when the top performers have chosen not to grow)	(26)	(29.1)
Those that do not follow the top performers	103	96.8
Total (26 banks – 7 years)	**182**	**182**

[a] The behavior of the top performers is represented by the actions taken by the majority of them.
* p <.05; **p <.01; *** p <.001
Significance levels are those obtained using both Pearson chi-square and likelihood ratio tests.

Table 10-3 examines whether individual banks imitate the location growth choice of banks belonging to the same cognitive group. There are 163 cases of imitation against the 41.1 randomly expected (i.e., four times more than expected by hazard), and the Pearson chi-square and likelihood ratio tests show significant dependence between the location growth choice of individual banks in period t (that is, the places they have chosen to grow in that period) and the location growth choice of banks of similar cognitive category in the previous period (*t-1*). In addition, since all banks are free to branch in any location, and many have multiple branches in an area, I look to places where banks choose not to grow.

Imitation is found here as well. There are 6810 cases of mimetic behavior. So, these results also give strong support for Hypotheses 1 and 3.

TABLE 10-3

Bank location growth choice:
Banks that follow the behavior showed
by any member of their cognitive group
in the previous period in terms of locations chosen [a]
(1991)

	Actual number of cases	**Randomly expected number of cases**
Those that follow the cognitive group in location decision	6973 ***[b]	6729.2
- from which:		
- (growing in places where the cognitive group have chosen to grow to)	(163)	(41.1)
- (not growing in places where the cognitive group have chosen *not* to grow to)	(6810)	(6688.1)
Those that do not follow the cognitive group in location decision	957	1200.8
Total (26 banks – 305 locations)	**7930**	**7930**

[a] Banks were able to (and in fact did) open more than one branch in a specific location; their choice is possible in every period.
* p <.05; ** p <.01; *** p <.001 (Significance levels are those obtained using both Pearson chi-square and likelihood ratio tests).
[b] Goodman and Kruskal tau = 0.054 (significance level = 0.000).

I challenge the results of Table 10-3 (in relation to hypothesis 3) by testing if banks follow top performers behavior on the location growth choice. The results (Table 10-4) show that while there is a statistical dependence between the location growth choice of individual banks in the period *t* and the location growth choice of top performers in the period *t-1*, the level of dependence (given by the

Goodman and Kruskal tau) is 10 times lower that the one showed in Table 10-3: cognitive categories-based imitation is clearly more important than imitation using top performers as models in the location growth choices.

TABLE 10-4

Bank location growth choice:
Banks that follow the behavior showed
by any top performer in the previous period
in terms of locations chosen [a]
(1991)

	Actual Number of cases	**Randomly expected number of cases**
Those that follow the top performers in location decision	7447 *** [b]	7415.0
- from which:		
- (growing in places where the top performers have chosen to grow to)	(24)	(8.0)
- (not growing in places where the top performers have chosen *not* to grow to)	(7423)	(7407.0)
Those that do not follow the top performers in location decision	483	515
Total (26 banks – 305 locations)	**7930**	**7930**

[a] Banks were able to (and in fact did) open more than one branch in a specific location; their choice is possible in every period.
* p <.05; ** p <.01; *** p <.001 (Significance levels are those obtained using both Pearson chi-square and likelihood ratio tests).
[b] Goodman and Kruskal tau = 0.004 (significance level = 0.000).

Hypothesis 2 predicted that the strategic choice involved in the mimetic behavior with negative payoff externalities might give a negative contribution to banks performance. The results of the GLS regression presented in Table 10-5 show a negative and significant association between accumulated branch growth and

bank ROA, providing support for Hypothesis *2*. Each one additional branch opened in this mimetic context reduced bank return on assets by 0.113 percent points of the average ROA (0.01152) presented in the beginning of the period (1988). On average, during the whole period of analysis, banks have expanded their branch networks by 85 branches. This means that by the end of the period, banks may had lowered their initial ROA by almost 10% due to their imitation-driven branch growth.

TABLE 10- 5

Generalized Least Squares Regression on Performance (Hypothesis 2)

Variable	β	s.e.	p values
Intercept	0.03080	0.003	0.000
Independent variable :			
Cumulative growth choice	- 0.000013	0.000	0.019
Control Variables:			
Size x 10^{-6}	0.00282	0.001	0.006
Age	- 0.000851	0.000	0.000
Specialism	- 0.0101	0.002	0.000
Foreignness	- 0.00666	0.003	0.019
Stateownness	- 0.00402	0.001	0.000
F value: 24.511	Signif. F= 0.000		
$R^2 = 0.461$	Adjusted $R^2 = 0.442$		
N = 208			

Significance levels are two-tailed for control variables and one-tailed for hypothesized effects.

CHAPTER 11
Discussion

The overall goal of this study was to examine whether imitation is an important driver of firms' adjustment choices when facing a major environmental change and which are the associated implications.

The findings show that firms tend to respond to environmental change by imitating others even when there are negative payoff externalities involved in the process. It was also found that, as hypothesized, such kind of imitation leads to negative contribution to firms' performance. Furthermore, results supported the idea that managers and legitimacy providers tend to build similar perceptions of intra-industry categorization and, consequently, that imitation is based on those firms defined as similar in the writings and views of legitimacy providers. These findings offer significant implications for interfirm imitation theories, for strategic management literature, and for managers.

Implications for interfirm imitation theories

Based on herd behavior models from financial economics (Devenow and Welch, 1996), and considering Greve (1998), it was suggested that a relevant typology for strategic choice interfirm imitation might be the following: imitation with positive payoff externality, imitation with no clear payoff externality, and imitation with

negative payoff externality. Previous studies have demonstrated the existence of imitation with positive payoff externality and imitation with no clear payoff externality. One contribution of this study is to provide evidence for a more intriguing type of mimetic behavior, that is, imitation with negative payoff externality. I suggest that this kind of imitation is mainly based on the existence of strong legitimacy incentives that more than compensate the adverse economic incentives associated to the payoff externality. So, this result also provides a strong support for institutional theory arguments build on legitimacy.

