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Small- and medium-sized enterprises' restructuring in a context of transition: a shared process

Inter-player effects on efficient boundary choice in the Argentine manufacturing sector

Michel Hermans

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Inter-player effects on efficient boundary choice in the Argentine manufacturing sector

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Abstract

When an economy goes through a transition from a closed to an open market economy, the agents that operate in it face a need to reconsider their position in the business environment and productive function. To function, organisations require resources they do not always have at their disposal. This scarcity makes that organisations interact with each other and exert influence to obtain the resources they need. Organisations, thus, are connected through dependence relations that, at the meso-level of analysis, make up a constellation of suppliers, intermediate firms, distributors/clients, public agencies and financiers.

The restructuring of small and medium enterprises (SMEs) to a context of market openness is conditioned more by rsource-constraints and perception and processing of information than that of their larger counterparts. As a result, their efficient boundary choices are influenced by how surrounding players restructure, while the restructuring process itself -from a meso-level perspective- can be interpreted as a bargaining process. To be able to restructure or, differently, to change their dependence relations, firms make use of th latitude as comprised in the relations that constitute the meso-level framework to which -in a context in transition- the impact of the opening of markets on the established governance structures should be added. This thesis shows that SMEs that held a comparatively strong bargaining position at the outset of the trasition were better able to restructure successfully than their weaker counterparts. The impact of the transition did not prove to icrease firms' latitude directly but needs to be taken in account to come to a more complete understanding of SMEs' restructuring processes.

I. Introduction: bargaining small and medium enterprises restructuring

"Economic problems arise always and only in consequence of change"
Friedrich Hayek (1945: 523)

I. 1. Micro-economic approaches to adaptation

When changes occur in the business environment, stimuli are given to the organisations that operate in it, to which they are expected to respond. In the neo-classical economic conception, agents' structural characteristics are defined in terms of supply and demand, while changes in the environment are expressed in variation of prices. According to the information agents receive from the price system, they change their supply or demand to maintain equilibrium between organisational structure and environmental characteristics to maximise their profits or utility; adaptation in the neo-classical sense. Due to a singular objective and stimuli from supposed perfect markets, agents' responses to changes in the environment are uniform and instantaneous.

Since organisations adapt neither as smoothly nor as uniformly as prices in perfect markets, institutionalist economics distinguish between organisations and markets by considering them to be alternative governance modes (Coase, 1937). Organisations choose whether or not to internalise a transaction based on a comparison of the cost of co-ordinating and safeguarding it and try to maximise their profits by operating at the lowest cost.

The distinction between hierarchic governance of exchanges and governance by the price mechanism mechanism allowed for considering adaptation to be the 'readjustment of processes internal to the organisation' (Barnard, 1938: 6). Inside the organisation, Schumpeter (1942) identifies entrepreneurs who attempt to obtain rents from innovations that alter the environment, thereby creating the optimal match between organisational structure and environmental characteristics. Competing innovative efforts imply different organisational structures and, therefore, partly explain different responses to environmental stimuli. Simon (1947) explains different responses by bounded rationality, which makes that changes in the environment are not similarly perceived among organisations. The combination of neo-classical and internal organisation perspectives in institutionalist transaction cost economics (TCE) by Williamson (1975) created a strong instrument for the analysis of organisational structures based on cost-efficiency. Based on the general economic assumption that because of competition, differences in firms' responses to environmental stimuli that lead to more or less efficiently operating firms, will disappear as less efficient firms are outperformed by more efficiently organised competitors.

I. 2. Small and medium sized enterprises in opening markets: the need for a multi-level approach to restructuring

The transition from a closed to an open economy is a strong stimulus for organisations to reconsider their operating structure. In general, the responses to this transition can be divided into three groups. The first group of organisations -often rather small- becomes internationally competitive through a restructuring of their operations according to the requirements of the changed environment. The second group attempts to maintain the position in the domestic market it occupied before openness and behaves defensively. The third group is that of firms that cease to exist and can be subdivided in those that disappear because of competitive pressure and those that are bought by other firms, national or foreign.

The responses of small and medium sized enterprises (SMEs) to a contextual transition are conditioned by their structural characteristics. Their limited size restricts access to resources, which are needed to pay the cost of changing an organisation, and they often lack the weight to 'create' their market as in the Schumpeterian conception. Furthermore, SMEs are often conditioned more by bounded rationality than larger firms since they have less information processing capacities. As a result of these structural characteristics, the stimuli of a context in transition provoke different responses among initially comparable SMEs, which diverge more than the responses of large firms. This thesis will, therefore, differentiate between adaptation and restructuring. The former stands for the narrowly defined economic imperative of maintaining the most efficient match between organisational structure and environmental characteristics, while the latter comprises any reaction[1] resulting from changes in the environment.

The micro-economic approaches that have been presented above help to understand the origins of this heterogeneity but need to be complemented with additional views on organisation to come to a better comprehension of SMEs' structural changes. Because of their determined object of study, the firm, micro-economic approaches explain an organisation's structure through analysis of the effects of environmental stimuli on processes *within* the firm. In doing so, the environment and the changes in it are considered as given, in other words, they are not addressable and can not be influenced by the firm. However, firms do not operate in a vacuum. They are related to other organisations as they make part of value chains, obtain capital from financiers and are subject to the influence of public agencies. Due to these relations, a focal firm and the organisations that surround it make up a constellation in which they mutually affect one another's responses to

[1] Inertia, being a non-response to the changes in the environment, is considered to be a reaction as well.

environmental stimuli. The structuring and functioning of this constellation, at its turn, is conditioned by a set of macro-variables, which includes political, social and economic factors. A better understanding of firms' responses to contextual change, thus, requires analysis of changes *outside* the firm at different levels of aggregation.

The transition from a closed towards an open economy implies changes at all levels of analysis. From the point of view of the individual firm, possibilities to source and sell abroad, different technologies and other competitors in the local market are but a few examples of changes that affect their operations. The above-mentioned constellation will change to the extent to which openness implies changes in the relations between players. A firm that decides to import a particular product, for example, will establish a relation with a foreign firm and thereby often replaces a local supplier. This change in the firm's supply structure also changes the way the firm is influenced and can exert influence on other organisations and, therefore, individual restructuring processes. Together, changes at the micro-level create dynamics at the meso-level, which determine political, social and economic variables at the macro-level.

The restructuring process of a firm, thus, is conditioned by the context in which it operates, while the firm's changes affect dynamics in the context. As a result, change at all levels of analysis needs to be considered, using a dynamic approach, to understand this ongoing process and come to a more complete explanation of firms' individual restructuring in a context of economic transition.

I. 3. Aims of the study

Business Administrative approaches to change processes normally offer a how-to-do manual to the manager or entrepreneur for identification of drivers of change, best practices for carrying out the change process, an inevitable checklist and performance indicators. This thesis is not Business Administrative in that sense.

The Business Administrative character of this thesis is twofold. Firstly, it will make use of the insights of various academic disciplines and an attempt will be made to align some of the elements to carry out the proposed dynamic multi-level analysis of SMEs' responses to a transition towards international competition. Secondly, restructuring efforts are considered to originate from strategic decisions that are based on analysis of the business environment. However, the complexity of the dynamics caused by a transition towards international competition makes the stimuli received by the individual firm diffuse and difficult to be converted to input for the strategic decision making process. Furthermore, as firms are embedded in their environment, a focal firm's individual restructuring decisions influence the organisations it is related to, whose responses may cause the focal firm to restructure again. As a result, a different view on strategy needs to be developed that addresses the problems of responding to complex diffuse stimuli and the effects of mutually exerted influence.

I. 4. Problem statement and research questions

SMEs' restructuring process originates from a mix of firm-specific characteristics and influence from their environment. Of the different levels of analysis, the macro-level is the most aggregated, which makes it difficult to attribute changes at this level that affect the individual firm to identifiable players. At the intermediate meso-level, however, the firm is surrounded by suppliers, distributors, competitors, banks and governmental agencies. As stated above, the relations between these players constitute a constellation, in which players are able to exert influence. Therefore, to change its operating structure, an organisation not only has to determine how to govern most efficiently, the parties the organisation transacts with have to accept this

governance structure as well. Since SMEs have limited access to resources, they are conditioned more by their surrounding players in their efforts to impose a particular governance mode than their bigger counterparts. Obstructing players, whether intended or unintended, may frustrate SMEs' restructuring to the same extent as they can stimulate their change process.

In this thesis, observation of an organisation's restructuring efforts is assumed to reveal how transacting parties perceive changes in their environment, how they think to re-position themselves and their ability to influence one another's behaviour. Using the proposed dynamic multi-level approach to explain individual restructuring, an effort will be made to answer the following problem-statement:

> How does the interplay between individual SMEs and their surrounding players affect the restructuring process of the former to a context in transition towards market openness ?

- Several concepts figure in this problem-statement that necessitate further elaboration. Firstly, a closer look at the relations between SMEs and third parties will be taken, explaining the constellation at the meso-level of analysis and the effects of the interplay on the micro-level. How are firms related to the entities that surround them on the meso-level? What are these relations based upon?
- Secondly, TCE uses a limited set of determinants to explain the choice for governance structures. As the multi-level approach will take resources instead of transactions as the basic unit of analysis, governance needs to be explained differently. How do the macro, meso and micro factors determine governance structures and what is the role of the past?
- Thirdly, an organisation's possibility to restructure will be shown to depend on its access to resources or, differently, its bargaining power as compared to its surrounding players. How does an organisation's dependence position determine its possibility to impose a particular governance structure on the meso-constellation?
- Fourthly, the process of opening markets will be considered. In a context-specific approach to restructuring, the impact of changes in the business environment needs to be considered as well to explain firms' behaviour. What are the principal changes that affect the established players that witness the opening? How can the impact be related to dynamics in the meso-constellation?
- The emergence of a governance structure between organisations is considered to be the outcome of the negotiation process between the constituting organisations. Hypotheses based on (1) the focal firm's bargaining position as compared to its surrounding players and (2) the impact on the pre-openness meso-constellation will be used to come to an explanation for SMEs' individual restructuring.
- The interpretation of restructuring as a negotiation process implies a different approach to strategy. As different aspects of restructuring will be considered throughout the thesis, so will be the corresponding aspects of strategy. Together, these parts constitute a step towards a view on strategy that addresses the problems of responding to complex diffuse stimuli and the effects of mutually exerted influence. Answers will be sought to questions such as: What are the implications of a dynamic multi-level approach to governance to the strategic decision making process? What are the possible bargaining strategies for restructuring?

I. 5. Object of analysis

As an empirical illustration of this thesis, a study will be made of the restructuring of Argentine SMEs to the opening of the local market to international competition, in which special attention will be paid to the SME production space[2]. Since restructuring will be analysed as a context-specific process and from an interdependence perspective, the development of the Argentine business environment will be included as well as the characteristics of some of the surrounding players.

The choice to analyse SMEs' restructuring is based on the general assumption that "the organisation of economic activity in SMEs is viable in industries that require quick adaptation to changing conditions" (Penrose, 1959: 220; also: Best, 1990), which implies that SMEs have less difficulty to restructure than larger firms do. Since SMEs have limited resources at their disposal, which inhibits them to restructure through internalisation, their restructuring will mainly be through redefinition of their relations with surrounding players. Furthermore, in a small and closed domestic market, SMEs may survive in industries in which, in the international economy, economies of scale are crucial. When a market opened, however, these firms are obliged to respond if they are to survive competitive pressure. Lastly, the behavioural aspects of organisation are more evident in the management of SMEs than in that of large firms. The mix political, economical and sociological -among others- phenomena that play a role in restructuring processes can only be analysed if tools can be developed that integrate knowledge from various disciplines and are applicable; in brief, an attractive challenge for the optimistic[3] student of Business Administration.

The choice for Argentina has been made because of the profound and concentrated impact the transition towards openness has had. Between 1989 and 1992, the Argentine economy changed from closed, regulated, macro-economically unstable and solitary to open, liberalised, stable and one of the drivers of Mercosur (see chapter III). These radically changed economic conditions press for a profound and rapid restructuring of industry and make it an attractive 'laboratory' for this thesis project.

I. 6. Layout of the study

Having defined the problem statement, revealed the elements the hypotheses are based upon and justified the aim of the study and the object of analysis in the anterior paragraphs, this paragraph offers a preview of the following.

I.6.1. Research method

This thesis results from a self-proposed research project that has been carried out in the Buenos Aires office of the Economic Commission for Latin America and the Caribbean of the United Nations. It is based on a mix of desk-research and interviews, of which the latter represent the smaller part as they served mainly to get a grasp of the Argentine reality and to exchange ideas of its (very) particular functioning. The desk research that has yielded the empirical data as presented in this thesis consists of two parts. Firstly, a process of reading and selection of material has resulted in the inclusion of the work of many other researchers. Secondly, I have been fortunate to obtain access to two large databases, those of the CEPAL and the Universidad Nacional General Sarmiento, Instituto de Industria. The information 'was in there' but it has cost me considerable

[2] For definitions of SMEs and the SME production space, please see annex A

[3] Optimistic in that 1) Business Administration also is science, and 2) that an inter-disciplinary approach is possible.

effort to distil the material I could test my hypotheses on, as the databases had been designed for a different kind of analysis.

The main implications of this research method are, firstly, that the cognitive and behavioural assumptions have not received the attention I think they should have received and, secondly, that credit for the representation of the Argentine reality should be given to the corresponding contributors. With respect to the latter, it should be mentioned that the inclusion of any information in this thesis was decided upon by its author only, making him exclusively responsible for any kind of error.

I.6.2. Composition of the thesis

The thesis is made up of three parts. After an introduction to the subject and the basic concepts this thesis is based upon in chapter I, chapter II develops a theoretical framework that considers the restructuring process, gives shape to the dynamic multi-level analysis and proposes two hypotheses to explain SMEs' behaviour in a context in transition towards market openness.

Chapter III, IV and V are the constituting parts of the dynamic multi-level approach as they focus on the macro, meso and micro dynamics from a historic perspective. The macro-aspects of the transition of the Argentine economy will be elaborated upon in chapter III as it gives a broad characterisation of the environment in which firms operated before and after the opening of the market. Chapter IV illustrates the importance of SMEs as players in the Argentine economy, followed by an analysis of the impact of the transition on the sectoral level of analysis, including all economic agents, and the impact on SMEs in particular. Chapter V elaborates upon the bargaining power dimension, the hypotheses have in common, by distinguishing between firms that adapted successfully and those that did not, as an attempt to identify archetypal features of the management of dependence relations.

The conclusion, chapter VI, connects the theoretical framework of chapter II with the empirical evidence as presented in chapter III through V. After an evaluation of the dynamic multi-level approach, conclusions about the inter-player effects on SMEs adaptation in a context of transition towards market openness will be given.

I. 7. Approaches to organisation

As can be deduced from the comments above, economics have yielded valuable insights but fall short to fully explain why certain governance structures are chosen. For better understanding of the restructuring processes of firms in recently opened economies, steps towards an interdisciplinary mix that contains ingredients of strategic management and TCE -the economic discipline that is concerned most with organisational structure- will be developed. It should be mentioned that in this thesis, TCE is interpreted according to Williamson (1975, 1985, 1991a, 1991b).

Although both disciplines have much in common a clear difference exists. TCE provides a framework that attempts to explain the limits or boundaries of both markets and business firms as arrangements for conducting economic activity. Strategic management is "about the direction of organisations, most often business firms, and poses questions such as: what goals to set, what products and services to offer; the design and configuration of policies determining how the firm positions itself to compete in product-markets (e.g. competitive strategy); the choice of an appropriate level of scope and diversity; and the design of organisation structure, administrative systems and policies used to define and co-ordinate work" (Rumelt *et al.* 1991: 6). Of strategic management theories, a choice for competence theory has been made since this school appears to

be the most complete and integrative. A short explanation of both approaches to organisation will be presented in the following.