If imitation with negative payoff externality is a typical legitimacy-driven imitation as suggested here, then an important issue to require further analysis is about the performance effects of such imitation since early theoretical works in the neo-institutionalism literature suggest the existence of a efficiency-legitimacy trade-off (Meyer and Rowan, 1977; DiMaggio and Powell, 1983). Consistent with such predictions, the results of this study show that imitation on strategic choices in the presence of negative payoff externalities contributes negatively to firms performance. These findings extend recent research, which showed a negative association between isomorphic behavior and performance: Westphal et al. (1997) found a negative impact on efficiency measures attributable to organizational *conformity* in *a administrative innovation* adoption case; Deephouse (1999) found that large levels of strategic *similarity* may be harmful to performance. Thus, the contribution of my study here is to suggest that a negative performance effect may come also from *imitation*, i.e., a behavior (rather than a position resulting from an

accumulated of past behaviors), and from *strategic choice* imitation (rather than imitation of an administrative or technological innovation) [25]. Moreover, while previous studies addressed 'no clear payoff externalities' situations, this study demonstrates negative performance effects on imitation with negative payoff externalities. This result further corroborates the importance and strength of the legitimacy argument (in addition to the evidence of the existence of such kind of imitation itself).

Another interesting contribution of my study for the understanding of the performance effects of interorganizational imitation relates to the dynamics of such imitation effects. This study suggests not only the existence of imitation of unprofitable strategies, but also the existence of unprofitable strategies in result of imitation. In the *basic growth choice* imitation, if only few banks decide to imitate, the strategies may reveal efficient and profitable (considering a *ceteris paribus* analysis); as long as more and more banks imitate, the strategies *become* inefficient and unprofitable. The same conclusion applies to the *location growth choice* imitation. These results and interpretations fully corroborates the early prediction of DiMaggio and Powell that "[s]trategies that are rational for individual organizations may not be rational if adopted by large numbers" (1983: 148).

A third major area of contribution of this study for interfirm imitation theories is about who follows whom. Greve (1998) suggested that managerial cognitions

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[25] The difference between imitation and similarity might be subtle, but far from irrelevant. *Imitation*, as

might affect mimetic adoption of market positions in non-overlapping geographic areas, and proposed that perceived relevance (operationalized as similar market size) might guide organizational action. In this study, I extend Greve (1998) attempts to incorporate cognitive models in the explanation of an imitation process. I offer a rather generic framework based on cognitive perspective and including the dynamics of legitimacy-driven imitation by taking into account the role of legitimacy providers; I have further operationalized the way cognitions are made based on a major cognitive approach, the categorization theory. First, in order to fulfill their specific tasks in an uncertain, complex, and ambiguous environment, managers and legitimacy-providers might use simplification processes by creating cognitive intra-industry groupings. These cognitive categories, I suggest, tend to be shared in some degree by managers and legitimacy-providers due not only to the same reasons why managers from different firms share their mental groupings (Reger and Huff, 1993), i.e., interaction and commonalities in information sources, but also due to legitimacy incentives. So, legitimacy-driven imitation, if exists, should be based on firms defined as similar along such cognitive categories. The results clearly supports the existence of imitation based on firms defined as similar in the writings and views of legitimacy-providers. Then, this study not only stresses the importance of cognitive models for the understanding of interfirm imitation process, as well as it calls for attention to the role of legitimacy-providers.

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defined by Haunschild (1993+: 567) should be determined as a *flow* in contrast with similarity on positions, which is a *stock* (i.e., an accumulaton of several flows occurred in diferent moments in time).

This generic framework might also encompass other criteria for the choice of the 'models' for imitation used in previous literature. This may be the case of network structures (Kraatz, 1998; Haunschild, 1993: Westphal et. al., 1997) since this stream of research emphasize the importance of network ties (Kraatz, 1998) and mutual knowledge and trust (Galaskiewicz and Wasserman, 1989) aspects which are close to the formation of cognitive categories (Porac and Thomas, 1990). The fact that in some studies it was found evidence for imitation of similar networks, but not for more successful networks (e.g., Kraatz, 1998) seems to corroborate this reasoning.

Our study also make a contribution to fill the gap detected in the institutional literature by DiMaggio and Powell regarding to what they called the "neoinstitutionalism' microfoundations", namely, the need to "develop a social psychological underpinning in order to highlight (...) gross differences between institutional and rational-actor models" (1991:16). In fact, the shift from a normative to a cognitive approach to action (where the key forms of cognitions are classifications, routines, schemas) and the consideration of sub-optimal solutions were suggested by those theorists to address such gap and were fully taken into consideration in my analysis as discussed above.

Two additional, yet minor, contributions to institutional theory literature are provided by this study. First, my empirical analysis shows the virtues of studying a multi-layer imitation (instead of the usual one-layer imitation): I first consider a given strategic choice (growth) and then several different decision layers of that strategic choice (in my case two layers, namely, whether to grow *and* where to

grow to). The use of a multilayer approach to study strategic change is recommended to allow "a more holistic operationalization that is closer to the understanding research construct" (Rajagopalan and Spreitzer, 1996: 67). Second, I provide another example that institutional forces are not confined to nonprofit organizations or governmental bodies as argued by institutional theorists (e.g., DiMaggio and Powell, 1991).

Implications for strategy theory and research

The arguments and findings of this study provide several implications for the strategic management field. First, this work offers evidence that both economic and social forces should be taken into account to understand firms' strategic behavior, something that is consistent with recent arguments for consideration of both economic rationality and normative rationality assumptions (Oliver, 1997). It is likely that managers attempt to choose the most beneficial strategies in order to add value to their firms, but under environmental conditions characterized by high uncertainty about the behavior of competitors, the behavior of customers, and the value of alternative strategies, they may opt for alternatives that provide legitimacy. Furthermore, these legitimacy forces might be powerful since, in the case of imitation with negative payoff externalities, they have to overcome not only the uncertainty effects as well as the negative economic incentives associated to the increasing number of adopters.

Second, driven by legitimacy-seeking strategies in conditions of uncertainty, firms might pursue strategies that contribute negatively to performance. These results are consistent with some recent theoretical developments. O'Neill, Pouder, and

Buchholtz (1998), for example, asserted that the occurrence and persistence of inefficient strategies should not be seen as surprising once some assumptions of the rational choice perspective are dropped, namely, assumptions that outcomes are known *a priori* and managers are efficient-oriented. This does not imply, however, that managers do not care about efficiency goals. In fact, they may be efficiency-seekers, but not efficiency-maximizers, as considered in the 'constrained-efficiency framework' recently proposed by Roberts and Greenwood (1997) and which also justifies why the adoption of unprofitable strategies may persist.

Third, the findings suggest a shift in the focus from practices legitimated to the 'peer groups'-based legitimacy: the legitimacy process may be more important not at an *individual* practice (or strategic choice) level but at a *multiple* practices (or strategic choices) level. The legitimacy assessment is made by comparing each organization against its reference group along all the relevant categories (or strategic choices). Accordingly, it is likely that some practices or strategic choices will be more important than others in providing legitimacy. Imitation may be important only in those relevant strategic choices. Organizations may then differ in their decisions about which practices to conform and which practices to differentiate from others. Thus, this generic legitimacy-based framework can explain both similarity and differentiation strategies.