I.7.1. Transaction cost economics

Origins

The transaction cost approach originates in Ronald Coase's (1937) article "The nature of the firm", in which questions about the borders of organisations and internal organisation were posed. Coase identified two alternative governance modes for transactions between actors: markets and hierarchies. Transactions in markets are carried out at a certain price, which consists of the price for a particular good plus the cost of the negotiation of the price, drawing up contracts and monitoring their fulfilment; in short, costs of the price system. What distinguishes the organisation from markets is that the organisation substitutes the price mechanism, i.e. the allocation of resources is not co-ordinated by prices but by managerial authority instead. As Coase puts it:

> "Outside the firm, price movements direct production, which is co-ordinated through a series of exchange transactions on the market. Within a firm, these market transactions are eliminated and in place of the complicated market structure with exchange transactions, is substituted by the entrepreneur co-ordinator who directs production. ... A firm consists of the system of relationships, which comes into existence when the direction of resources is dependent on an entrepreneur (Coase, 1937: 333, 339).

The main hypothesis out of which TCE works is: align transactions, which differ in their attributes, with governance structures, which differ in their costs and competencies, in a discriminating (mainly, transaction cost economising) way (Williamson, 1991b: 79). Put differently, when a transaction can be carried out more efficiently when it is hierarchically co-ordinated then through co-ordination by the price mechanism, an organisation will internalise that transaction. This transaction does not need to concern a physical product but can be an innovation, production capacity or a particular capability as well.

TCE regards the transaction as the basic unit of analysis. Three exchange conditions determine which governance form is more efficient for a particular transaction: uncertainty, asset specificity and frequency. Uncertainty refers to the changes that occur in the environment, which is the 'central problem of economic organisation', since environments rarely are stable and predictable (Williamson, 1991a: 278). Asset-specificity refers to the degree to which an asset can be redeployed to alternative uses and by alternative users without sacrifice of productive value (Williamson, 1991a: 281). Increased uniqueness of a good implies an increased risk that the holder cannot benefit from it in case the exchange party the unique good was developed for backs out. Frequent -and similar- transactions between parties provide cost efficiency in using specialised governance structures (Williamson, 1985: 60). The behavioural assumptions TCE is based on are bounded rationality and opportunism. The first refers to behaviour as '*intendedly* rational, but only *limited* to do so' (Simon, 1947: xxiv), while the latter refers to self-interest seeking with guile.

TCE competition

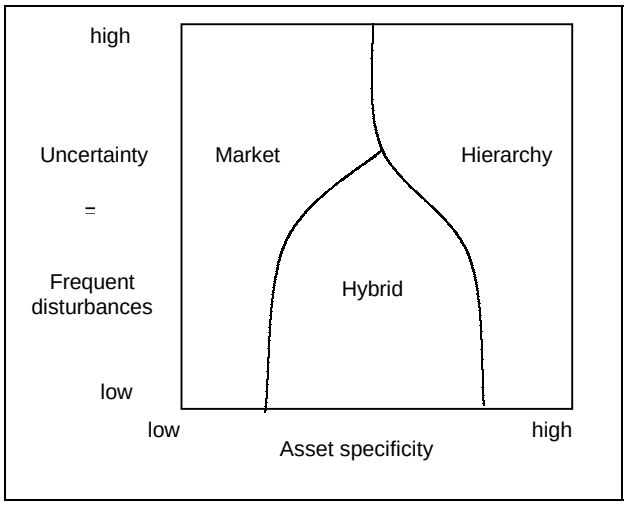
One of TCE's fundamental assumptions is that the economic system is based on competition. Coase insisted that theories of economic organisation should be based on costs that should be considered comparatively. Williamson responded to this request stating that 'for a governance form to emerge and thrive, it must address problems of adapting, co-ordinating and safeguarding exchanges more efficiently than other governance forms' (1991a). The firm that best manages the governance of its transactions will be the most efficient and earn the largest profits. Williamson (1991b: 80) largely denies the value of strategies based on market power because the latter is only temporary and 'most firms lack market power of the kind that is routinely assumed by the

strategizing literature'. Therefore, he proposes strategy to be accompanied by an economising approach.

TCE and interconnectedness

The original dichotomy market-hierarchy has been complemented by hybrid governance modes, defined as various forms of long-term contracting, reciprocal trading, regulation, franchising and the like. Of the conditions that determine the most efficient governance form, asset specificity is the most obvious factor that connects parties. According to Williamson 'a condition of bilateral dependency builds up as asset specificity deepens (1991a: 282). Frequent exchanges may justify a specialised, non-polar governance structure but, since the cost of the design of such governance is high, TCE normally 'sets aside' this factor (Williamson, 1985: 293). An intermediate level of uncertainty may lead to hybrid governance structures, which divides costs between exchange partners and permit them to adapt their operations faster to environmental conditions since they rent resources instead of owning them. However, when uncertainty is too high, the benefits of the flexible hybrid mode are lost because of the cost of re-negotiation of contracts, as can be seen in figure 1.

Figure 1
GOVERNANCE MODES AND UNCERTAINTY



Source: Williamson (1991[a]:292).

I.7.2. On competence-theory

Origins

Integrating and building on various schools of strategic management, the concept of organisational competences, being dynamic, systemic, cognitive and holistic, is an attempt to come to a better understanding of the competitive reality. The approach builds upon Penrose's (1959) and Wernerfelt's (1984) resource-based view of the firm, which sees firms as heterogeneous accumulations of resources and explains performance differences in terms of distinctive resource endowments. It draws from the evolutionary perspective developed by Nelson and Winter (1982), explaining firms' survival as a process of variation, selection and retention of organisations' routines or, differently, 'comps' (McKelvey and Aldrich, 1983).

Behavioural influences have come from research in managers' cognitive managerial models and how these constrain competitive interaction, while a systematic approach to organisational learning (Senge, 1990) was conceived as a possibility to develop new capabilities and expanding managerial cognitions. All the above-mentioned was blended in Hamel and Prahalad's concept of

core competences, defined as "a bundle of skills and technologies that enables a company to provide a particular benefit to customers[4]" (1994: 219). As from here, a new school is emerging that integrates economic, behavioural and organisational perspectives within strategy.

Competence-based competition

Competence theory characterises a firm as an open system of asset stocks and flows, including tangible assets like production assets and intangible assets like capabilities and cognitions. A firm's performance is based on two components: leverage of existent competences and building new competences to compete in the future. The process of competence leveraging can be defined as applying existing competences to current or new market opportunities in ways that do not require qualitative changes in the firm's assets or capabilities. Competence building is any process by which a firm achieves qualitative changes in its existing stocks of assets and capabilities, including new abilities to co-ordinate and deploy new or existing assets and capabilities (Sanchez *et al*., 1996: 8). Competitiveness is defined from the point of view of the customer: a competitive firm has at its disposal those competences that have the highest yield for clients. Since the leverage strategies and competence building are based on the perception of the customer's needs and expectations, competence-based competition, basically, is the contest between managerial cognitions (Sanchez *et al*., 1996).

Competences and interconnectedness

In the open system-approach, the employment of firm's resources, not only implies influence on the employment of resources by other firms, it also implies being influenced by others' employment of resources. In the resulting interdependence, firms can be distinguished by distinctive sets of strategic goals; by the resources available and used in the pursuit of goals; and by the different ways in which firms co-ordinate their deployment of both firm-specific and firm addressable resources (Sanchez and Heene, 1997: 306).

To keep their competences up to date, firms continuously replenish their stock of tangible and intangible assets through interactions with individuals, other firms, financial institutions, governments, communities and other providers of resources. However, when a firm finds itself in a situation in which it urgently needs a profound actualisation or reconfiguration of its competences, it can combine its existing stock of assets with that of other firms through acquisition or co-operation.

[4] The concept "customers" does not only comprise the end-user. Buyers/customers in business-to-business transactions also try to maximise their utility, like end-users do.

II. Restructuring and meso-level dynamics

II.1. Introduction

One of the consequences of opening an economy to international competition is that the organisations that operate in it become part of a larger business environment. Exposed to, among others, different competitors, different technologies and different approaches to organisation, their organisational structure is incongruent with environmental characteristics.

As a result of their limited size, SMEs' responses to the changes brought about by the transition to international competition is conditioned by their restricted access to resources, which are needed to pay for the cost of restructuring. In the open systems-approach of competence theory, based on Pfeffer and Salancik's (1978) resource dependence, firms can be seen as making part of a constellation of players that mutually exert influence to obtain access to resources that are needed to configure their competences. When competences need to be re-configured in response to changes in the context, the initial dependence relations and the way these relations are managed will determine an organisation's access to resources and, thus, its ability to restructure.

For the analysis from a dependence perspective of firms' restructuring in response to contextual transitions, paragraph II.2 will elaborate on the above-mentioned constellation and present additional dimensions of governance through which the need for changing an

organisation's structure can be diffused. As firms compete, they try to organise their operations as efficiently as possible. Differences in perception of the changes in the business environment and a firm's prior structural characteristics determine the most efficient governance structure and, thus, how the firm responds. Paragraph II.3 will therefore build on the determinants of governance as presented by TCE by adding a multi-level perspective, consider restructuring as a dynamic and ongoing process and elaborate on the implications to strategy-making. At this point, the aspects of the functioning of the individual firm in its environment that are relevant in the study of restructuring from a dependence perspective have been defined.

Paragraph II.4 points out the shared character of restructuring processes and features an explanation for firm's behaviour based on bargaining power as compared to the organisations that surround it. An alternative explanation for firms' behaviour will be presented in paragraph II.5, which includes the impact of the transition. To conclude, the separate considerations presented throughout the chapter will be grouped and re-connected to the point of departure: the conditioning of the restructuring process of individual SMEs by their surrounding players.

II. 2. The meso unit of analysis

Responding to changes in the environment mostly implies a different organisation of a firm's processes. As concerned to organisational structure, the re-organisation of a firm's processes has consequences inside the firm and outside. The aim of this paragraph is to develop a framework that addresses the effects of a focal firm's restructuring on the players that surround it, as well as how the responses of these players affect the focal firm. Having defined micro-adaptation as changing the governance of a firm's "bundle of skills and resources" to establish the most efficient match with environmental characteristics, the open-systems approach leads to questions such as: how will the firm acquire resources; who will provide them; how will a changed governance structure affect the focal firm's surrounding players; and what are the implications of changed governance to the meso-constellation as a whole.

II. 2.1. Dependence relations

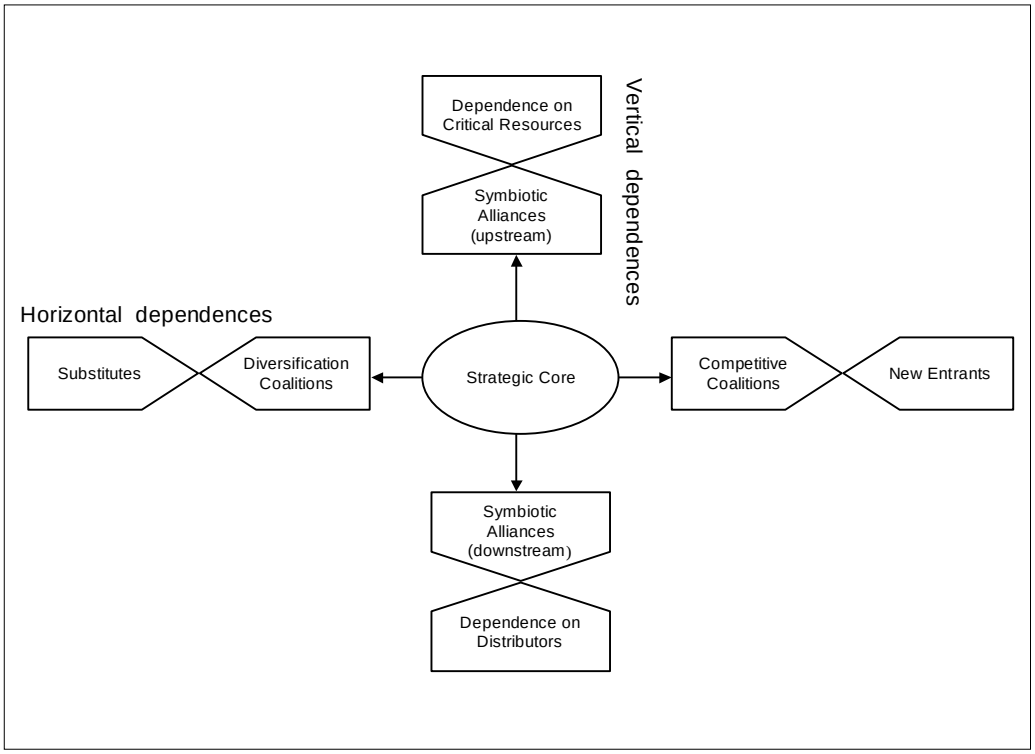
The basic unit of analysis on which the multi-level approach to restructuring is resources. Grant (1991: 118) defines resources as inputs to the production process and mentions items of capital equipment, skills of individual employees, patents, brand names and finance, among others, as examples. The value of resources can mostly be expressed in a price. To firms, however, the value of resources depends on their yield. As the yield of resources is a function of the way in which they are used (Penrose, 1959:25), the definition of resources as inputs needs to be amplified with the benefit inputs yield for the organisation, or organisations, to understand why a particular governance structure is chosen.

Through time, organisations consume resources or the resources an organisation needs may change. Both imply a drive for organisations to replenish their stock of resources by acquiring them from other organisations (Pfeffer & Salancik, 1978: 259) or by generating resources themselves. With respect to acquisition, organisations must interact directly with other organisations that control the needed resources. The generation of resources need not involve interference of other organisations but, since the subsequent use of generated resources alters the basis for exchanges with other organisations, existing or future relations are conditioned by the stock of resources an organisation disposes of.

As organisations are conditioned by availability of resources and depend on other actors when acquiring them, a meso-level constellation of interrelated actors can be identified, in which players mutually exert influence through *dependence relations*. The extent to which a firm is

influenced and is able to exert influence depends on how it defines its efficient boundaries (see Williamson, 1988: 182). The strategic decision which transactions to organise inside the organisation and which outside, thus, not only determines the structure of a firm but has consequences for the meso-constellation as well (Wassenberg, 1995: 38-40).

Figure 2
THE QUARTET OF CRITICAL DEPENDENCIES



Source: Wassenberg (1995:39).

The dependence relations of a focal organisation are visualised and categorised in figure 2 as the 'quartet of critical dependencies'. Vertically, a broadened chain of production figures, placing suppliers of resources at the input-side and distributors and clients on the output-side. Horizontally, the focal organisation is placed among its competitive dependencies, which are divided into possibilities to generate new products with other actors on the left, and conditioning of behaviour by the threat of new entrants on the right.

II.2.2. Meso-analysis of dependence relations

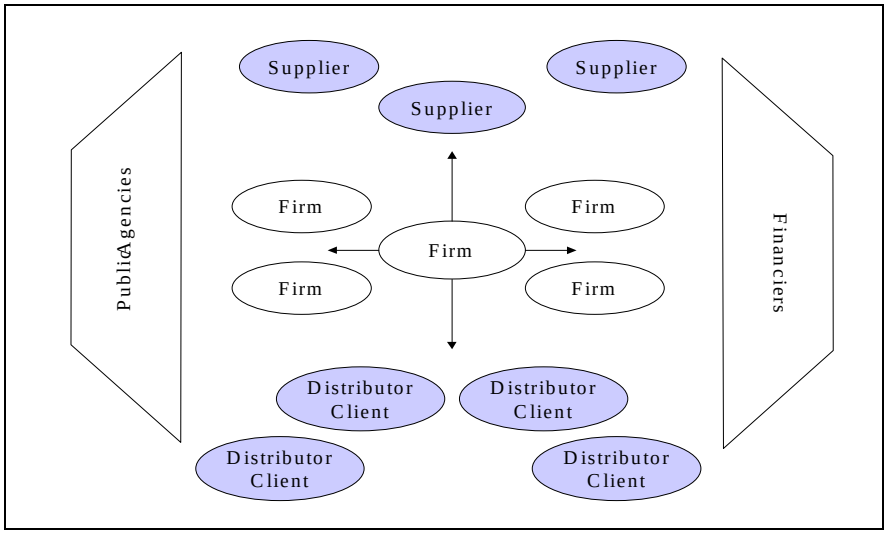
Wassenberg's quartet of critical dependencies illustrates the relations of the focal organisation with its surrounding actors and, therefore, coincides with the competence-based approach. However, since the definition of competences is based on a focal firm, dependence relations of the surrounding players other than with the focal firm are not taken into account. In other words, competences include various organisations but, as each firm has its own competences, the group of organisations that surround it varies per firm. As a result, this approach can not explain how the behaviour that influences the focal firm is influenced itself. To understand how the dynamics at the meso-level of analysis influence governance structures, the quartet – the competence-based approach – needs to be amplified with a multiple-player approach that considers each player to manage its dependence relations.

In their study on institutional isomorphism, DiMaggio and Powell (1983) presented the organisational field as "those organisations that, in the aggregate, constitute a recognised area of organisational life: key suppliers, resource and product consumers, regulatory agencies and other organisations that produce similar services or products" (1983: 148). The organisational field features all players that matter in the quartet of critical dependencies but fails to designate functional positions to them and connects them only to the extent that relations are institutionally defined. This means that other kinds of relations are not included, while they do matter when considering firms' strategic behaviour. Banks, for example, do not solely evaluate their client firm's projects but take sectoral performance, including non-clients, into account as well.

Ruigrok and Van Tulder's industrial complex, being the whole of dependence relations between a core firm and its suppliers, distributors, employees, financiers and governmental bodies (1995: 65), includes any kind of relation that may influence a player's behaviour but is based on one core firm. In the analysis of SMEs, however, there is no core firm that manages its complex, but a functional constellation that individual SMEs make part of. Legislation and governmental initiatives to promote competitiveness, for example, affect the entire chain of production and should therefore be analysed as such. In addition, as employment in SMEs is scattered and limited per firm, the influence ascribed to employees can be considered little.

Using parts of the concepts described above as building blocks and adding a multiple-player perspective to them, a framework emerges that: 1) includes all players in a value chain, as well as their financiers and public agencies and 2) recognises that players exert influence in many ways. The meso-constellation, as presented in figure 3, visualises the insights to be derived from the multi-level approach to structural changes of SMEs: the consequences of inter-player effects to organisational restructuring.

Figure 3
MESO-LEVEL CONSTELLATION



Source: Data prepared by the author.

II.2.3. Dimensions of inter-player relations

The debate on different modes of governance modes has produced a number of competing views on how organisations are related[5]. Especially when considering hybrid governance modes,

[5] Granovetter (1985) states all economic action to be *embedded*, i.e. all agents are interrelated since they search for information in the context to reduce uncertainty. In this conception, market governance would be a theoretical construct since the atomistic economic

scholars disagree on what constitutes a relation and through what dimensions connected organisations affect each other. The organisation of the meso-constellation that has been presented above, is constituted by the dependence relations between organisations that result from their needs for resources. This conception is defined broader than the TCE conception of interconnectedness, which is based on transactions only, and allows for recognising the influence of dimensions other than asset specificity, frequency and uncertainty.

As suggested by many, long-term, established relationships between organisations enable them to benefit from each other's competences (Hamel *et al*, 1989; Ohmae, 1989; Cleri, 1996). In the many contributions on the topic, different aspects of inter-firm relations have been highlighted and many definitions have been proposed to capture dimensions that influence governance structures. Table 1 offers an overview of different kinds of networks or organisational forms based on networks that distinguishes on the level of analysis as well as on the kind of involvement of the firm. The next paragraph will build on these definitions to identify the dimensions that should be added to the TCE set to come to a more complete understanding of how changes of a focal firm affect the organisations that surround it.

Table 1

DIFFERENT KINDS OF ORGANISATION BASED ON NETWORKS

Social networks	Collectivity of individuals among whom exchanges take place that are supported only by shared norms of trustworthy behaviour (Liebeskind *et al,* 1996: 430)
Strategic Group	Meaningful substructure of firms within an industry – one that is acknowledged by industry participants and has significance to them (Peteraf and Shanley, 1997: 166)
Network governance	Select, persistent and structured set of autonomous firms (as well as non-profit agencies) engaged in creating products or services based on implicit and open-ended contracts to adapt to environmental contingencies and to co-ordinate and safeguard exchanges (Jones *et al,* 1997: 914)
Alliance capitalism	Strategic, long-term relationships across a broad spectrum of markets (Gerlach and Lincoln, 1992: 493)

Source: Authors mentioned in the table.

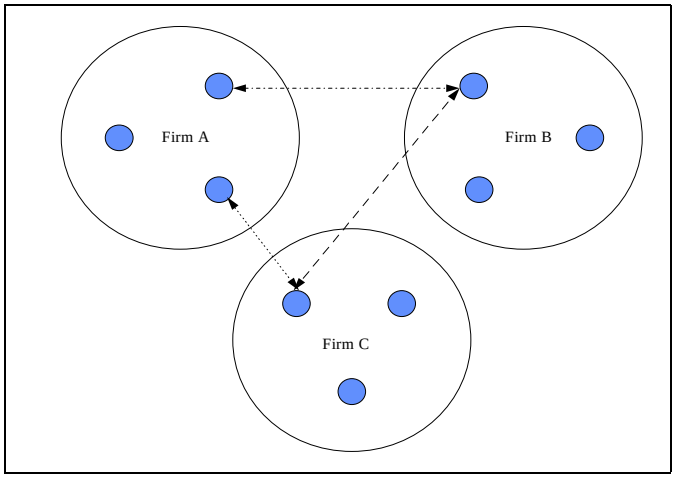
II.2.4. Relations illustrated

The different networks are different kinds of hybrid governance that have more characteristics of hierarchy, the more inclusive the constituting relations are. The first and least inclusive, is the social network, in which individuals from different organisations get to know each other, build relations and start to exchange resources. The most important feature of a social network is that reliable *information* is shared among the members, which facilitates their organisational learning (Liebeskind *et al.*, 1996: 431). Another feature of social networks is that they may enhance flexibility a firm's capacity for responding to unpredictable changes in its environment (Volberda, 1996). Firms can avoid the sunk cost of investments in technologies that change rapidly, by sourcing information from an external network of confidants. This external network can help the firm to assess the value of information when firms are not able to learn and institutionalise appropriate assessment routines in short periods of time. Information sharing may be institutionalised, as is the case with trade and branch associations, or occur as the result of

agent does not exist. Here, this polar governance mode is maintained, so that the hybrid mode closest to market -the social network- shows stronger contrast between solitarily transacting firms and firms that share information on a regular basis.

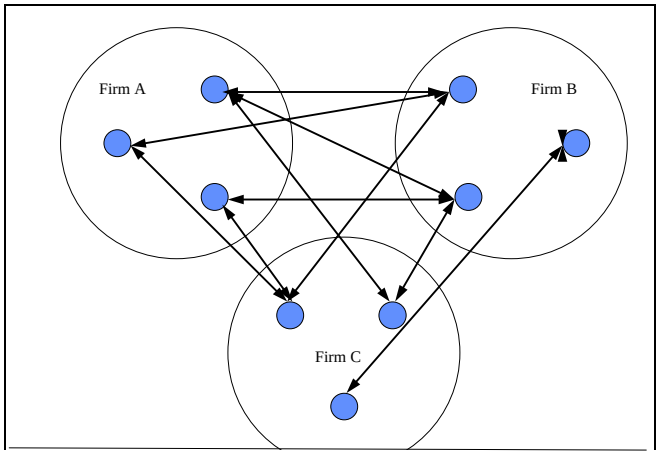
frequent contact between individuals. Figure 4 shows agents that belong to different organisations that are related to each other and form inter-organisational bridges that allow for diffusion of information

Figure 4
SOCIAL NETWORK



Source: Data prepared on the basis of Liebeskind *et al*. (1996:431) and Volberda (1996).

Figure 5
STRATEGIC GROUP



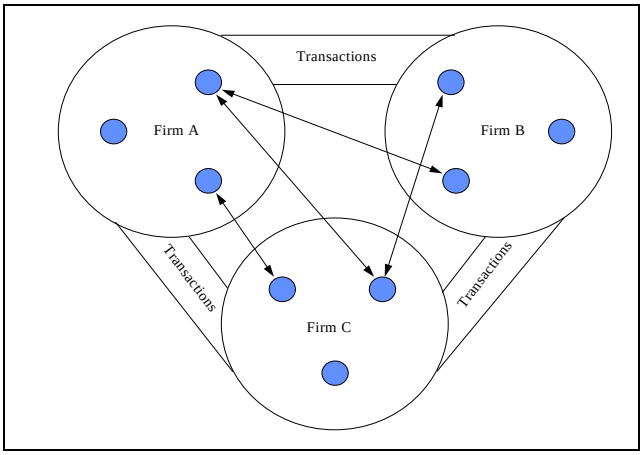
Source: Data prepared on the basis of Peteraf and Shanley (1997).

The second kind is the strategic group, in which managers recognise that they belong to a group based on a strategic *group identity* a set of mutual understandings among members of a cognitive intra-industry group, regarding the central, enduring and distinctive characteristics of the group (Peteraf and Shanley, 1997: 166). To cope with the complexity of the surrounding environment, managers categorise players that share particular characteristics into groups. Group identity, then, may be built as the result of social learning processes, that create collective understanding and reinforcement of the group's attributes. In inter-organisational activity, managers get to know each other and learn which firms are important to observe and which not, when scanning the environment. As a result of improved information, uncertainty decreases, which leads to lower transaction costs. In figure 5, agents of different organisations are interconnected to

an extent that permits for mutual learning and understanding, leading to the formation of a strategic group.

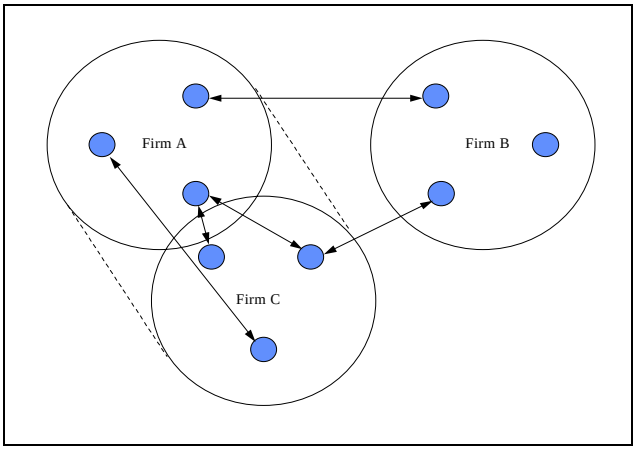
The third kind is network governance, in which parties transact on a basis of open-ended relational contracting. Relations are not just a by-product of transactions, the transacting parties value the social component of the relation and may even transact because of the relation. The structure and quality of ongoing social relations shape actors' expectations and opportunities in ways that differ from the economic logic of market behaviour (Uzzi, 1996: 676). These actors are a select group of firms that interact frequently and, in doing so, come to a division of labour. The *co-ordination of production* within the network, without interference of a mutually agreed upon authority, is what distinguishes network governance from the strategic group, in which information about group members reduces uncertainty but not necessarily provokes changes in an actor's operations. An illustration of network governance is given in figure 6.

Figure 6
NETWORK GOVERNANCE



Source: Data prepared on the basis of Uzzi (1997).

Figure 7
INSTITUTIONALISED ALLIANCE



Source: Data prepared on the basis of Uzzi (1997).

The fourth kind is alliances in which the co-operation is *institutionalised* or, differently, closest to hierarchic governance. Organisations not only co-ordinate their production, they also dedicate resources that will be managed jointly. If we define the borders of organisations according to where their administrative power reaches, we find institutionalised alliances to blur them. In figure 7, firm A and C jointly control part of their activities while they still maintain relations with others individually.

II.2.5. Diffusion of change

Meso-level relations based on resource interdependence, thus, are subject to conditioning effects of TCE dimensions of governance but the influence of information sharing, collective identification, implicit co-ordination of production and shared institutionalisation should be taken into account as well. The main implication of defining relations between players more broadly is that changes or events have a more diffuse effect, i.e. they affect more players than those directly involved. A technological innovation, for example, may affect the organisation of a value chain, force competitors to produce differently, change relations with financiers and involve different regulation from governmental agencies. An organisation's response to changing environmental conditions, thus, is a function of firm-specific characteristics and the dependence relations it is embedded in.

The combination of firm-specific characteristics and environmental forces implies a different view on diffusion of change from that of the two most common perspectives on the adaptation of organisations: strategic choice versus ecology. The first sees adaptation as the result of strategic choice a transformational process in which organisations adapt to environmental changes by restructuring themselves to in an intentional, rational manner (Zajac & Kraatz, 1993; Fombrun and Ginsberg, 1990). The second defines adaptation as an evolutionary process in which whole populations of organisations adapt to environmental change, given that individual organisational adaptation is blocked by institutional inertia and resource specificity (Hannan and Freeman, 1977). Although the two perspectives seem opposite, they have in common that they assume successful individual organisations or whole populations to be driven by negative feedback systems towards a state of equilibrium, i.e. firms adapt to the environment or disappear.

The interpretation of the interplay between the organisations that constitute a business environment as a system has led system dynamists (Stacey, 1995, 1996; Senge, 1990) to consider the effects of positive, non-linear and network feedback systems on organisational adaptation. This led to define the transformational process as one of "internal, spontaneous self-organisation amongst the agents of a system, provoked by instabilities, and potentially leading to emergent order" (Stacey, 1995: 478). The dependence relations between organisations that enable them to exert influence, thus, constitute the open-systems approach in which the behaviour of the individual firm is conditioned by various feedback systems, i.e. the dimensions that determine governance modes. The complex nature of these feedback systems makes it impossible for the organisation to establish clear relations between cause and effect and makes the emergence of order -here, an efficient organisation of production in a meso-constellation- dependent on the agents' acceptance of a set of conditioning rules. As long as agents cannot agree on these rules, the outcome of the interplay is unpredictable over the long term.

An organisation may design its structure and strategy for adaptation for a desired future state but, as long as its environment lacks some order, it cannot determine what governance mode will be the most efficient. Since the establishment of order in a firm's environment depends largely on the dynamics in the meso-constellation, the origins of these dynamics need to be considered. To do so, the next paragraph will present a multi-level perspective and focus on the establishment of an

individual organisation's efficient border as it reflects the structural response to environmental change.

II.3. Determinants of governance

The TCE approach to organisational structure, as presented in section I.7.1, explains the establishment of the boundaries of the firm. Although the approach has been criticised because of its rigid behavioural assumptions, non-dynamic character and neglect of a firm's competitive considerations, it has high explanatory power at the micro-level of analysis. Since it is the redefinition of organisations' boundaries in response to environmental change puts the meso-constellation in motion and the boundaries of the firm reflect the influence of inter-player effects, this paragraph will build on TCE by adding a multi-level approach and addressing some of the critiques. The different approach to governance and the broadened set of dimensions that determine a governance mode that were presented in the anterior paragraph will be incorporated to explain how a firm establishes its efficient border.

II.3.1. Macro-milieu

Some determinants of governance apply to all agents that operate in a particular environment. Social, macro-economic and political conditions shape the general context in which organisations interact and, therefore, influence all players to some extent.[6]

The influence of culture and social relations on the performance of economies or individual firms has been elaborated upon by various scholars (Fukuyama, 1995; De Jong, 1996; Hofstede, 1980). The conclusion they draw is that social and cultural phenomena, identified as macro-characteristics, can be recognised to influence individual transactions and, therefore, the way they are governed.

The conditioning effect of macro-economic variables on micro-economic functioning becomes evident when a brusque change occurs or when they are highly volatile. Macro-economic indicators such as GNP, inflation, balance of payments, interest and exchange rates, etc. reflect the conditions of the economy that affect all players. Credit given by suppliers, loans granted by banks, foreign investment or real prices of imported inputs are examples of individual transactions that are partly determined by the macro-economic situation.

Political conditions as reflected in regulation and institutions affect those individual players that operate in the regulated environment or are related to a public institution. With respect to the latter, North (1990) holds that the principal role of public institutions is to reduce transaction costs through providing regulatory and social conditions that allow organisations to specialise, which increases the general level of prosperity.

II.3.2. Meso-moves

Resource-based interdependence makes that the redefinition of boundaries of one organisation affects the other players in the meso-constellation. Through analysing boundary-decisions at the meso-level, TCE is enriched with strategic considerations and thereby combines the minimisation of transaction costs in the present (see Williamson, 1991b) and the positioning of

[6] Van de Vliert and Kluwer (1997) have even made an effort to show the influence of temperature on economic performance. Based on a relation between income per capita and a country's average temperature, interfered by a cultural effect on social competition, they came to the conclusion that countries that have warm climates are significantly poorer. Here, I will limit myself to macro-factors that depend on human choices and behaviour.

the organisation, aimed at the composition of future competences (see Ghoshal and Moran, 1996; Hamel and Prahalad, 1994). As a consequence of strategic considerations, an organisation may choose a sub-optimal governance structure in the present to assure access to critical resources in the future.