Finally, the results of this study are also relevant to the dominant theories in the strategic management literature which stress the virtues of strategic heterogeneity, as is the case of IO economics-based positioning theory (Porter, 1980) or of

resource-based view of the firm (Barney, 1991; Wernerfelt, 1984). On one hand, by showing that there is imitation on major strategic choices, this study calls attention for the fact that such differentiation-based theories do not fully explain what happen in the business world. On the other hand, by showing that strategic mimicry leads to negative contributions to firms' performance, this work provides support for the normative branch of heterogeneity theories like the positioning theory and the resource-based view of the firm.

Managerial implications

From a managerial point of view, the results show the cognitive constraints that may arise in the strategic choice process. Of course bank managers may conceptualize the reasons why they undertook such behavior. Growth seems to be a clear goal in this setting. By other hand, if the legitimacy assessment is more important in a (peer group-based) multiple-practices comparison rather than in a single-practice comparison, as argued above, then this means that managers have a larger degree of freedom in their strategic choices then otherwise. They are only compelled to conform in some strategic choices, and they can choose which behaviors should be imitated (with the resulting legitimacy benefits) and in which strategic choices they may differentiate. And of course managers always have the possibility of not taking at all a legitimacy-seeking behavior into consideration in their decision-making. Yet, by doing so they should be aware of the potential lack of support of crucial stakeholders when (and if) somewhere in the future the organization faces a particularly adverse situation threatening their organization's survival.

Limitations

All studies have their limitations. This study uses a small sample and limited time frame. This means that fine-grained analyses are impossible. For instance, I have reviewed the "not followers" banks, but I have not detected any obvious pattern in their organizational characteristics. In a larger sample more discernible patterns (differences in risk profiles or organizational inertia-based features, for example) could be identified.

I have not tested uncertainty against stable conditions. Our setting was characterized by a strong degree of dynamism and complexity, consistent with the mimetic isomorphism concept. However, I have no data available for a corresponding stable period.

The performance effects were studied in a relatively short-term framework. I do not know if a longer-term analysis would reveal a different set of results. Yet, it should be noted that, in a longer-term analysis, performance effects due to imitation process could reveal more difficult to be discernible.

I have not tested if managerial cognition is not a post fact rationalization of imitation. This would have required fine grained and longitudinal data over many years. The question is: Do banks make a decision to do something (e.g., open a new branch in Porto) and then define themselves as part of the group that made a similar decision (open a new branch in Porto) as opposed to defining themselves as part of a cognitive group (domestic private generalists banks) and then doing what others do (following the herd)? This kind of circular reasoning trap affects

all ways of measuring cognitive groups, whether by direct interview or indirect methods such as annual reports and indirect attribution (as in my case). Because I use contemporaneous data, rather than a reconstruction of the past from today's interviews, I hope to minimize this risk. The potential errors of indirect measures are offset by the attractiveness of having data from the relevant time period.

Future Research

The above discussion implicitly includes several avenues for future research. However, I detail here some specific promising questions to be theoretically and empirically addressed in the near future.

I found a particular kind of imitation that I conceptually assumed is due to legitimacy. Further developments can be made by directly testing the association of legitimacy with this kind if imitation. Also different drivers of this same kind of imitation (with negative payoff externalities) can be identified and tested.

Negative profitability implications were found here associated to mimetic strategic choices when negative payoff externalities arise in the process. Westphal et al. (1997) found negative efficiency effects in a 'no clear payoff externality' imitation on an administrative innovation. It would be interesting to investigate which other important and generic conditions exist to imply the same outcome.

This study found clear evidence for the existence of cognitive models determining who will follow whom. However, contrary to some prior studies, top performers were not found much relevant in the mimetic process. Is there any systematic explanation for the relative importance of top performers as 'models'

for imitation? Is there any relationship between cognitive groups and top performers? When are top performers the selected cognitive group to be imitated? Does network structures (particularly when mutual knowledge and trust are salient) have a link with cognitive models as I suggested it might exist? Moreover, if legitimacy assessment is made at a *multiple* (strategic) practices level, which are the types of strategic choices more relevant for that purpose?

CHAPTER 12

Overall Conclusions

Environment, strategy, and performance are probably the main issues involved in the field of Strategic Management (Schendel, 1997). This study addresses these issues and its overall implications cross several important debates within the strategy literature. In Chapters 6 and 11 I have discussed the specific implications of each Part of this dissertation. Here, I extend the discussion to issues involving the whole work.

Strategy is closely linked to the search for competitive advantage based on the assumption that competitive advantage is the explanation for firms' performance differentials (Schendel, 1996). So, what determines firm success? While several conceptual answers have been given, Porter (1991) recently argued that one should take a double step approach to capture all the picture: first, there is what he called 'the cross-section problem', that is, the need to explain the causes of superior performance at a given point of time; second, there is 'the longitudinal problem', i.e., the need to explain how a superior position is created over time. Porter suggests that his early positioning framework (Porter, 1980) addresses the cross-section problem: firm success is dependent on the attractiveness of the industry where the firm is operating and on the firm's relative position in that industry. While this framework explains the relevance of the choice of a relatively

attractive position given some industry structure for firm's success, he argues, it does not explain why some particular firms are able to get and maintain such position and others are not (the longitudinal problem). He suggests two types of answers for this second question: *initial conditions* and *managerial choices*. "Initial conditions clearly influence feasible choices as well as constrain them" (Porter, 1991: 105). They might be internal or external to the firm. Pre-existing reputations, skills, and in-place activities were examples considered. On the other hand, managerial choices (independent of initial conditions) might also explain why some firms were able to attain favorable positions. "These managerial choices, which are made under uncertainty about the future, define the firm's concept of competing (positioning), its configuration of activities, and the supporting investments in assets and skills (Porter, 1991: 105).

My study applies precisely to the 'longitudinal problem'. First, the arguments and results of Part One suggest that when a major environmental shift occurs, organizational forms clearly influence the ability of firms to achieve or maintain desirable positions: organizational forms characterized by lower inertial properties will be more able to reach such positions. So, organizational forms should be considered as relevant *initial conditions*. Second, the arguments and results of Part Two suggest that managers' cognitive structures significantly affect managerial choices, namely constraining in a severe way the set of perceived available choices. This means that managerial cognitive structures should also be considered in the *initial conditions'* set.