Examples of situations in which a firm chooses to sub-optimise may be the threat of a competitor that inhibits access to critical inputs for the production process or an anticipated need for specific resources such as technological knowledge. If the firm decides to change its organisational structure through internalisation of these resources, the competitor or the supplier of technology will need to reconsider its boundaries as well. Competitive moves are not justified by arguments of profit maximisation, neither at the meso-level nor at the micro-level. Instead, Schenk (1996) identifies a mini-max regret logic, which justifies competitive moves whenever the cost of damage suffered by a firm's competitors is larger than the cost of the move to the firm itself.

II.3.3. Micro-motives

Contrary to bureaucratically structured large firms, SMEs are often managed by autocratic owner-entrepreneurs or families that identify with the firm. In addition to the firm's economic function of profit-maximisation, SMEs are often subject to personal influence or traditions imposed by the founders or current director in their behaviour and have a social function, in terms of employment for the entrepreneurs' relatives or his social status (Brytting, 1990; Kantis, 1996). As a result of blending personal with corporate interests and goals, SMEs are characterised by economic sub-optimisation. The consequences of these characteristics for the management of the firm are various (adapted from Gatto, 1998: 202-5):

- SMEs show a high degree of centralisation that can be seen in the organisational structure that, although it consists of few hierarchical levels, clearly demarcates functions and responsibilities. Relations within the firm, however, are personal and close.
- It is often difficult to separate the assets of the firm from the property of entrepreneur/owner. In many cases this ownership-structure inhibits association with other firms or external investment that would allow the firm to grow.
- Strategic management and internal policies are rarely formalised processes. The entrepreneur-owner is mainly occupied with short-term planning of operations through which strategic changes are implemented abruptly. The firm's strategy emerges from the entrepreneur's intuition and cognitions and is based comparison with the behaviour of other firms.
- The possibility SMEs have to finance their investments is reduced as compared to that of large firms. Re-investment of profits or savings of the owners are the most common sources of finance, followed by more expensive long-term credit granted by banks.

The bounded rationality economists assume, is characterised by the mixed motivations that vary per entrepreneur and through time. Because of the structural particularities of SMEs, managerial cognitions and motivation influence the governance of competences more explicitly than would be the case in large firms.

II.3.4. The past

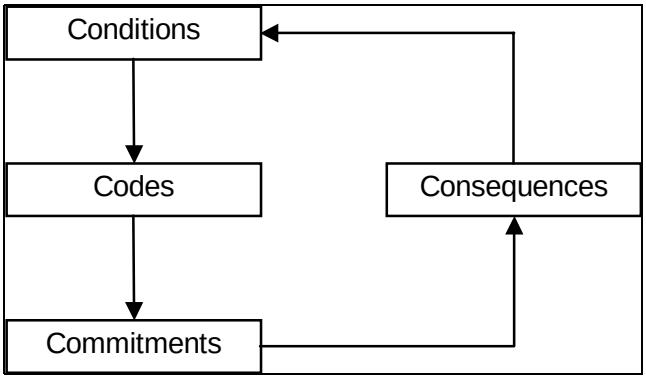
Organisations evolve through time and, in doing so, gather knowledge and experience that differ them from other organisations. The trajectories along which firms develop, determine the content of organisational routines, i.e. "regular and predictable patterns of activity, which are made up of a sequence of co-ordinated actions by individuals" (Nelson and Winter, 1982).

The use of accumulated experiences and knowledge in a firm's management of operations biases its governance. Since the business environment changes over time, routines that once put the firm at competitive advantage may be inadequate in a changed contextual setting. Wassenberg (forthcoming: 1) amplifies the influence of the past to the organisation as a whole, stating that "past investments may stand in the way of a flexible response to new challenges. History binds: mentally, financially and institutionally". As a result, Williamson's classical TCE leads to structurally erroneous establishment of an organisation's efficient border in a context of rapid or profound change (Nooteboom, 1994: 161). For a better understanding of how the boundaries of the firm are established, TCE should be complemented with the influence of the focal organisation's past and that of its context.

II.3.5. A cyclic approach to governance

The emergence of governance takes shape in the structure and content of dependence relations between organisations. Resulting from macro, meso and micro factors and the past, individual firms' boundary decisions determine how and to what other organisations it will relate to govern its competences. The interaction between organisations from which a governance structure emerges can be seen as a negotiation process, in which players' commitments – the establishment of relations – are the outcome of their aspirations, their mutual agreement to negotiate according to a set of rules and their initial positions (Wassenberg 1995: 11-23). To emphasise the inter-player effects, i.e. how the responses of one player affect other players' possibilities to respond and vice versa, the negotiation process is stylised as a cycle.The cycle departs from the actual state of a framework, the *conditions*, that reflect the players' internal and external dependencies. The internal dependencies consist of dynamics inside the organisation caused by differences in actors' interpretations of the determinants of governance. The strength of the organisation-internal consensus determines an organisation's possibility to stick to one course of strategic action in its interactions. Organisations' external dependencies have been elaborated upon in section II.2. Note that external dependencies are not independent variables but the result of the organisation's decision where to establish its efficient border. The following phase, *codes*, comprises the definition of the rules of the game and players' stakes. Organisations' goals, crystallised from the internal dynamics, are negotiated according to an agreed upon set of rules. This phase is based on the cognitions of the interacting players, which determine their goals and chosen bargaining strategy. The pursuit of goals activates the framework, i.e. from the moment an organisation acts to obtain its goals, all actors it is connected to through dependence relations react to maintain or improve their position in the framework. The outcome of the negotiation process is a re-definition of the relations between organisations, *commitments*. The whole of these relations constitutes a renewed framework, in which players – that do not necessarily need to be the same as those of the anterior framework – configure their operations according to the role obtained. In the final phase, c*onsequences*, the obligations and expectations that come with commitments are coupled to the initial conditions and codes through which the establishment of governance structures is characterised as a cyclic process (see figure 8).

Figure 8
CYCLE OF INTER-ORGANISATIONAL BEHAVIOUR



Source: Wassenberg (1995:12).

The cyclic multi-level approach to the emergence of governance is an attempt to upgrade TCE, in which a central role is assigned to the consequences of inter-player effects to changes in the operating structure of individual SMEs. Interpreting restructuring as a negotiation process, the bargaining position of each of the players involved needs to be considered to understand the dynamics in the meso-constellation. Prediction of how a new governance structure will emerge in response to a changing context, however, is impossible due to the complexity of this process. Firstly, the complex nature is explained by the many factors that should be taken into account for an individual organisation's boundary-choices. Secondly, since the dynamics in the meso-constellation affect all players, they respond simultaneously and, in doing so, cause even more changes.

Although no realistic predictions can be made about the implications of contextual change to the orchestration of a firm's meso-environment because of complexity, the cycle of inter-organisational behaviour helps to understand the restructuring dynamics. Players' behaviour is aimed at improving their position in the meso-constellation utilising the *latitude* between dependence and independence as comprised in their set of dependence relations. In other words, organisations are embedded in their environment through dependence relations that, on the one hand, are inevitable because of resource needs, and, on the other hand, condition an individual player's response the more a player depends on the resources it obtains through the relation. As organisations make use of latitude to change their structure -and, by doing so, their role in the meso-constellation- the assumption can be made that organisations will try to reduce their dependence on others as much as possible to be able to maintain or establish an efficient match between organisational structure and environmental characteristics.

II. 4. Responding to market openness: the bargaining dimension

Resource-based interdependence conditions players' possibilities to respond to changes in the environment. This paragraph will elaborate on the collective character of restructuring processes, operationalise the negotiation approach and present its implications to the strategy process. Together, these three elements constitute the basis for a possible explanation for the response of an individual firm to a context of markets that are opened to international competition.

II.4.1. Obtaining returns from collective restructuring

Firms that face strong changes in their environment, find themselves in a situation in which each individual firm would prefer to change the orchestration of the meso-constellation so that it obtains the highest efficiency in its operations. Due to interdependence, however, firms can not

bluntly impose a governance structure but need to negotiate 'agreements' with other players from which a new governance structure can emerge. Interpreting the ongoing interactions inherent to shared governance as a repeated game, McMillan clearly identifies the problem adapting firms face:

> *"Playing a game is like dividing a pie. Players are often faced with contradictory motives. Their actions affect the size of the pie, and all participants agree in wanting the pie to be as large as possible. But their own interests are at odds when it comes to dividing the pie; all want their own share to be as large as possible. The players' attempts to increase their own shares may have the side-effect of decreasing the size of the pie. A tension exists between a large total pie and seeking a large share of the pie (1992: 21)."*

In the restructuring process, initiated by the opening of markets to international competition, the tension is found in the question how to govern, which has direct consequences for the share of the pie each firm obtains. This question contains subquestions such as: *who* to involve in the constellation to be governed; what are the *stakes* of the players involved; and *where* activities will take place.

The emergence of a governance structure is the result of a process in which answers to the questions mentioned above are negotiated. Players' efforts to impose a particular governance regime, activate the framework and determine what Wassenberg (1995: 14) calls an *arena*; a "constellation in which internal dynamics are caused by efforts of each firm to reduce dependence on the other players". An arena has three constituting elements: a multi-interpretable configuration of partly compatible, partly conflicting goals or values (multiple stake); a configuration carried by a joint group of partly independent, partly mutually dependent organisations (the network of players); and a critical minimum of normative regulation of mutual relations and attitudes that originates from the interaction (rules of the game).

When markets are opened to international competition, the meso-constellation is activated becomes an arena. Due to the different interpretations of the determinants of governance and the positions players occupy in the constellation, the initial establishment of firms' efficient borders will lead to overlap and cavities in the constellation. Since all players will try to position themselves so that they can operate most efficiently -and obtain 'their' share of the pie- conflict will be centred on the questions mentioned above. Compatibility of stakes is based on interdependence; although a part of the local constellation may be externalised through replacement, a minimum of organisations will be needed for the co-ordination of local operations. The rules of the game can be summarised in pragmatic understandings aimed at obtaining a favourable position in the re-emerging meso-constellation. High volatility in terms of exit and entrance of players, the inclusion of the economy as a whole in an international trade system and the introduction of different production technologies and management techniques, reduce the transparency of the rules of the game, which may give rise to opportunistic behaviour.

To obtain benefits from the re-emerging governance of the meso-constellation a firm has to convince or force other players to behave in a particular way. The arena, thus, becomes the locus for a subtle game of taking positions, threatening and commitments to paths of action that will be won by the strongest player – or players in case of coalitions. In the negotiating approach to restructuring, strength is defined in terms of bargaining power, a concept Wassenberg (1995: 60) defines as "the cost to player A to harm player B". This cost is expressed in the use of critical resources: player A is powerful when doing harm to player B implies only a minor cost in terms of resources, or when player A has sufficient resources at its disposal to justify the gains of harming player B. The explanation for an organisation's structural responses to changes in the business environment can thus be formulated as follows:

Hypothesis (I): *The stronger an organisation's bargaining position, the better*[5] *it will be able to restructure in response to changes in the business environment.*

The next paragraphs will, respectively, operationalise bargaining power, so that the hypothesis can be verified in an empirical study, and develop a different approach to strategy as a response to the changes brought about by market openness.

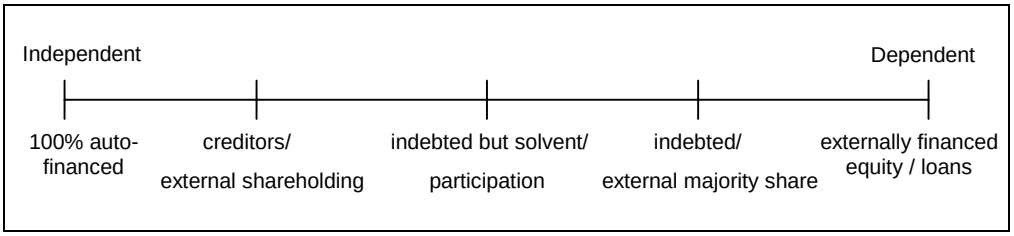
II.4.2. Bargaining power operationalised

The relations that have been elaborated upon in section II.2, are based on the need for resources. Notwithstanding the many kinds of resource dependence and the dimensions through which interdependent players are connected, this paragraph will approach bargaining power as resulting from an organisation's financial and technological dependence and its position in the framework.

Finance

The actors in the extended network are related to one another through financial ties. Most transactions involve some form of payment and especially relations with banks[6] are characterised by the financial dimension. Financial dependence relations can be divided into two kinds, those that result from debt and those from equity. Equity relations are directly coupled to say in the emitting entity, permitting the holder of shares to influence the strategic course of a firm according to his share. Debt relations are less compromising as long as a firm is solvent. However, when credit is needed or when an indebted firm faces difficulties, lenders will try to influence the firm so that it lowers the risk involved and guarantee repayment.

Figure 9
FINANCIAL DEPENDENCE



Source: Data prepared by the author.

As can be seen in figure 4, complete financial independence comes with full auto-financing, a situation in which the firm is not indebted and holds all its shares. The more the firm is financed externally, whether through debt or equity, the more dependent it becomes on the financier, that finds itself increasingly capable to influence strategic action of the firm. In a situation of extreme dependence, finally, lenders or shareholders are found in a supposedly powerful position. On the other hand, as equity or loans can not be withdrawn easily from a firm facing difficulties, the firm is not completely powerless.

With respect to adaptation to market openness, SMEs face an increased need for capital, to finance for example export or investment in equipment. As a result, financiers' bargaining power increases, conditions to obtain credit sharpen and a number of firms will not qualify to obtain capital needed to adapt.

[5] Note that a better response to changing environmental conditions has been defined in terms of the results the individual firm obtains from its restructured operations, i.e. an *efficient* match between organisational structure and environmental characteristics.

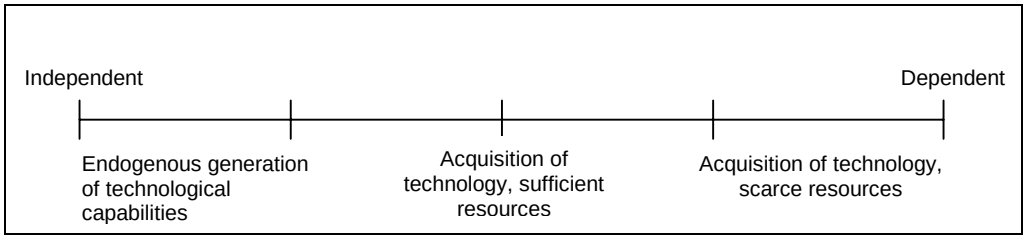
[6] The influence exerted by banks depends largely on the industrial structure of an economy. Japanese and German banks are known to take active roles, while banks with an Anglo-saxon orientation take a more passive role (see Ruigrok and Van Tulder, 1995; De Jong, 1996, 1997; Moerland, 1997).

Technology

The core of the framework is the chain of production. The flow of products connects providers with intermediate players and ends when a product reaches the final customer. Technological dependence can be divided into two sub-categories: access to technology and quality. These kinds of dependence are less explicit and even less relevant in simple production processes, but can be significant in technologically sophisticated production. Access to technology refers to the extent to which an organisation can renew its stock of technological knowledge. This renewal can be either endogenous, the organisation's technological progress is the result of its own R&D efforts, or exogenous, technology is acquired from third parties through licenses. To raise the quality standards in a production chain that consists of various players, all are obliged to improve their processes, i.e. if the output of firm A is not of sufficient quality, his client, firm B, will have difficulty to raise its standards.[7]

According to a firm's position on the continuum, it will be able to require other firms to adapt to a particular technology or replace providers or distributors by technologically more advanced players. Note that dependence in the chain of production is not only determined by the technological capacities; a player's bargaining power increases as it finds itself in a bottleneck-position[8] in the chain of production. On the other hand, this position also increases the possibility that other players replace the bottleneck-player in case of malperformance.

Figure 10
DEPENDENCE RESULTING FROM TECHNOLOGY



Source: Data prepared by the author.

The technological adaptation of SMEs in a context of opening markets is often aimed at catching up with the international standards to be able to offer competitive alternatives for imported products. To be able to do so, firms will vertically disintegrate to specialise and acquire parts and sub-assemblies from technologically advanced local or foreign players. Before firms engage in R&D activities on their own account, production processes will be updated through the acquisition of equipment and licenses. Successful adaptation, thus, will be the result of both access to technology and the position the firm occupies among its competitors.

Vertical flow

An organisation's bargaining position as compared to its suppliers and distributors depends to a great extent on how the chain of production is structured. Firstly, the number of suppliers and distributors an organisation transacts with, determines its possibility to impose conditions and structure relations. The bottleneck-position that was mentioned above places the organisation in a position that enables it to exert influence on its surrounding players, managing the equilibrium between the threat to cut a players' vertical flow and exit-barriers to prevent replacement.

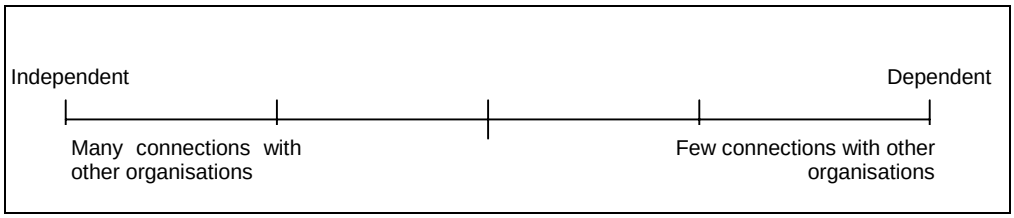
[7] More simple, connections based upon quality are based on the 'Garbage in - Garbage out' principle.

[8] In the theory of constraints-view on production, a bottleneck-position is defined as the critical point in the flow of production. In this view, optimised production is characterised by a continuous flow through processing-stations that function without delays caused by stations that because of a longer processing-time hamper the entire flow; bottlenecks.

Secondly, the exclusiveness of relations with suppliers or distributors determines how influence can be exerted. Exclusive dealerships or franchise-relations, for example, enable an organisation to condition the behaviour of its distributors.

An organisation's vertical dependence relations determine to a large extent its ability to adapt. A firm that has committed itself to one exclusive supplier will have to negotiate firmly if it is to change its production, while a firm with many clients will not be affected too much by the threat of one client to acquire elsewhere since the firm does not change its products according to that particular client's wishes. In general, when competition increases, i.e. more players make an effort to transact, vertical exclusiveness decreases, which implies lower bargaining power.

Figure 11
VERTICAL DEPENDENCE



Source: Data prepared by the author.

The shift from a closed to an open economy requires firms to reconsider their vertical dependencies. The possibility to replace local suppliers by imports or newcomers or the possibilities of selling or producing abroad are more open to independent firms than to those that operate as the extension of their supplier, distributor or client. The response to a changed environment will therefore be conditioned by a firm's initial position.

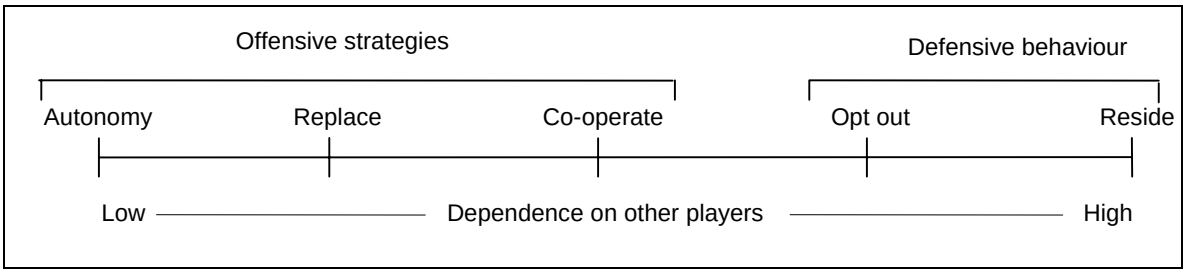
II.4.3. Strategic behaviour

As stated in paragraph II.3.5, it is impossible to predict how a governance structure will emerge due to the complexity of boundary choices of individual firms and the dynamics caused by simultaneous responses. Does this mean that it is impossible to behave strategically as well? The answer to this question is no. As was explained in paragraph I.7, strategic management is about the direction of organisations, which means that the organisation defines goals and acts to obtain these goals in the inter-player dynamics. In an open-systems view, strategy needs to be seen as the management of dependence relations so that the organisation has access to the resources it needs, while limiting the conditioning effect of influence exerted by other players as much as possible.

As the emergence of a governance structure has been stylised as a negotiation process, bargaining strategies can be borrowed from negotiation theories (Pruitt and Carnevale, 1993). Of the initial division of responses into offensive, defensive and disappearance, the first two are categories that can be subdivided into five possible options as illustrated in figure II.11. As a function of its bargaining power as compared to its surrounding players a firm may: decide to try to control those transactions that are most important to its business, adopting a solitary or autonomous strategy; replace those players that obstruct its chosen course of action by more supportive players, choosing a strategy that allows for dependence on others; engage into co-operative agreements with other players in order to share resources and jointly manage transactions; opt out, the owners sell the firm; or to reside and assume an attitude that is either inert or responding to requirements of the players a firm depends on.

Figure 12

POSSIBILITIES FOR STRATEGIC ACTION OF PLAYERS PURSUING ADAPTATION



Source: Data prepared by the author.

The emergence of governance in the meso-constellation [voortkomen uit] the bargaining strategies players pursue while boundary choices – and therefore bargaining strategies – are conditioned by the repartition of roles that result from the emerging governance structure. A firm, thus, can define long-term goals but can not predict all the short-term steps it has to take to realise its long-term goals. Instead, short-term strategy-making has a "muddling through"-character (Lindblom, 1959), as firms continuously need to redefine their future short-term steps to realise their long-term goals. To change its position in the meso-level constellation a firm makes use of the latitude as comprised in its dependence relations. Firms' efforts to reduce dependency, thus, are aimed at improving the basis from which short-term strategic action is undertaken so that long-term strategic goals can be realised. As this basis is constituted by the control of critical resources, the arena will be dominated by the successful players that, due to the accumulation of resources that comes with being successful, will be able to exert more influence on their surrounding players and, in doing so, shape their environment. In a context that undergoes a profound transition, the dominant players will therefore subsist, while weaker players are replaced by new entrants, bought by stronger players or gradually disappear.

II.5. The impact of opening markets

The opening of markets to international competition has a profound impact on the established players. In the anterior paragraph an inside-out perspective has been presented in which the incumbents see the *ancien régime* in the meso-constellation affected by changes in their dependence relations that condition their possibility to respond. In addition, an outside-in view will be developed that features the consequences of opening markets as context-specific characteristics. As a result, an alternative explanation of individual firms' responses to opening markets will be formulated.

II.5.1. Opening markets

When markets are opened to foreign competition, a strong impulse is given to the meso-constellation, which causes a series of responses that drive the re-emergence of governance. This impulse however, is not equal in each sector of the economy concerned and has a manifold impact on players that make part of various meso-constellations. In terms of resource dependence, due to the transition the *criticality* of resources changes which has implications for bargaining positions but does not entirely explain firms' behaviour.

The explanation of organisations' structural responses to changes in their environment to depend on their bargaining position has two shortfalls that are particularly important in a context of opening markets. The first is based on the definition of the meso-level of analysis. Lying between the well-defined micro- and macro-levels, the meso-level of analysis is more of a conceptual kind. The attempt as made in this thesis, to come to a better definition has led to the meso-constellation.

While useful to visualise bargaining dynamics, it is not inclusive[9] enough -players can make part of more than one constellation- which makes it impossible to explain an organisation's behaviour by the bargaining dynamics of only one constellation.

The second shortfall of an explanation of responses to environmental change based on a firm's bargaining position results from changes that affect the meso-constellation as a whole, without or partially affecting the internal dependence relations. The export-based internationalisation strategies of many Asian firms, for example, sometimes led to the redundancy of entire meso-constellations in markets abroad. The competitive influence of subsidiaries that are exclusively related to a home-based constellation do not alter bargaining dynamics among local players directly, because they do not change the resource availability (and thus criticality), but do require responses of the incumbents. As the need to respond grows, the more a new entrant appropriates a share of the market, the explanation for structural change of incumbents needs to be derived from information outside the meso-constellation. Another example is the international expansion of hyper-market chains such as Wal-Mart, Ahold or Carrefour, which has led to a situation in which local suppliers desperately seek to serve the newcomers, irrespective of their previous bargaining position. As the arrival of these hyper-markets requires a complete redefinition of the meso-constellation, the entire negotiation process is skipped. The explanation for an organisation's response to a shock-like change, therefore, needs to be based on those factors that caused the shock.

In this thesis, the drivers of change that are not included in the explanation for structural responses based on bargaining power will be considered by making use of information on changes at the sectoral level of analysis. This choice has three reasons. Firstly, in economics, the sectoral level is the level of analysis, which is demarcated best and, furthermore, the most common for studies that are neither macro- nor micro-orientated. Secondly, dynamics at the sectoral level are based on changes in the market that is relevant to the core of the meso-constellation, the chain of production. The influence of new entrants, different technologies or shock-like reorganisation of a sector's production, thus, can be shown to affect the individual firm even though the power-relations inside a meso-constellation do not change. Thirdly, because the sectoral level is the most common, more information is available that can help to explain a firm's behaviour.

Returning to the cycle of inter-organisational behaviour, the changes brought about by the opening of markets that requires firms to respond, also provokes dynamics they can make use of in their restructuring process, without changing their dependence position. The more a sector is subject to the changes that come with the transition, the more the conditions and codes are affected, creating a second kind of *latitude*. Therefore, to explain SMEs' responses to contextual changes as strong as the opening of the market they operate in, hypothesis (I) should be complemented. To include restructuring, enabled by contextual changes that can not be explained by changes in dependence on the surrounding players, an alternative hypothesis is formulated as follows:

Hypothesis (II): *The stronger (1) the pre-openness meso-environment is affected by the changes brought about by market openness and (2) a focal firm's bargaining position as compared to its surrounding players, the better it will be able to restructure in response to these changes.*

In the next paragraph, the impact of market openness at the sectoral level of analysis will be operationalised so that the arguments presented above can be verified in an empirical study.

[9] The problem of the meso-level of analysis is basically one of demarcation: while organisational fields or clusters do not seem to end (i.e. too inclusive), the analysis of product chains does not take into account the influence of organisations that do not have a production function. As each kind of meso-analysis has its benefits, scholars should choose the most suitable and accept its limitations.

II.5.2. Operationalising sectoral impact

The impact of market openness differs per sector: governmental regulation may apply to specific sectors; banks may perceive different risks among sectors; and differences between the level of technological development of each sector as compared with the international state of the art may exist. The factor that has the strongest impact, however, is the exposure of the incumbents to international competition through FDI or arm's length trade. As the two modes of internationalisation have a different impact, they will be considered separately. In international business, the difference between tradable and non-tradable products largely determines the extent to which recently opened sectors will host FDI or see changes in arm's-length trade. Industries that produce non-tradables (e.g. services) will host relatively more FDI, as they are only accessible through the establishment of operations in the opened market. In industries with tradable products, the location of production operations and of markets need not coincide. As a result, they will be subject to combinations of trade, FDI and non-equity arrangements that, from the point of view of a firm, are designed to organise production and distribution activities as efficient as possible (UNCTC, 1995: 197). To measure the changes at the sectoral level, a number of proxy variables will be used. As they are proxy variables, they do not fully explain or approach the impact the opening of markets can have but rather need to be seen as partial indicators that are inter-related as well.

Trade openness

As a first proxy, the relation of imports to exports of firms of a particular sector will be used to express its openness. In equation (I), the i-th sector in year 'a' is characterised as a 'net importer' when I_{ia} lies between 1,5 and 2; as a 'net-exporter' when I_{ia} is lower than 0,5; and as an 'intra-industrial trade' sector when the index fluctuates between 0,5 and 1,5 (Fuchs and Kosacoff, 1992).

Equation (I): $I_{ia} = 1 - [(X_{ia} - M_{ia}) / (X_{ia} + M_{ia})]$

in which: X_{ia} are the exports of the i-th sector in year 'a'
M_{ia} are the imports of the i-th sector in year 'a'

In this classification, sectors characterised as 'net-importers' can be expected to have adapted only partly to the new competitive reality. The sector's firms are conscient of a need for basic inputs, semi-manufactured products or final products that, as they are not produced locally, are purchased abroad. The surpluses of 'net-exporter' sectors not necessarily have to be ascribed to competitiveness in an open sector. They can be explained by location or ownership advantages that enable firms to export independently from international tendencies. The 'intra-industrial trade' sectors, finally, can be subdivided into a group that is barely exposed to the international context, and a group of sectors that are inserted in an international system of production and commercialisation. The first group acquires its inputs, produces and sells in the local context and is often protected by factors such as the cost of transport or the size of a market. The second group, however, can be assumed to acquire inputs in international markets that are processed locally before they are sold -or sold directly- in both national and international markets. Therefore, this second group of 'intra-industrial trade' sectors is supposed to be most open to international trade.

Presence of TNCs

The presence of subsidiaries of TNCs is the second proxy to be used as indicator of the sectoral impact of opening markets. The main assumption is that the ownership advantages of TNCs -those tangible and intangible resources of a firm that can be exploited successfully abroad (Dunning, 1981)- affect the performance standards in a sector. In addition to the direct consequences of the establishment of a TNC's subsidiary, the contact with its home base or other subsidiaries allows for an ongoing distribution of best practices.

Although the largest share of FDI needs to be ascribed to firms that do not compete in sectors in which SMEs prevail, the impact of the presence of these firms can be assumed to be diffused because of the relations as described in section II.2. However, for the sake of explaining the sectoral impact of opening markets, FDI will be considered to affect the sector it is aimed at.

Public action

The changes brought about by market openness are often accompanied by governmental action and initiatives from non-governmental organisations (NGOs). Support to sectors that expect or witness erosion of the position they held when the economy was closed, adaptation of legislation to international private law or the organisation of export promotion abroad, are some examples of governmental action in an economy in transition towards openness.

It should be mentioned, however, that action from governments and NGOs mostly comes as a response to contestation of the affected sector or group. In a setting of opening markets, this means that the most influential sectors or groups of firms of the closed-economy period will be able to provoke more support to facilitate their restructuring process than less influential sectors or groups of firms. Public action, therefore, does not always apply to those sectors that are most affected by openness but -interpreted with care- can serve as a qualitative proxy.

II.6. Conclusion: inter-player effects in a context in transition

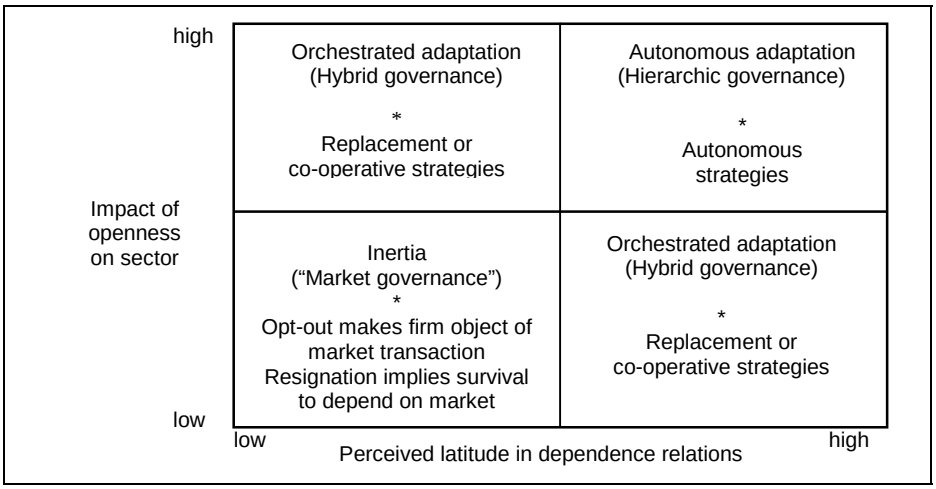
The aim of this chapter has been to reconsider the responses of organisations to the transition from a closed to an open market and highlight inter-player effects and strategy-making. In the preceding paragraphs, firms' restructuring efforts have been defined as the structural changes organisations undergo to maintain or establish an efficient match with the characteristics of the environment it operates in. As firms make part of a larger whole, the meso-constellation, individual restructuring has consequences to other organisations. The mutual conditioning of responses to environmental change has been captured in a model of organisational behaviour based on negotiation processes, in which firms' basic behaviour is aimed at improving their bargaining position to minimise the possibility of being influenced in their restructuring efforts by surrounding players.