Moreover, in his attempt towards a dynamic theory of strategy, Porter (1991) also suggested that one potential theoretical perspective that could address the 'longitudinal problem' was the resource-based view of the firm (RBV). RBV centers its argument on the importance of a firm's unique bundle of resources (or competences) for the achievement of competitive advantage. However, according Porter, RBV is yet short to address properly the longitudinal problem due, among other reasons, to its lack of link to environmental changes: "For every firm with resources that convey advantage, there will be another (and perhaps many others) whose bundle resources impeded change or proved to be a liability in light of environmental changes" (1991: 108). This important issue recently began to be addressed by the literature, among other ways, through the concept of strategic flexibility (Sanchez, 1995; Volberda, 1997; Hitt, 1998). According this stream of work, given the frequency and amplitude of environmental changes firms now face, they should emphasize resources and capabilities that could provide greater flexibility to firms (either to formulate choices or to implement them). In line with this research, Part One of this study suggests that certain low-inertial properties associated to organizational forms (broaden-scope routines, less-older routines, broader-scope skills, financial slack, lower degree of centralization, less exhaustive system of rules) should be seen as valuable resources and capabilities in environmental change situations.

This study also addresses the debate about strategic change-environment relations (Stacey, 1995; Venkatraman and Prescott, 1990; Tan and Litschert, 1994; Zajac and Shortell, 1989; Hrebiniak and Joyce, 1985; Miller and Friesen, 1983). Adaptation view stresses the efforts made by organizations to adapt to changing

enviroments (Lawrence and Lorsch, 1967; Thompson, 1967), while selection perspective emphasize the constraints imposed by environments on organizations' abilities to adapt (Hannan and Freeman, 1977; Aldrich, 1979). This study shows that selection and adaptation explanations are simultaneously valid and important, demonstrating that they are complementary rather than alternative. Second, some common wisdom in each of those theoretical views might be reviewed: inertia might not be beneficial, while adaptation-driven choices might reveal hazardous. Third, it is likely that significant interrelationships between selection forces and adaptation factors take place and might influence survival chances.

Research testing the simultaneous relevance of both selection and adaptation in a given setting and condition has been rare (Singh et al. (1986) is one exception). Part One of this thesis clearly supports a selection view of organizational evolution. Organizational forms, as generalism, stateownedness or foreignness, and organizational characteristics, as size or age, show strong influence on organizational profitability in the presence of large environmental change conditions. Part Two offers a clear support for an adaptation view. Organizations do attempt to adjust to environmental changes, namely, through interorganizational imitation. This result provides empirical evidence for prior theoretical claims about the complementary nature of selection versus adaptation, rather than the traditional view of these approaches as mutually exclusive (Cook, Shortell, Conrad, and Morrisey, 1983; Hrebiniak and Joyce, 1985).

While this study displays the simultaneous validity of selection and adaptation, it also reveals that some important common wisdom associated to each of these

views should be reviewed. Part One indicates that structural inertia is not generally beneficial as described in traditional population ecology research. On the contrary, consistent with the work of Tushman and Romanelli (1985) and Haveman (1992), inertia may be harmful particularly in major environmental change conditions. Part Two also contradicts the common wisdom in the adaptation tradition that organizational attempts to respond to environmental changes are in general beneficial (Singh et al., 1986: 589). In fact, adaptation, particularly when characterized by mimetic isomorphism in the presence of negative externalities, may be hazardous. All this means that selection and adaptation, while clearly different perspectives, are more closed (namely in their assumptions) than usually considered in the literature.

Another conclusion can be drawn from taking together both Parts of this study: selection and adaptation are inter-related and in a very close manner. From Part One, I have concluded that selection processes can be better understood through a dual selection modeling: there is a *relative* selection (which outcome is profitability) and an *absolute* selection (which outcome is survival/failure). In consequence, I argued, a new model in the selection perspective should be defined: survival = f (profitability, organizational buffers); from Part Two, it can be concluded that legitimacy-seeking actions (such as the mimetic behaviour here studied) can be considered as one type of organizational buffer. In fact, the critical game from legitimacy-driven practices consists in the improvement of the organizational survival chances. This might explain why such practices are carried forward even in detriment of performance, as showed in this study. Accordingly, in such circumstances, adaptation efforts are made in order to benefit from

absolute selection forces. Moreover, this study presented an example of adaptation attempt that contributes negatively to the relative selection process, but possibly in a positive manner to the absolute selection process. That is, not only adaptation is related to selection, but also it might be related to both levels of selection and not necessarily in the same direction.

By domonstrating the complementary nature of selection and adaptation and by suggesting the importance of potential interrelationships between selection forces and adaptation factors, this study seem to fully corroborate the recently proposed coevolutionary perspective (Lewin and Volberda, 1999). Coevolution proponents argue that "change is not an outcome of managerial adaptation or environmental selection but rather the joint outcome of intentionality and environmental forces" (Lewin and Volberda, 1999: 523); for them, change may not occur in all interacting populations of organizations and can be driven by both direct interactions and feedback from the rest of the system. Two of the main properties of coevolution seem related to the characteristics of the dual selection modeling here suggested: multilevelness (the fact the coevolutionary effects may take place at multiple levels of analysis) and multidirectional causalities (which make the systems of relationships so complex that almost all variables become endogenous). Accordingly, my findings and conclusions not only indirectly supports the importance of future research through the coevolution lens, as well as suggest the dual selection modeling as one line of evolution of such research.

Finally, two specific features of this study deserve a mention. First, following Rumelt, Schendel, and Teece (1994: 562), this work is based on fundamental

questions and problems for strategic management, which are addressed by borrowing the power of a rich set of theories originated from diverse disciplines, such as economics, organization theory, and social psychology. Part Two of this study shows an interesting example of the integrated use of theories originated in distinct disciplines as an adequate route for the development of the strategy field. Second, this study also addresses one important aspect related to the generalizability of the strategy research. Hoskisson, Hitt, Wan and Yiu recently echoed concerns at this level: "There is no theoretical work nor empirical findings suggesting that the existing body of knowledge, largely obtained in the context of the United States, is equally applicable in other countries" (1999: 445). By applying theoretical arguments and frameworks mainly tested in the US to a European research setting with substantial differences in competitive and environmental conditions, this study provides a meaningful contribution for the generalizability of such theories, in particular, and of the field, in general.

In sum, managers unequivocally matter for firms' strategy and performance. However, they have to realize that they are subject to important constraints, endogenous and exogenous, which might influence significantly the outcomes.

APPENDICES

APPENDIX A

The Deregulation Process In European Union Banking Industry

The integration of the European banking has registered a decisive development since 1985, in parallel with the European Community (EC) single market programme [26]. The White Paper on the competition of the internal market[27], proposed in 1985 by the European Commission[28], fulfilled a crucial role on that evolution. The 1985 White Paper advocated the removal of different types of barriers[29]; it's content was incorporated in the Single European Act (agreed in December 1985 and valid since 1 July 1987) which expressed the Member States intention to complete the internal market by the end of 1992. In terms of the banking activity, the major barriers were neither physical nor fiscal barriers, but technical, given the significant differences in regulations and supervision among

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[26] EC was at that time the designation of what we know today as European Union (EU).