The decision to open an economy puts the pre-openness meso-constellation in motion. The changes that occur at different levels of analysis are interpreted by the players in the meso-constellation who establish their efficient border correspondingly. In the negotiation-approach, a firm's strategy is dualistic: long-term objectives are formulated to indicate where the firm is heading, while short-term strategy has more an incremental "muddling through"-character, because of the impossibility to predict how a meso-constellation will be governed.

Figure 13

BARGAINING STRATEGIES DERIVED FROM IMPACT AND PERCEIVED LATITUDE

IN DEPENDENCE RELATIONS



Source: Data prepared by the author.

As featured by figure 13 a firm has various strategic options at its disposal that can be applied according to its dependence position and the consequences of the contextual transition. To verify the formulated hypotheses, the multi-level approach will be used in a study of the responses of Argentine SMEs to the definite opening of the economy. The identification of the factors that explain firms' behaviour will make the "muddling through" process more comprehensible, which, at its turn, helps to understand how governance structures re-emerge.

In the next chapter, a historic analysis of the macro-environment will be made to get a grasp of the particularities of the context the SMEs operated in and understand organisational structure as a function of the heritage of the past. Chapter IV will focus on the changes at the sectoral level and is supported by additional information on the Argentine context in the annexes. The last descriptive chapter features a study at the micro-level, in which changes in the composition of firms' dependence relations are connected to the results of its restructuring efforts. Finally, the information derived from the multi-level approach to explain firms' individual restructuring efforts will be elaborated upon to explain the re-emergence of governance in meso-constellations based on international competition.

III. The Argentine economic context

III.1. Introduction

As a first step in the proposed multi-level analysis, this chapter combines an analysis of the macro-factors and Argentina's economic history. Argentine firms have been, and still are, influenced to a great extent by societal tendencies and macro-economic circumstances. An overview of Argentine economic history and the development of macro-economic variables such as GDP, inflation and foreign trade will be given, which focuses on the conditioning of agents' behaviour. The agents that operate in the Argentine manufacturing industry can be subdivided into three subcategories: SMEs, TNCs and national holding companies. Since each type of agent has a different nature, their reactions to environmental change differ. Although this thesis is about SMEs' restructuring processes, due to the linkages between SMEs and large agents the latter's development through time and the consequences to SMEs will be illustrated.

III.2. Argentine economic history[10]

When the Spaniards arrived at what today is Argentina, they optimistically projected their quest for precious metals as gold and silver on the place and baptised the river they sailed on the Rio de la

[10] To prevent entering into historians' debates, I have decided to adopt the division of industrial development into three stages, as made by Katz and Kosacoff (1989).

Plata, the river of silver. They soon found out that, contrary to the northern colonies, the cone of Latin America had no treasures buried in its soil. The settlers started to appreciate the abundant soil they had encountered when the European and North American industrial revolution caused a need for raw materials. The export of wool, wheat and meat benefited considerably from technological innovations that reduced cost of transport and, especially in the case of meat, allowed for longer storage life (Jones, 1996: 68).

III.2.1. Agro-export model (1880 - 1929)

By the end of the nineteenth century, Argentina's industrialisation starts to take off, developing in function of the agro-economic activities. Continuous growth of the need for agricultural commodities and few restrictions on trade favoured Argentine development, making it one of the world's most prosperous countries between 1880 and 1930. However, restrained growth in the agricultural sector and the economic *malaise* of the 1930s, that lead the governments of importing countries to impose protectionist measures, meant the end of Argentina's agro-export model based on free trade. In response to the decline of the political-economic model, restrictions were imposed on imports and the open[11] Argentine economy began a process known as import substituting industrialisation (ISI).

The decades before and after the turn of the century were periods of substantial immigration of Europeans into Argentina. Many of the Italians, Spaniards, British or Germans -to name but a few of the nationalities that arrived- were craftsmen, who started up enterprises based on the exploitation of technological skills, acquired in their country of origin. The Argentine economy of those days consisted of many SMEs that produced mainly for the local market, large[12] *estancias*, owned by Argentine or foreign enterprises, that were responsible for the largest share of Argentine export in those days and some service-providing companies, concentrated in trade, utilities, banking, insurance and transport. Economic activity was organised from and grouped around the administrative, cultural and economic capital, Buenos Aires.

III.2.2. ISI (1930 - 1978)

As from the 1930s, the Argentine economy is governed different from the anterior period. Political measures as foreign-exchange control and import permits were imposed in 1931 and 1933 respectively, while the foreign exchange market was split into two. The closed-economy policy led to a decline of the importance of foreign trade to the Argentine GDP. This policy, called 'Industrialización por Substitución de Importaciones' (ISI) was designed to reduce dependence on foreign supply of goods and stimulate local industrialisation. In the first sub-period of ISI, the substitution was applied to the 'easy' sectors of manufacturing production. The sectors of consumer goods, household electrical appliances, simple machinery, metallurgical industry and construction were the most important in this period.

In the second sub-period of ISI, from 1946 to 1958, the Argentine industrialisation grew to cover the entire domestic market with locally produced goods. Institutions as IMF and UNCTAD at that time believed substitution strategies to be an adequate instrument for development and, as a result, supported the government (Ingham, 1995: 338). The state stimulated the industrialisation actively through support programs and by providing basic inputs for the production process. However, as R&D was aimed at improving the existing products and processes, the Argentine industry soon found itself producing obsolete goods and was unable to progress into more complex

[11] Between 1880 and 1930, Argentina was one of the main recipients of FDI (Jones, 1996: 226), depended on free trade for its export-based economy and imported state-of-the-art technology and luxury goods (the Buenos Aires subway system, for example, was constructed at the beginning of the century as were those of Paris or London and of comparable technology and design).

[12] To a Dutchman any Argentine estancia seems large...

kinds of manufacturing because of restrictions on import of technology imposed by the balance of payments policy.

The final sub-period started in 1958 and lasted until the end of the 1970s. In this period more complex industrial activities were the base of the economy, like the petrochemical, the automotive and machinery sectors. A policy of complete economic self-sufficiency allowed for the entrance of TNCs to cover the gaps in the industrial structure and to bring with them the needed technological resources. The government again supported local production of basic industrial inputs and subsidised exports but as companies bought modern equipment and technologies abroad, the Argentine industrial sector was worsening the deficit on the balance of payments ISI was supposed to resolve. With the establishment of the military government in 1976 came changes in economic policy. Market liberalisation and openness were supposed to be the ingredients to increase the international competitiveness of the Argentine industry. The following two years, reductions of the import tariffs did not lead to increases of foreign trade because of competitiveness of locally operating firms and an exchange rate that discouraged purchasing abroad. The country experienced a rise in the production of durable consumer goods and capital goods.

The ISI policy was broken down completely in 1978 when a monetary approach to the balance of payments was applied which was to bring down the domestic inflation rate. The local currency was steadily devaluated against the US dollar according to a published timetable, the 'tablita', so that domestic interest and inflation rates would converge to the corresponding international rates. Contrary to the preceding 48 years, economic policy was clearly aimed at insertion of Argentina into the world economy.

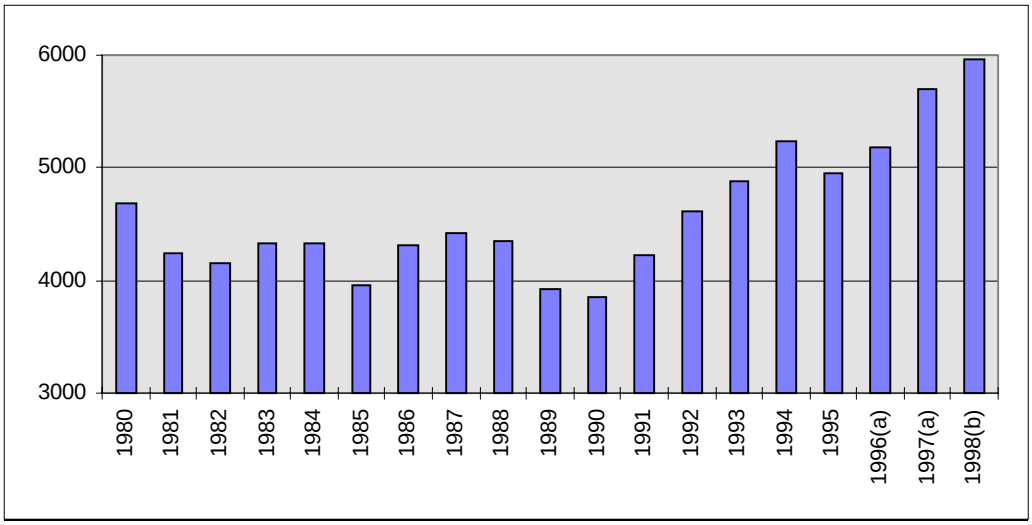
III.2.3. Economic openness I (1978 - 1990)

The period of economic openness can be divided into two sub-periods; one of economic instability, which lasted from 1978 until 1990, and one of stability that started with the convertibility plan. The economic instability started when the monetary approach to the balance of payments did not yield the results policymakers had hoped for. As the adjustment of prices of goods was slow and imperfect, and the domestic interest level rose because of a growing risk-premium caused by political uncertainty, convergence was never achieved. The exchange rate adjustment by the 'tablita' was based on a projection of inflation that was lower than real inflation and caused continuous overvaluation of the Argentine peso. Overvaluation and tariff reductions led to significant increases of imports, which –again- disturbed the balance of payments.

The opening of the economy allowed for an inflow of foreign capital, which compensated for the current-account deficits. However, most of this was short-term capital that was lent to take advantage of the high interest rates. With the interest rates rose political instability, which at its turn led to further increases of the risk premium. Under these circumstances the Argentine industrial sector entered into the deepest crisis in its history. The overvaluation of the peso had made the Argentine exports too expensive while the increased importation of goods had lowered significantly the demand for locally produced goods. A change within the military government in 1981 produced some short-run measures to resolve the most pressing problems. They were not sufficient to provide a solution to the indebtedness problems the business sector suffered from. In 1982, the government establishes a medium-term financing plan that was based on regulated interest rates. These regulated rates, together with the growing inflation rate led to a liquidation of the liabilities of firms and provided major relief for financial institutions. In addition, most of private foreign debt was taken over by the state through a mechanism of exchange-rate-risk insurance. These two measures resulted in a 'socialisation' of the losses of the business sector; nationalisation of debts (Kosacoff, forthcoming). The foreign debt had come to a level that caused

the government to revaluate the exchange rate and impose new restrictions on imports. The Argentine business sector found itself protected again.

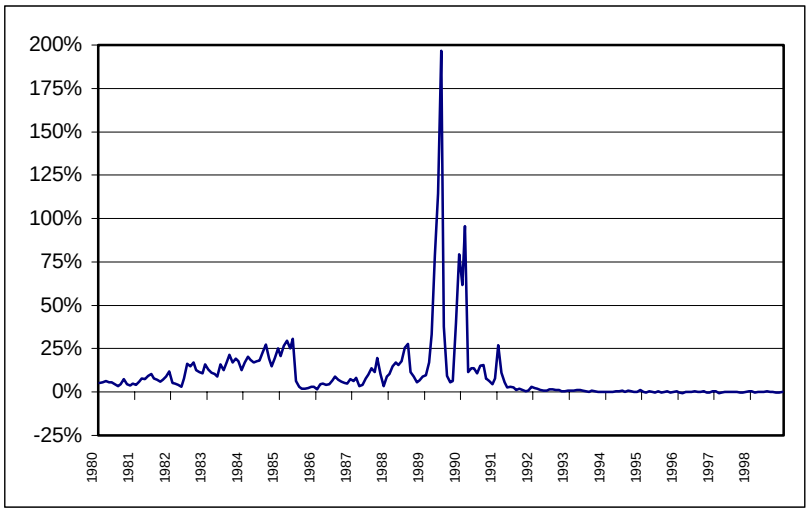
Figure 14
DEVELOPMENT OF ARGENTINE GNP 1980-1998
(thousands of 1986 pesos)



Source: CEPAL (1998a).
Notes: [a] Preliminary estimations, [b] Estimation for first three months.

Thus, the investment and savings decisions that determine macroeconomic behaviour and performance are based on opinions and expectations on the uncertain evolution of economic variables rather than on risk probability distributions that can be known *ex-ante*. In a word, markets are necessarily imperfect when time is involved, as the information necessary to correct such "market imperfection" will never be available.

Figure 15
MONTHLY PERCENTUAL CHANGES OF INFLATION – 1980-1999
(percentages)

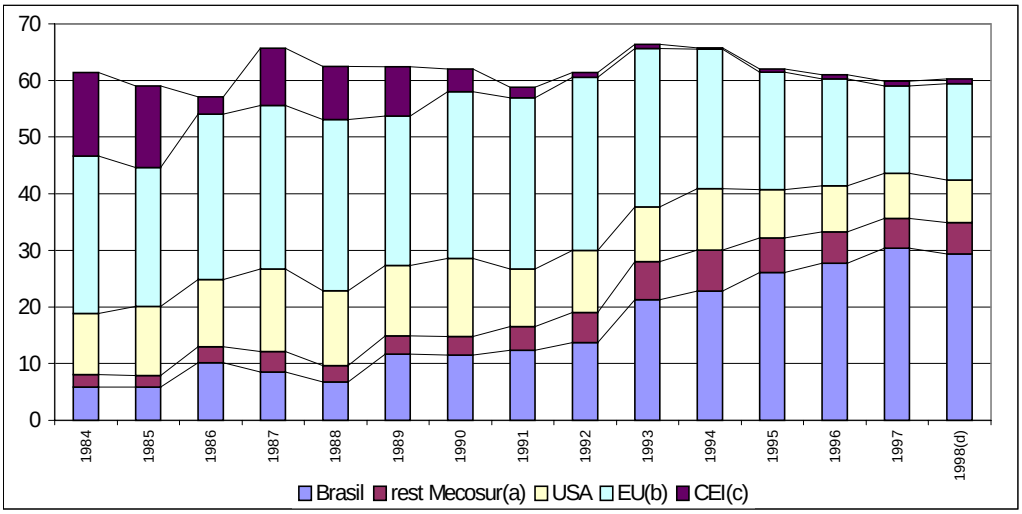


Source: Based upon macroeconomic database CEPAL.

III.2.4. Economic openness II (1991-?)

In March of 1991 the Convertibility Law was approved by the National Congress to bring the needed macroeconomic stability and start a process of structural reforms. The exchange rate was fixed by law through coupling the peso unilaterally to the US dollar, while the Central Bank was obliged to guarantee the monetary base with sufficient reserves. All restrictions on foreign exchange movements were abolished and measures were taken to eliminate the heritage of the inflationary episode (i.e. inflationary tax, indexed contracts, corrections of salaries to inflation, etc.). Additional means were obtained through an extensive privatisation programme and tax reforms, while considerable results were booked in refinancing the country's foreign debt. Economic openness and deregulation of markets led to an increase in FDI and increased commercial integration of the Argentine economy into Mercosur.[13]

Figure 16
DESTINATIONS MARKETS OF ARGENTINE EXPORTS
(percentages)

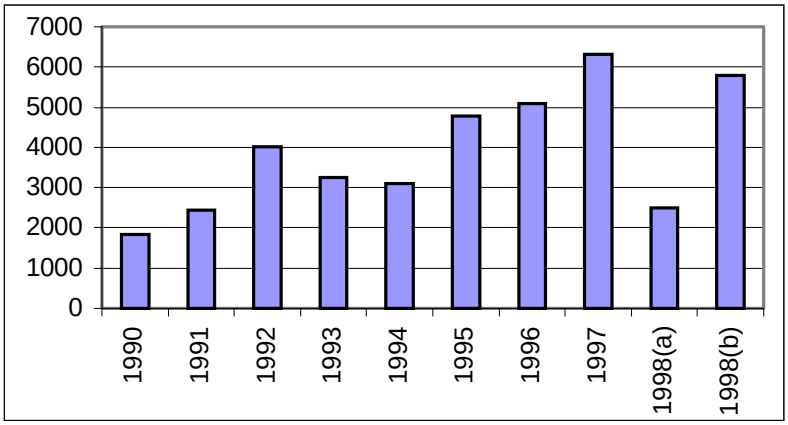


Source: CEPAL (1998a).
Notes: [a] Paraguay and Uruguay, [b] European Union, [c] ex-USSR member states, [d] estimate.