[27] According with the definition in the Article 8th of the EEC Treaty :"a space without internal frontiers within which the free movement of goods, services, people and capital is ensured according with the dispositions of the present Treaty".

[28] The White Paper was presented in the European Council meeting at Milan (28-29/June/85).

[29] Namely, three categories of barriers (*physical*, as the physical frontiers control, *technical*, as the differences in standards and regulations, and *fiscal*, as the differences in indirect taxes)

the EC countries (Dixon, 1993). The White Paper proposed three main principles: single banking licence, home country control and mutual recognition.

The so-called Second Banking Directive[30] (issued by December 1989, to be implemented, at last, by 1 January 1993), following the principles recommended in the White Paper, has built what has seen as the most important step towards an internal market for the banking industry. Before the Second Directive, as noted by Baltensperger and Dermine (1993) among others, three main issues explained why the European Banking industry was still distant from a complete integration:

- *a priori* authorisation to operate in another members state;
- significant differences in national regulations;
- restrictions on capital flows.

The principle of freedom of capital flows, contrary to the Treaty dispositions on the free trade of goods and services, does not apply directly, requiring specific directives upon this subject. The 1986 White Paper advocated a full liberalisation of capital flows as a condition for the creation of a large internal market. Without that liberalisation, the results from the harmonisation of the national regulations on the activities of financial entities and markets would be far less than desirable.

In this context, the European Council issued a Directive (1988) laying down the full liberalisation of capital flows by June 1990 for the Member States in general, but allowing special deferring periods (mainly till the end of 1992) for Portugal,

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[30] 'Directive on the co-ordination of laws, regulations and administrative provisions relative to the taking up and pursuit of the business of credit institutions and amending Directive 77/780/EEC'.

Spain, Ireland and Greece in some specific types of flows. The only exceptions Member States have within that liberalisation consist of eventual measures to control banking liquidity and temporary restrictions justified by large short term capital flows that could severely affect their monetary and exchange policies.

Two other important barriers to the banking integration were the authorisation process and the substantial differences in national regulatory frameworks. In 1973 the European Council approved a Directive[31] to eliminate the possibility of any explicit discrimination, between national banks and other EC countries' banks, in each Member State market and regarding either the access to the market or their activity.

The 1973 Directive was intended to abolish existing discriminatory rules (Table A-1). In 1977, the so-called First Banking Directive[32] envisaged a more ambitious goal, namely, to ease the access and the activities of credit institutions in any Member State. The Directive adopted the principle of generalised harmonisation, by which "it is necessary to eliminate the most obstructive differences between the laws of the Member States" [33]. Harmonisation, as pointed out by Slot (1996), has a complementary role in relation to the general prohibitive articles in the Treaty, and has been used when the free movement of goods, persons, services and capital has not been accomplished through these general provisions.

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[31] Directive on the abolition of restrictions on freedom of establishment and freedom to provide services in respect of self-employed activities of banks and other financial institutions.

[32] Directive on the co-ordination of laws, regulation and administrative provisions relating to the taking up and pursuit of credit institutions.

[33] In Directive 77/780/EEC of 12 December 1977, Official Journal No L 322/30 (17/12/77).

However, the Council (of the European Communities) recognised[34] that it was not feasible to create the conditions required for a common market through a single Directive. Accordingly, the First Banking Directive was seen, even by its drafters, as the first step in a multiple-stage process.

Table A-1

The three-stage liberalisation process in banking

INSTRUMENT	**TYPE OF APPROACH**
1973 Directive	Abolition of Discriminatory Rules (1)
First Banking Directive	Generalised Harmonisation
Second Banking Directive	Minimum Harmonisation and Mutual Recognition

(1)Applied to EC banks.

This first stage included: (a) the indication of the *home country control* as the intended outcome at the end of the above mentioned process; (b) the definition of credit institution as an "undertaking whose business is to receive deposits or other repayable funds from the public and to grant credits for its own account" (First

[34] See previous footnote.

Directive, Article 1 (1)); and (c) the determination of certain minimum authorisation requirements to be imposed by all Member States.

The latest issue is a crucial one in this Directive. It specifies three conditions which, regardless the national laws, must be met by any credit institution having its head office in a Member State and intending to begin its activities through branches to locate in other Member State: first, it must possess separate own funds; second, it must possess adequate minimum own funds; third, there shall be at least two persons who effectively direct the business and who have sufficiently good reputation and experience to perform such duties (First Directive, Article 3 (2)).

The Second Directive

Despite those two Directives, the EC banking industry maintained a long way from the intended integration, as mentioned above. Following the 1985 White Paper suggestions, the Second Banking Directive[35] (1989) was the cornerstone of the process towards the internal market in the banking industry. The Directive abandoned the *generalised harmonisation* approach (e.g., Clarotti, 1989) and has opted for a *minimum harmonisation* approach (see above Table 1) in result of the recognition that harmonising only the essential of the national regulations would be a more effective method than trying to converge on all (or almost all) of prevailing national regulations.

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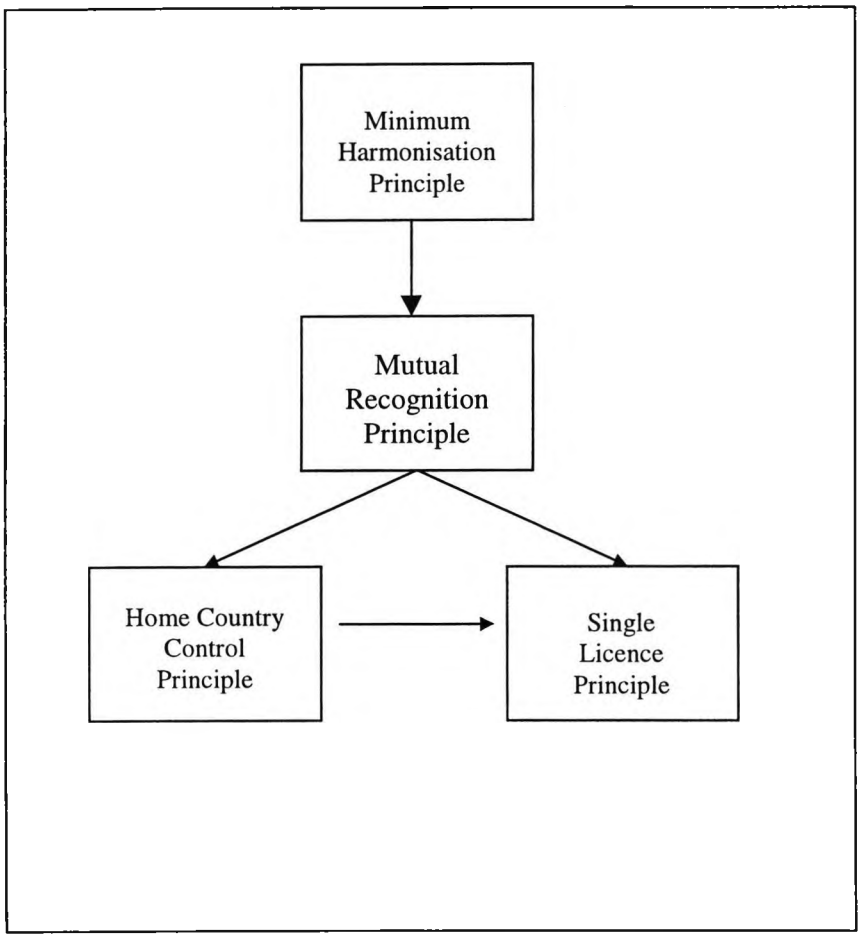
[35] Directive on the co-ordination of laws, regulations and administrative provisions relative to the taking up and pursuit of the business of credit institutions and amending Directive 77/780/EEC.

The harmonisation of essential aspects of national regulations was a necessary and sufficient condition to implement the principle of *mutual recognition*, by which the EU countries recognise the authorisations and the prudential supervision systems of each other (see Figure 1).

Figure A-1

The Principles-Chain
in the Second Directive



The *mutual recognition*, in turn, enables the application of the principle of home country control, already previewed in the First Directive, as noted above, but applied for the first time with the Second Directive (it seems worthwhile to note

that *home Member State* means, in this regulation, the EU country in which a bank was authorised). With mutual recognition, by one side, and the main supervisory tasks assigned to the home country authorities, by the other, it is then possible to apply the *single licence* principle.

The *single licence* (also known as *single passport*) is the centrepiece of the Second Directive. This principle means that any bank authorised by the supervisory entity of one Member State can carry on a certain set of activities (contained in a list below described) in another EU country, either by establishing a branch or providing cross-border services, *without* further authorisation, provided that such activities are included in the home State authorisation.

The list of activities subject to the single licence principle are: Acceptance of deposits and other repayable funds from the public, lending, financial leasing, money transmission services, issuing and administrating means of payment (e.g. credit cards, travellers' cheques and bankers' drafts), guarantees and commitments, trading for own account or for account of customers (in money market instruments (cheques, bills, CDs, etc.), foreign exchange, financial futures and options, exchange and interest rate instruments, and transferable securities), participation in share issues and the provisions of services related to such issues, advice to undertakings on capital structure, industrial strategy and related questions and advice and services relating to mergers and the purchase of undertakings, money broking, portfolio management and advice, safekeeping and administration of securities, credit reference services, and safe custody services.

In practice the single licence, as defined in the Directive, means that (see Figure A-2):

one bank authorised to operate in one Member State can also operate without further authorisation in another EC country in all the activities covered by the authorisation, as long as they are included in the list just specified; this ability does not even exclude those activities which are not permitted to local banks by the host authorities;

one bank authorised to operate in one Member State can also automatically operate in another EC country in activities covered by the authorisation but not included in the list as long as those activities are not subject to an authorisation system in the host country (Recitals 13 and 15 of the Directive);

Figure A-2
Freedom to Cross-Border Banking Operations (*)

	Activities included in the list (1)	**Activities not included in the list** (1)
Authorised activities in the home country (2)	Automatic freedom to operate	Potential freedom to operate (3)
Unauthorised activities in the home country (2)	Need of host country authorisation	Need of host country authorisation

(*) Within EC and related to authorised credit institutions.
(1) List in the Annex of the Second Directive.
(2) Specifically to each institution.
(3) Possibility to operate as long as these activities are not subject to authorisation in the host country.

one bank authorised to operate in one Member State cannot automatically operate in another EC country in activities which are not covered by the authorisation, regardless their inclusion (or not) in the list; in these cases, the bank needs a local permission to operate;

one bank that has not yet received an authorisation to operate in one Member State has to be submitted to the full process of authorisation according to the localisation of its head office.

The principles of mutual recognition and of single licence are extended by the Directive to the financial institutions[36] from one EU country which are subsidiaries of credit institutions, provided that such subsidiaries are covered by the consolidated supervision of their parent undertakings, that the activities in question are actually being put in practice in the home country and that the parent undertakings or authorised as credit institutions in the home country, hold at least 90% of the voting rights of the subsidiary and not only assure to the authorities the prudent management of the subsidiary but also jointly guarantee the subsidiary's commitments.

The inclusion of these financial institutions in the universe of firms benefiting from the single licence principle is in line with another crucial aspect of the Second Directive, the banking model adopted. The scope of activities described in the Annex of the Directive and referred above clearly reveals the option for a

universal banking model (in opposition to the specialised banking model), with the only exception for the delivery of insurance services.

Those activities include the traditional (retail and wholesale) banking activities (such as acceptance of deposits or general lending), the financial activities that in some countries should only be provided by specialised financial institutions (such as leasing, factoring or mortgage credit), and also some investment banking activities (such as trading in securities or portfolio management).

The broad perspective of banking activities employed in the Second Directive, however, has not been reflected in its definition of 'credit institution', remaining valid the First Directive's version: it's an "undertaking whose business is to receive deposits or other repayable funds from the public and to grant credits for its own account" (First Banking Directive, 1977: Article 1). The maintenance of that narrower definition (in result of conflicting views within the Community, as pointed out by González (1993)) is, nevertheless, complemented, on the one hand, by the inclusion of some 'financial institutions' in the mutual recognition principle, and, on the other hand, by the Commission's proposal of a Directive on investment services on the securities market [37] in the same vein as the Second Banking Directive, to assure similar competitive conditions to all financial institutions regardless they are banks or not.

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[36] The Second Directive defined the 'financial institutions' as an undertaking other than a credit institution the principle activity of which is to acquire holdings or to carry on one or more of the activities included in the list of the Annex of the Second Directive (list discribed in the text) with the exception of the acceptance of deposits and the credit references and safe custody services.

[37] The first proposal was made in 1989 and published in the OJ No C 43, 22.2.1989, p.7; the second proposal was presented in 1990 and published in the OJ No C 42, 22.2.1990, p.7; finally, the Directive reached the final version only in 1993,and was published in the OJ No L 141, 11.6.93, p.27.