As from 1991, economic activity rose considerably: 32.3% between 1991 and 1994 (CEPAL, 1996). The most dynamic sectors in this period are the motor vehicles industry, which tripled its output in this period, and the home electrical appliances industry, that more than doubled its output. The steel and petrochemical industries, that experienced considerable growth in the 1980s, are loosing ground to international competitors that import to the Argentine market and drive down prices to international levels. The sectors that are affected most by the economic openness are those of easily internationally tradable goods like the textiles and capital goods industries, which are passing through a period of profound restructuring. A comparison of the industrial sector of 1978 with that of 1995 shows an industrial fabric of the same size in terms of output and employment levels, but with higher productivity levels, increased business concentration and presence of TNCs (Kosacoff, forthcoming).

[13] Mercado Común del Sur, the free trade area established between Brazil, Uruguay, Paraguay and Argentina, into which Chile and Bolivia may enter.

Figure 17
NET INFLOW OF FDI INTO ARGENTINA- 1990-1998
(millions of dollars)



Source: CEPAL (1998b)

III.3. Large firms through time

The changes brought about by the political decision to open and liberalise the Argentine market had a profound impact on the organisation of production. To understand the relations between SMEs and large producers, this paragraph will follow the latter through time and consider their linkages with SMEs.

IV.3.1 TNCs

The Argentine economy has been characterised by a strong presence of TNCs since the agro-export era. The first flows of FDI were directly related to agricultural production and international commerce that accompanied it. As a result a number of trade and transport firms, banks and insurance companies were established at the beginning of the century (Jones, 1996: 163-5). Other areas of strong TNC presence were the utilities sector and public transport and railroads. As from the 1920-30s many chemical firms started local production in the Argentine market.

TNCs played a central role in the increasing industrialisation of the 1950s and 1960s, and were one of the drivers of the competitive position of the Argentine manufacturing sector, which confirmed ISI policy. In this period, TNC participation in manufacturing output rose sharply from less than 20% in 1955 to almost 33% in the early 1970s; an increase that was notable in the metal products, machinery and petrochemicals sectors (Kosacoff, forthcoming: 88). TNCs brought production and organisation skills with them, developed abroad and unseen in the Argentine industry before. The requirements and specifications of the ISI policies, however, obliged TNCs to adapt their technologies to the characteristics of a small and closed market, which diverted Argentine industrial development from the course of international technological development. On average, TNCs operated at a larger scale than their local counterparts and were more productive and capital-intensive.

As from 1976, FDI decreased considerably because of the political and macro-economic conditions. The efforts to establish stability and insert the Argentine economy in the international trade system led to increases of FDI in the mid-1980s. These flows of capital, however, were hosted in sectors based on the utilisation of natural resources, such as petroleum, agribusiness or cement, and led to asymmetric development of industry as a whole.

The market liberalisation and the privatisation programme of the beginning of the 1990s caused a massive inflow of FDI. Until 1994, the privatisation of the public sector[14] and the manufacturing industry, in which especially the automotive sector had a role of importance, were the main attractors of FDI from investors from the United States, Spain, Italy, Chile, France, Canada and England (CEPAL, 1997: 124). As from 1994, the leading hosts of FDI are the food industry, followed by the petrochemicals sector and the motor vehicles industry.

The relations between TNCs and Argentine SMEs vary significantly. Firms attracted by the natural resources Argentina disposes of, hardly relate to SMEs. As they mostly are vertically integrated to a large extent, they elaborate and commercialise without interference of smaller firms and often sell in international markets. TNCs that pursue globalisation or regionalisation strategies often make part of an international production system, which implies a supply structure in which imports, whether based on intra-firm trade or preferred suppliers, play a dominant role. Stand-alone firms that aim at benefiting from captive markets can be expected to enter local supply and distribution channels. In brief, SME-TNC relations depend largely on the TNC's strategy and the position of the local subsidiary in the international network it belongs to.

III.3.2 National conglomerates

The largest Argentine firms are characterised by the great number of activities they handle. They operate as conglomerates do: centralisation of capital, human resources and business start-ups and strong operational decentralisation, expressed in the autonomy of business units. In 1995, the Argentine conglomerates had participations in around 700 firms, a joint turnover of almost 30.000 million US dollar, are responsible for 25% of Argentina's export and employed 172.000 persons (Bisang, 1998: 94-5). Organised initially around one central activity, these economic groups have been amplifying themselves as the result of opportunities derived from the protected market as well as unsatisfied demand of inputs that led them to auto-supply themselves[15]. The sectors in which these conglomerates have a strong presence are energy, petrochemicals, specialty chemicals and the food industry, while they also play a role of importance in construction, transport, engineering services and communications.

The changes of the 1990s challenged the conglomerates to restructure their activities as many of them were affected by the changes in demand in the national market and new competitors. The responses were various: some saw themselves harmed badly by the new conditions and survived because of changes in regulation; some concentrated on their core competences, disposing themselves of unrelated activities in the national market; some created a new mix of competences that consisted of existing activities and those acquired in the privatisation process; some combined local acquisition with concentration on core competences and put more emphasis on the international exploitation them; a small group, finally, decided to liquidate their activities, selling them to TNCs (Bisang, 1998: 133-5).

The newly imposed macro-economic stability allowed the conglomerates to change the management of their operations. The concentration on core competences gave rise to a trend of outsourcing of activities such as transport, generation of energy, security or computer support, of which many existing and recently established SMEs benefited. This trend, however, did not lead to the creation of networks or chains of relations between large firms and SMEs based on

[14] Between 70% and 85% of inward FDI in the period 1990-1993 was related to privatisation or continuation of investment in the ex-public sector (Kosacoff and Porta, 1998: 58).

[15] Examples of diversification as the result of unsatisfied demand are Grupo Arcor S.A, Latin America's largest producer of sweets, that because of discontinuities in supply of packing materials developed its own cardboard, paper and plastics division; or Pérez Companc, energy and petrochemicals, that until 1997 owned the Banco Río de la Plata, result of lack of investment opportunities because of the closed market in the ISI-period.

subcontracting. Instead, firms in sectors characterised by subcontracting –automotive, capital goods or electronics, for example– obtain a large share of their input in foreign markets.

III.4 Conclusion: an econo-historic circle?

The description of the Argentine economy of the beginning of this century has some elements in common with the description of today's Argentina: the economy was based on the exploitation of the country's natural resources; TNCs held an important position in the economy and were the drivers of technological development; and SME-production was based on cheap labour and orientated towards the local market. Notwithstanding these similarities, the economy of the 1990s is more industrialised, consists of more activities carried out by more economic agents and is orientated to a broader 'local' market: Mercosur.

In the following chapters, the multi-level approach to SMEs' restructuring in a context of transition will be continued. Since they had such profound impact, awareness of the historic development of macro-factors is required to understand the meso- and micro-dynamics well. Therefore, this chapter will be concluded with Table 3, that summarises the most salient changes that distinguish the 1980s from the post-convertibility context.

Table 2
CHANGED CONDITIONS, 1980s VS POST 1991

Old conditions (1978 - 1990)		New conditions (1991 - ?)
• Economic instability	⇨	• Economic stability
• Surviving macro conditions	⇨	• Inter-firm competition
• Frustrated economic opennes	⇨	• Economic openness
• Dispersed exports, local market orientation	⇨	• Mercosur orientated, import-based competition
• TNCs act like local firms	⇨	• TNCs benefit from international leading positions
• Steel and petrochemical industries are the most dynamic sectors	⇨	• Food and automotive sectors are the most dynamic

Source: : Data prepared by the author.

IV. Restructuring: sectoral evidence

IV.1 Introduction

The brusque changes in the Argentine economy that have been described in the preceding chapter, have had a profound impact on the country's industrial structure. Continuing the multi-level approach to firms' restructuring, this chapter features a meso-analysis. Differences in the extent to which sectors witnessed inflow of FDI, changes in its international trade flows and governmental action are considered to explain partly the different responses of SMEs and, consequently, differences in governance structures among meso-constellations. To do so, the tendencies that apply to the entire Argentine manufacturing industry will be projected on the SME production space, assuming that because of embeddedness -see II.2.3 and 4- changes that do not affect SMEs directly, eventually will affect them indirectly.

In paragraph IV.2, a characterisation of Argentine SMEs will be presented as well as an illustration of their role in industry, by showing their participation in employment, number of establishments and total production as compared to micro and larger firms and their international involvement. Paragraph IV.3 contains an analysis of the manufacturing industry *ex ante* and *ex post* the market openness and yields the general tendencies that will be applied to the SME production space in paragraph IV.4.

IV.2 SMEs in the Argentine industry

IV.2.1 Profile

The severe macro-economic instability of the 1975-1990 period negatively affected the development of the Argentine industrial sector. The industrial GNP of 1974 was almost 10% higher than the average of the following fifteen years and was not passed until 1991, after the economic reforms had been carried out. The growth of the industrial sector by 44% in the 1991-1997 period demonstrates the new economic line that, notwithstanding the positive impact, mainly recovered the damage of previous years. As a result, the industrial GNP of 1997 was only 15% more than that of 1974 (Bonvecchi, 1998).

Of the changes described in the previous chapter, the opening and liberalisation of the Argentine market affected strongly those sectors of industry predominated by SMEs. As can be seen in table V.1, micro and very small firms together with SMEs play a role of importance in the Argentine economy in terms of employment and number of establishments both before and after the opening and liberalisation. Although the absolute participation of the small firms has declined, their relative position has improved in all aspects.

Most SMEs acquired their operating features during the ISI-period and, as a result, were accustomed to low competition in markets characterised by high uncertainty. The operating features can be summarised as follows: centralised management; a weak network of collaborative arrangements with other firm or institutions; poor performance in export markets; defensive commercial strategies aimed at the domestic market; low R&D activity, often aimed at improving existing technologies; low investment levels; and use of outdated technology (Yoguel, forthcoming). SMEs' strategic management, as described in paragraph II.3.3, influenced to a great extent firms' *auto*-diagnostic capacity and prevented many firms from capturing and processing signals from the changing Argentine context (Kantis, 1996).

Table 3

ESTABLISHMENTS, EMPLOYEES AND PRODUCTION ACCORDING TO SIZE OF THE FIRM

	1984			1993		
	Establishments	**Employees**	**Production%** [2]	**Establishments**	**Employees**	**Production**[3]
Micro and very small firms[1]	74 309	176 908 (12.8%)	- (3.7)	64 355	139 657 (13.9%)	4 616,7 (5.1%)
SMEs	33 207	593 735 (43.0%)	- (28.9)	24 911	448 930 (44.6%)	32 126,4 (35.9%)
Large firms	2 022	611 384 (44.2%)	- (67.4)	1 490	417 889 (41.5%)	52 857,4 (59.0%)
Total	**109 538**	**1 382 021**	**(100.0)**	**90 756**	**1 006 476**	**89 598,5**

Source: Gatto and Ferraro (1997b: 8).
Notes: [1] Firms are classified according to number of employees. Micro < 5; SME > 5, < 100; large > 100. [2] Because of sectoral differences in inflation and differences during the year, no absolute indication can be given. [3] Millions of 1994 pesos.

IV.2.2 Sectors

In general, Argentine SMEs are labour-intensive: the average productivity of SMEs is 24% lower than the average of the industry as a whole, while labour requirements are 30% higher (Moori-Koenig *et al.*, forthcoming). Most of SME production is concentrated in a small number of sectors that are not necessarily predominated by SMEs. This implicates a co-existence of SMEs and their larger counterparts *within* sectors or markets that represent a large share in total SME production. It should be mentioned, however, that in none of these sectors SMEs are in leading positions (Gatto and Ferraro, 1997a: 12), which might confirm niche-player hypotheses. On the other hand, sectors that are predominated by SMEs -SME production is more than 70%- are of little importance to the Argentine industry as a whole.

As can be seen in Annex C, the first 40 sectors represent around 70% of total SME production, employment and establishments. Within this group the most important sectors are those based on the processing of natural resources, such as bakery and dairy products, wines and meat; manufacturing products that are in the maturity-stage of their life-cycle, such as general purpose machinery, electric motors, vehicle parts and basic plastics; and textiles, such as wearing apparel, carpets, and knitted fabrics.

IV.2.3 Participation in markets abroad

SMEs' international involvement needs to be considered as participation in export and import, since only few SMEs have production facilities abroad. Within the group of SMEs that sells in international markets, a distinction needs to be made between firms that produce and sell and firms that acquire goods locally to commercialise them afterwards in markets abroad, so-called mini-tradings. Although these kinds of firms can not be distinguished yet because of the Secretary of Foreign Trade's registration system, openness can be expected to have led to an increase of traders.

In their analysis of exporting SMEs, Moori-Koenig and Yoguel (1996) divide the period that runs from the end of the 1980s to the mid-1990s into two sub-periods. The first runs from 1988 to 1993 and is characterised by increased export. In this sub-period SMEs' exports grew faster than those of larger firms: SMEs 60% against the rest of manufacturing industry 35%. The second runs from 1993 to 1995 and features a slowdown: SMEs' exports grew 20% while the exports of the rest of manufacturing industry grew 60%, a difference that should be ascribed to increased trade in commodities, motor-vehicles and agricultural products, which are activities in predominated by larger firms. In general, export by small firms is more the result of a limited number of firms that has been able to obtain competitive positions in niche-markets than of sectoral competitive advantage (Gatto and Ferraro, 1997a: 32).

SMEs' markets abroad and their respective shares, more or less coincide with those of industry as a whole. The tendency towards increased importance of Mercosur, Brazil in particular, applies more strongly to SMEs, which may be explained by factors such as transport, favourable tariffs and the probability of meeting trading-partners. In 1993, for example, Mercosur-countries represented 40% of SMEs' exports (Brazil 17%), while these markets represented only 25% of export of the entire industry (Brazil 16%).

IV.3 Sectoral impact of openness

The changes of the early 1990s have caused profound changes in the Argentine manufacturing industry. General features are the inflow of FDI by both players that were already established in Argentina and so-called newcomers; a strong bias towards import; processes of

downsizing both in terms of employees and establishments, aimed at increasing productivity; and a tendency towards vertical disintegration. However, as can be seen in annex B, these features do not apply to all sectors of industry nor did they occur to the same extent. In the following, a comparison will be made between the surveys of 1986 and 1994 carried out by the Instituto Nacional de Estadística y Censos (INDEC, national institute for statistics). In doing so, sectoral consequences of the structural changes can be deduced from the differences, that will be applied to the SME production space in paragraph IV.4.

IV.3.1 Preliminary consequences

The conditioning effect the macro-economic conditions of the 1980s caused many firms to behave alike, while before, significant differences existed between sectors as well as between firms *within* sectors. Firms' structural characteristics and inter-sectoral differences have influenced firms' responses to the challenges of the new business environment, leading to a sharp contrast between firms that opted for offensive restructuring strategies and those that featured defensive behaviour. In concrete, a group of around 400 firms exists that successfully adapted to the new conditions and that accounted for 40% of industrial output of 1995, while the other firms do not seem to be able to change their course.

Although the successful firms are not concentrated in particular sectors of the economy, nor have common structural characteristics, a general classification can be made (Kosacoff, 1998: 27-30; forthcoming: 232-7). On the sectoral level of aggregation, the offensive firms are prominent in four areas, being basic input-producing industries (iron, steel, petrochemicals, etc.); industries based on natural resources (oilseeds, refinery of crude oil); the motor vehicles industry; and sectors in which large investments were made such as dairy products, sweets, telephone equipment and other industrial products. Almost all of these sectors have hosted substantial flows of FDI and most of them are integrated in the international trade system through exports and imports. In the cases of the input-producing industries and the motor vehicles industry the Argentine government has had an active role in creating favourable conditions for growth.

IV.3.2 Impact of openness

The influence of FDI, trade openness and governmental action -the proxy variables for openness as defined in paragraph II.4.2 has not been equal in all sectors of the Argentine economy. In trying to explain the firms' adaptation to the new environment, the extent to which a sector is included in the international production and trade systems is found to be related to the extent to which the characteristics of sectoral performance vary between sectors in the 1986-1994 period. For exact correlations and covariations, see annex B2.