It can be argued that, after the Second Directive, there is an *EU universal bank model*, characterised (a) by the range of the activities defined in the list above referred and (b) by the limits to the banks participations in non-financial companies[38]. The limits of banks' qualifying holdings[39] in non-financial firms imposed by the Directive, which can be not applied to insurance companies by a decision of each Member State, are:

no such participation can exceed 15% of the bank's own funds;

the total amount of such qualifying holdings cannot exceed 60% of the bank's own funds.

Therefore, the implicit EU universal bank model is situated in an intermediate position between the broader version of universal bank (like the German type) and the specialised bank model (like the traditional Italian version). It should be noted, however, that this EU model could be irrelevant in the part regarding the limits to the participations, given the adjustment period of 10 years allowed to banks which exceed the limits at the first date.[40]

In parallel with the single banking licence and the universal bank model, the shift from the primacy of the host country's regulations and supervision to the *home country control* principle was one of the key issues in the Directive. Since then,

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[38] Here, I agree with Steinherr and Huveneers (1994) in terms of the two key features for defining "universal banks".

[39] A "qualifying holding" means here a participation in an undertaking with at least 10% of the capital or of the voting rights or such that enables a significant influence over the management of the undertaking.

the supervision of a bank, including its activities in another Member State carried on either by the establishment of a branch or by providing cross-border services, is a responsibility of the authorities of the home country. The main exception, where the supervisory responsibilities remain in the host countries hands, is the control of the liquidity of the branches.

Besides the prudential supervision and the bank's participations in non-financial firms there are three other important aspects that the Second Directive considered essential to be harmonised: initial capital and own funds, capital allocated to branches and relations with third countries.

The determination of a minimum initial capital of ECU 5 million and the imposition that bank's own funds never fall below that amount introduces a quantified innovation in contrast with the general condition of 'adequate minimum own funds' included in the First Banking Directive.

Another step forward, dismantling a very important barrier to the internal market, was made through the removal of any endowment capital requirement for branches of any EU bank in another EU country. Finally, in respect of institutions from third countries, the Directive establishes the possibility to be given to the Commission a mandate for negotiation with those countries to obtain similar competitive opportunities for EU banks, whenever occurs a situation of non-reciprocity. Besides, in these circumstances, there is always the possibility of

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[40] The "EC model" can also be affected by other flexibility dispositions included in the Directive, such as the possibility of non-conformity with the participations' limits if national regulation provides that 100% of the holdings in excess has to be covered by own funds which are not included in the calculation of the

suspension of new applications for authorisations or, alternatively, of restrictions on new authorisations.

The European Council has considered that the Second Banking Directive would need the simultaneous implementation of two other Directives, on own funds and solvency ratios (recital 5 of the Second Directive). Both Directives were published in 1989.

The Own Funds Directive

The main objectives of the Own Funds Directive (1989) are to contribute to the soundness and stability of the European banking and to avoid distortions in competition in the banking sector.

The first objective is related to the vital importance that 'own funds' represent to three different types of entities:

- to banks' stockholders and managers, because it ensures the continuity of the business, even absorbing eventual losses;
- to banks' depositors and creditors, because it means the protection of their money;
- to supervisory authorities, because it is a relevant variable to assess the financial situation of banks, namely their solvency, and, consequently, to assess the systemic risk.

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solvency ratio.

The second objective is to ensure (simultaneously with the solvency ratio rules) that, in the perspective of an internal market there is a fair competition (a 'level playing field') at the whole Community territory, where the definitions and the rules applied to the own funds should be equivalent. This is notably relevant in respect to the fulfillment of the dispositions contained in the EU banking legislation, in general, and in the Second Banking Directive, in particular. The purpose of avoiding distortions to competition is in line with the wider international efforts that have been made in order to approximate the national regulations in these matters in parallel with the deregulation process. Those efforts have been centralized on the Basle Committee on Banking Regulations and Supervisory Practices, vulgarly, 'the Basle Committee' [41], which famous report ('the Basle Report') on 'International Convergence of capital measurement and capital standards' (1988) inspired the Own Funds Directive and the Solvency Ratio Directive.

The Own Funds Directive discriminates two categories based on their quality: 'original own funds' (similar to the 'core capital' or Tier One in the Basle Report); and 'additional own funds' (equivalent to 'supplementary capital' or Tier Two in the Basle Report). 'Original own funds' include equity, reserves (with the exception of the revaluation ones), and provisions for general banking risks.

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[41] "The Basle Committee" is a Committee of bank supervisors from twelve countries (Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, The Netherlands, Sweden, Switzerland, the United Kingdom and The United States), created in 1975, under the auspices of the Bank of International Settlements, to co-ordinate regulation of banks with international activities (in practice, the impact of its recommendations was extended to all credit institutions).

'Additional own funds' include perpetual bonds, subordinated bond and revaluation reserves. There are some deductions to be made on both values.

Given their quality differences, the additional own funds must not exceed the amount of original own funds. Some elements of the additional own funds (fixed-term cumulative preference shares, subordinated capital that meet certain conditions and some kind of commitments), considered simultaneously, must not exceed 50% of the original own funds.

The Solvency Ratio Directive

The Solvency Ratio Directive (1989) not only specifies the exact rules to calculate the solvency ratio, in conjunction with the Own Funds Directive (which determines how the numerator should be calculated), but also defines the minimum level for that ratio (8%).

Therefore, the novelty brought by the Directive, besides the definition of the ratio's minimum level, concerns the determination of the denominator, the total of assets and off-balance sheet items that are risk adjusted. It should be noted that only *credit* risk is taken into account [13]. For that purpose, there are four categories of risk, each one associated with a specific weight (which, when multiplied by the amount of the asset, gives the risk-adjusted value of the asset): 0%, 20%, 50% and 100%.

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[13] Market risks, as interest rate risk and exchange rate risk, were left to a later analysis, in line with the international discussions centralised in the Basle Committee.

The lower risk category (weight of 0%) includes claims issued by (or guaranteed by, or even collateralised by securities of) the governments and central banks of "zone A" countries. ("Zone A" countries are the members of the EU or OECD; "zone B" includes all other countries). The second risk category (20%) includes claims issued by regional governments or local authorities of zone A countries, credit institutions of zone A countries, and credit institutions of zone B if the residual maturity of the securities is lower than one year. The third risk category (50%) includes mortgage loans. The higher risk category (100%) includes loans to firms and households, as well as tangible assets and stakes on financial institutions not directly deducted to own funds.

A line of separation was clearly made, for the aim of risk categorisation, between the Member States and other members of OECD, by one side, and the other countries, by the other.

The calculation of the risk-adjusted value of *on-balance-sheet* assets is obtained simply by multiplying each asset book value by the appropriate risk-weight. *Off-balance-sheet* elements are subject to a specific system.

The Large Exposures Directive

Two other Directives should also be considered in the minimum harmonisation process began with the Second Directive: the large exposures Directive and the deposit-guarantee schemes Directive.

The Large Exposures Directive (1992) establishes the definition *of large exposure* and imposes the limits of large exposures incurred by banks, for each individual

case and in aggregate for the whole bank business. The underlying logic of this Directive is based on the assumption that an excessive risk concentration (related to a client or to an interconnected group of clients) could lead to an unacceptable level of losses that, in turn, could threaten the solvability of the bank. Hence, the specific objective is to limit the maximum risk of losses that a particular bank can offer from one client or group of clients.

The EU adopted a two-step procedure in respect of the large exposures. First, the European Commission made a Recommendation on 22/12/1986 as a preliminary step to introduce some common orientations on these grounds; the Commission has explicitly chosen the Recommendation form (which is not legally binding, contrary to the Directive form) as a way to allow a gradual adjustment by the different national banking systems. The second step consisted in the referred 1992 Directive.

A large *exposure* is defined by the Directive as one that reaches or exceeds 10% of bank's own funds[17], a more restrictive level than the one expressed in the 1986 Recommendation (15%). Banks cannot assume exposures relative to one single client or one group of related clients in excess of 25% of their own funds (the same limit of the Recommendation). The aggregate amount of large exposures assumed by banks cannot exceed 800% of their own funds (the same limit of the Recommendation).

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[17] "Exposures", according the 1992 Directive, are the on-balance-sheet assets and off-balance-sheet items referred in the Solvency Ratio Directive.

When the exposure is related to firms of the same group of the bank the individual limit decreases to 20%, except when those firms (being them the parent-company or the subsidiaries of the parent-company or the bank's own subsidiaries) are credit (or financial) institutions subject to the bank's supervision in a consolidated basis.

The Deposit-Guarantee Schemes Directive

The directive on deposit insurance systems (1994) conforms with the EU intention to reinforce the stability of the banking system and the protection of the depositors, in parallel with the abolition of restrictions on freedom of establishment and freedom to provide services, to promote a healthy development of the banking activities. The EU contended that such a strategy should include a minimum harmonisation of the deposit-guarantee schemes.

The 1994 Directive is based on three main principles: universal application, guarantee per depositor and home country scheme. The first principle means that all Member States will have one guarantee scheme and that all banks must adhere to a deposit guarantee scheme, to assure that no distortions in competition arise from the implementation of these systems. According the second principle, the relevant unit of analysis is the depositor: there should be a minimum harmonised guarantee limit per each depositor and not per each deposit in the default bank. The Directive defined the minimum harmonised limit at ECU 20,000. Till 1999, Member States can allow national maximum amounts below that value, but at least equal to ECU 15,000. The guarantee should not cover 100% of the deposits except for some special categories of deposits (for social reasons); the cover

degree should be at least 90% when the amount to pay does not exceed the minimum harmonised limit.

The home country scheme principle means that the relevant guarantee system is the one in place in the country where the bank has its head-office. This principle emanates from two premises: first, the home country authorities have the competence on banks' solvability control (given the Second Directive) and, therefore, all branches of a particular bank, including those established in other Member States, should be covered by the same guarantee system; second, all depositors of a same bank, even those of the branches located in host countries, should be protected by the same guarantee system.

The branches of third countries' banks which are not included in a deposit-guarantee system equivalent to the one characterised by this Directive may have to adhere to the host country own system.

EU regulatory changes vs. regulation typology and theories

The regulatory changes above described can be divided in two parts: one, where there is a clear relaxation of regulation (represented by the Directive on capital flows and by the majority of the components of the Second Banking Directive), can be claimed to be in line with the *economic theory of regulation*; another, where there is a notorious case of re-regulation (represented mainly by the other four Directives analysed) can be considered as a recognition of the existence of some market failures, which are the core argument of the *public interest theory* (specifically, the Deposit-Guarantee Schemes Directive seems to address the

question of *depositors protection*, while the remaining three Directives seem to constitute a response to *systemic risks).*

The European Union has decided for changes either in structural *and* conduct regulation, as well as in economic *and* prudential regulation. Table A-2 illustrates how these regulatory changes fit within these typologies.

Table A-2
EU regulatory changes

	Structural Regulation	**Conduct Regulation**
Economic Regulation	· Directive on capital flows · II Directive (reduction of geographic limitations) · II Directive (no institutional separation in banking) · II Directive (no capital requirements for branches)	
Prudential Regulation	· II Directive (minimum level of capital) · Solvency Ratio Directive (minimum solvency ratio) · II Directive (supervision aspects)	· II Directive (limits to banks' participations in non-financial firms) · Own Funds Directive (eligible own funds) · Solvency Ratio Directive (differentiated capital requirements by assets) · Large Exposures Directive (limits to large exposures) · Deposit-guarantee schemes Directive (deposit insurance)

APPENDIX B

Categorization of banks by legitimacy providers

In this appendix, I give several examples of the categorization of banks considered by the legitimacy providers in my setting:

- Retail banks vs. specialized banks; stateowned vs. private vs. foreign banks.

(Analysis of the banking industry by APB, in Semanário Económico, 15/7/88, p.4-5)

- Retail banks vs. specialized banks; stateowned vs. private vs. foreign banks.

(Analysis of the banking industry by APB, in Semanário Económico, 20/7/90, p.3B)

- Retail banks, private banks, wholesale banks.

(Analysis of the banking industry, in Semanário Económico, 10/1/92, p.3)

- Retail banks vs. specialized banks; stateowned vs. private vs. foreign banks.

(Solvency ratio analysis of the banking industry, in Semanário Económico, 12/7/91, p.4B)

- Domestic banks; foreign retail banks; investment banks.

(Analysis of the banking industry of KPMG, in Semanário Económico, 12/8/94, p.6)

- Stateowned retail banks; private retail banks; investment banks.

(Analysis of bad loans in the banking industry by the central bank, in Diário Económico, 4/11/91, p. 24)

- Domestic vs. foreign banks; Investment vs. retail banks; large vs. small banks.

(Analysis of loan market by the central bank; Banco de Portugal Annual Report 1993 (1994) p. 150-151).

- Euromoney Awards : best retail bank; best investment bank; best foreign bank.

(Semanário Económico was the most influential economic newspaper during the period; APB is the Portuguese banking association).

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