Trade openness

In 1986, the Argentine industry consisted of a small group of net-exporting sectors, e.g. elaboration of food and beverages, motor vehicles and sectors with activities based on natural resources; a large group of 'intra-industrial trade' sectors, e.g. textiles, chemicals and leather products; and a group of net-importing sectors, of which most produce machinery or electronics. The characterisation of sectors in 1994 is uniform: all are net-importers. An interesting observation is that those sectors that were net-importers in 1986, are the sectors that have the lowest index in 1994, i.e. import less as compared to their exports than sectors that switched from net-exporter or 'intra-industrial trade' sector to net-importer. This may be an indication of the importance of the restrictions on import the government had imposed on most sectors. After disappearance of these restrictions and benefiting from the overvalued peso, most sectors 'recovered' for the past years and made investments in imported equipment.

Variation in sectoral openness is positively related to the variations in average size and average scale, i.e. the average size and scale of firms that were net-exporters in 1986 have increased more than those of firms that were net-importers in 1986. The variations vertical integration and number of establishments are related negatively to sectoral openness, i.e. firms that were net-exporters in 1986 have disintegrated more and closed more establishments than firms that were net-importers in 1986. The relation between variation in sectoral openness and employment is negative, although it should be mentioned that the distribution is not uniform. Employment has diminished in most sectors but most notably in those that feature predominantly large firms. Sectors characterised by activity of firms of limited size show strong variations; while most contracted, some show significant increases.

The shift from being a net-exporter to being net-importer of final products or sub-assemblies profoundly affects the relations at the meso-level. Instead of producing in interaction with predominantly local players, importing (semi-)finished products means exporting the preceding steps in the chain of production, which overbodig maken local suppliers, reduces capital requirements and biases the pressure to develop or acquire production techniques. The possibility to acquire parts or finished products abroad forces firms to specialise and optimise their operations, which generally leads to decreases in employment and establishments, and to vertical disintegration.

FDI

Since the Argentine economy had been one of the most liberal economies at the beginning of the century, the position of TNCs has always been prominent. In the closed economy period, the Argentine subsidiaries of TNCs acted as if they were local firms and benefited from the protected market. Sectors characterised by TNC-activity are mainly based on economies of scale are important, such as (petro-)chemicals, motor vehicles or pharmaceuticals. Until the economic reforms, Argentina hardly participated in the strongly increased flows of FDI that characterised the economic landscape of the 1980s, a situation that would be reversed in the 1990s. Except from FDI attracted by the privatisation programme, the role of established TNCs in their sectors was reconfirmed and a number of sectors such as food, beverages and detergents were subject to significant flows of FDI.

The extent to which sectors hosted FDI is positively related to variations in average size and average scale, which means that the more FDI a sector hosted, the larger the average establishment of firms in a particular sector in terms of gross value and employees per establishment. The relation between FDI and vertical integration is negative, i.e. the more FDI a sector hosted, the less the sector was vertically integrated in 1994. This effect can mainly be ascribed to the rationalisation of production that leads to more specialisation of production. The relation between FDI and employment and the number of establishments is negative but only weakly and, in the case of establishments, has a relatively high covariance. The reason could be that although FDI often leads to a reduction of personnel and establishments as the result of rationalisation of production, a significant share of the FDI Argentina hosted at the start of the 1990s came from so-called newcomers. Since many of these newcomers were involved in green-field operations, most of them had to establish themselves locally, which led to a certain compensation for rationalisation. In comparison to the effect of openness, FDI is less related to the decline in number of establishments as well as restrained growth of employment; probably as the result of the difference between rationalisation and creation of FDI on the one hand and substitution by imports on the other.

Governmental action

Governmental action is two-faced as concerned to opening and deregulating markets. Firstly, the decision to do so has to be taken and secondly, policies have to be designed that facilitate the

transition. In this section, the sectoral consequences of the liberalisation will be analysed. In the following chapter attention will be paid to public action in the sense of support to firms that have difficulty to adapt to the emerging business environment.

The opening of the Argentine economy was accompanied by a number of changes in the regulation of the functioning of the internal market, foreign trade, public regulating entities and capital markets and fiscal reforms aimed at vitalising the over-regulated Argentine market. A brief summary of the deregulation of the Argentine market is can be found in Annex D, from which can be deduced that the deregulation created a context favours international trade in general but in the food and agro-industries in particular. However, as was mentioned before, the special attention for the agricultural sectors may be the result of the traditionally important position these sectors had in Argentine society and a political response to the problems caused by the falling prices in international commodity markets.

IV.4 Consequences in the SME production space

The tendencies that apply to the entire Argentine industry applied even stronger to the SME production space. Lacking critical mass that could function as a buffer, SMEs need to adapt rapidly to new conditions lest they do not collapse. The consequent polarisation is clearly illustrated on the sectoral level by the general contraction in terms of employment and number of establishments that is contrasted by a few sectors that have expanded considerably. The data the comparison is based upon is derived from the 1984 and 1994 statistical reports of the INDEC.

IV.4.1 Areas of SME production space

The division of the SME production space according to the type of sector and according to labour intensity as made in table 6, shows that the changes have been responded to differently. While knowledge-intensive sectors and those based on mature products have increased their participation in total gross output and shown inward-oriented international involvement, the participation of natural resources-intensive sectors has decreased but was significantly more outward-oriented. The grouping according to labour intensity hardly shows any changes in the participation in total gross value but strong increases in the import ratios.

Table 4

CHANGES IN SHARES OF OUTPUT AND FOREIGN TRADE RATIOS IN GROUPS OF SECTORS OF DIFFERENT TYPES[3]

(percentages)

	Gross value of output as share of total gross output		Export to output ratio		Import to output ratio	
	1984	1993	1984	1993	1984	1993
Type sectors:						
Knowledge-intensive	37.3	39.1	16.9	8.4	17.0	42.4
Natural resources-intensive	43.1	35.5	4.9	13.5	4.0	6.7
Mature products[1]	19.6	25.4	8.1	9.6	3.3	13.2
Type of sectors by labour intensity:						
High labour intensity[2]	43.9	43.9	4.1	11.4	11.4	29.6
Medium labour intensity	35.9	35.6	9.1	8.7	4.9	14.8
Low labour intensity	20.2	20.5	9.4	9.9	10.1	22.3

Source: Yoguel (forthcoming: 153).

Notes: [1] Mature refers to the product's life-cycle; that is products that are subject to relatively minor manufacturing change. [2] Labour-intensive sectors are those in which total wages and salaries bill accounts for more 20.5% of output. Low labour intensity, capital intensive sectors, are those in which this percentage is less than 13%. [3] Information concerns the SME production space, see annex A for definition.

The impact of openness was strongly negative for SMEs in the knowledge-intensive sectors - mostly characterised by low labour intensity- whose production of parts and capital equipment was replaced by imported goods. Many manufacturing firms bought equipment and inputs abroad in order to raise their productivity and enhance their international competitiveness. Consequently, specialised equipment and tool producing SMEs, which had reached a considerable level of international competitiveness in the closed economy period, suffered severe losses.

Trade openness gave a positive impulse to natural resources-intensive sectors. The potential of these sectors that had been neglected in the closed economy-period due to the limited domestic market, is now being exploited in international markets. The decline in participation in total gross output can be explained to a large extent by the downward trends of prices of commodities as wheat, oil, peanuts and meat. Added value in these sectors mostly implies labour-intensive elaboration, which explains part of the positive development of the export ratio in sectors characterised by high labour intensity.

Mature industries' response to openness was mainly an effort to increase productivity. In these sectors too, firms invested in modern equipment that was acquired abroad and made the import-ratio increase. The consequences of openness in terms of employees and establishments will be analysed on the sectoral level in the following paragraph.

IV.4.2 Sectoral evidence

Although SMEs are found in almost every sector of the economy, the main share of production by SMEs is concentrated in a limited number of sectors. Annex C features a more specific sectoral division and re-grouping based on activity and the value a specific sub-sector represents in the whole of production by SMEs (Gatto and Ferraro, 1997b: 1-4), which allows for an analysis of those sectors that are most relevant to SMEs. Before considering the different variables, however, it should be mentioned that the participation of SMEs has grown because of the rationalisation of production throughout the Argentine economy. Due to processes of downsizing, a number of firms that was classified as large in 1984 was considered SME in 1994. Also, individual firms that are classified as SME may be part of one of the national holding companies or a local subsidiary of a TNC. The changes that have occurred in the SME production space should thus be interpreted with precaution.

Employment in SMEs has decreased considerably. Although the relations between employment and FDI nor openness correlate strongly, part of the explanation can be found in the changes in the industrial structure. A significant share of SME activity consists of the production of parts, sub-assemblies and intermediate products that are incorporated in the processes of –mostly– larger manufacturing firms. The increased import of inputs replaced local demand and transferred effects of re-organisations of firms at the end of the chain of production to upstream players.

The decrease of employment in SMEs between 1984 and 1994 is accompanied by the closure of firms or subsidiaries of firms. The efforts to increase productivity have mainly been reductionistic but have not led to the desired outcome. Gatto and Ferraro (1997a: 26) observe that SMEs' viability in the new Argentine business environment depends more on the ability to restructure the outlay of production and change market orientations, than on contraction of firms' existing operating modes. In addition they point at the lack of venture capitalists or holding groups that buy and sell SMEs, which makes the continuity of an SME depend on its owner's ability to conceive, finance, implement and manage alternative business opportunities.

IV.5 Conclusion

The common response to openness has been to restructure defensively, meaning closure of establishments and reduction of personnel. A part of local production has been replaced by import of final products and of parts or sub-assemblies, a process that has had its main impact in knowledge-intensive sectors and mature industries. Here, openness implied access to technologically more advanced and standardised equipment and cheap inputs of reliable quality, which were thought to solve firms' productivity problems.

As with concern to the Argentine manufacturing industry as a whole, the extent to which sectors hosted FDI; the shift from net-exporter of 'intra-industrial trader' to net-importer; and the effect of governmental action, indicate the impact of openness. The restructuring processes were more profound, the stronger the impact of openness was.

The restructuring of SMEs has even been stronger but can not be ascribed directly to the indicators mentioned above. A possible explanation may be that the consequences of openness were diffused before they affected SMEs. Examples may be the changes as experienced by SMEs that supply a large firm, when the latter decides to acquire its inputs abroad, or SMEs that operate in sectors that are not directly affected by openness but that implement different management styles as the result of transferral of knowledge.

As was signalled in the paragraph on SMEs' exports, competitive positions in international markets did not originate from sectoral competitiveness but rather from individual performance in niche-markets. The next chapter will complement the relation between sectoral impact and restructuring with an analysis of individual firms in their meso-level framework, so that the isolated successes can be explained.

V. Firm-level evidence: the governance of dependence relations

V.1 Introduction

To complete the multi-level approach, the actual restructuring of individual firms and the implications to governance in the meso-constellation will be the topics of this chapter. Awareness of the macro-environment and the general tendencies in the responses to the changed business environment as presented in the preceding chapter, a closer look will be taken at how individual firms restructured their operations. The relations with public agents and banks will be treated separately in paragraph V.2 and 3, since these players operate in a large number of meso-constellations and have a strong influence at all levels of analysis. The following paragraphs consider the restructuring of SMEs according to the dimensions of bargaining power and distinguish between firms that adapted more and less successfully.

V.2 Public action

Support to SMEs, aimed at facilitating the restructuring process, is gaining importance on the agenda of Argentine politicians and NGOs. At the outset of the reforms that shaped present day's Argentine economic landscape, governmental policy was aimed at attracting and maintaining large firms as the basis maintaining large firms as the basis economic development.

However, since these large players are going through a phase of restructuring, based on optimisation and rationalisation, as well, they have structurally decreased their workforces. Social pressure resulting from high unemployment has led public actors to focus more on SMEs as 'generators of employment' and take corresponding measures.

V.2.1 SME policies

Public initiatives to support SMEs' adaptation to the new scenario are carried out separately and are aimed at the different areas of corporate operations. Consequently, there are programmes to stimulate innovation, to give technological support, educational programmes, lines of credit, and the like. Moori-Koenig *et al.* (forthcoming: 29) identify the preferred characteristics of public support programmes in Argentina:

- Support to firms, irrespective of the sector or area they operate in
- Accessible for many firms
- Combination of financial support with education and strategic consulting
- Beneficiaries are free to choose suppliers of needed inputs
- Use of intermediaries that diffuse information about the programmes and attend interested firms
- Creation of commitment to adaptation through obliged financial contributions by the firm
- Carried out in a determined amount of time
- Transparent, so that public representatives' possibilities to act inappropriately is limited
- Reduced involvement of professionals in the organisations that carry out the programmes

V.2.2 Agents

Argentine SMEs receive support from various public actors that use different political instruments and programmes. The Argentine government stimulates SME activity at three levels: national, provincial and in communities. In 1992, the mentioned change of the Argentine government's attitude towards SMEs led to the creation of the Sub-Secretary of SMEs, within the Secretary of Industry of the Ministry of Economy. Decree 943/97 confirmed the importance of SMEs in 1997, as the Sub-Secretary was declared Secretary, ranked as Ministry, with the objective to modernise, restructure, convert and re-engineer SMEs. The Secretary provides support to SMEs through facilitating access to credit, assisting in education and technological development and organising meetings between SMEs, banks, universities, regional Ministries of Production and Chambers of Commerce to stimulate co-operation.

Furthermore, there are various programmes being carried out by non-governmental organisations (NGOs), such as the Inter-American Development Bank, the World Bank, various UN bodies, etc. These programmes usually aim at increasing the participation of SMEs in foreign trade, stimulation of the incorporation of technology and the strengthening of specialised supply-structures.

V.2.3 Examples of programmes

Among the programmes that aim at increasing firms' competitiveness in general the most important at the national level is the Programme for Corporate Restructuring that is based on co-financing of projects ($75 000 per project, max. $135 000 per firm). The programme is sub-divided into three phases: direct assistance to SMEs, the phase in which resources are assigned; co-ordination of flows of information towards SMEs, the aim is to develop a system for the diffusion and integration of public and private programmes; change of attitudes, initiatives aimed at increasing SMEs' use of technological assistance and educational services. The available budget for this programme is US$ 200 million made up of participations by the Inter-American Development Bank, the Argentine government and private contributions. About 2 500 firms are expected to benefit from this project.

In the category of programmes that are aimed at increasing SMEs' participation in foreign trade, the Programme of Corporate Restructuring for Export co-finances all activities that make part of export projects (US$ 75,000 per project, max. US$ 125,000 per firm). Among the export-promoting activities feature market studies, adaptation and development of products for foreign markets, registration of trademarks and patents, marketing campaigns abroad and changes within firms to facilitate export. The responsible organisation is the Secretary of SMEs, which is supported financially by the World Bank to administer US$ 27 million and approximately 1 000 projects.

The FONTAR programme has innovation and technological development as its objectives. Besides firm-specific assistance, this programme has led to the establishment by law of various so-called Unidades de Vinculación Tecnológica, public entities that diffuse technology through the establishment of relations with firms. The budget for 1998 comprised $30 million from the Argentine government as well as funds from NGOs and was used for credits for technological renewal, fiscal credit and subsidies for SMEs.

Furthermore, the Secretary of SMEs, public and private banks have a number of special arrangements that should facilitate access to capital. These projects comprise financial instruments varying from mutual guaranties to loans at specific conditions.

V.2.4 General support?

To obtain support from public entities, a firm has to qualify itself according to the conditions of the public player. This makes that a number of firms that were seriously affected by the opening of the Argentine market cannot benefit from public initiatives. The obligation of co-investment, featured by a number of programmes to create commitment to restructuring on the side of the firm, for example, excludes those firms that do not dispose of financial means from public support. As a result, only a limited number of firms receive the benefits as the result of a position that is considered favourable for future growth.

V.3 Relations with banks

One of the principal obstacles Argentine SMEs face in their operations is the access to capital (Moori Koenig *et al.*, 1994; Gatto, 1995), which not only limits their possibilities to make the investments that give shape to the restructuring process but also inhibit them to sell their products in national and foreign markets. This paragraph will start with an analysis of the relation SME-bank, followed by an analysis of the financing of export. Since the consequences of (non) availability of means in general for investment in assets were derived from a different database, they will be presented in paragraph V.5.

V.3.1 Relations with banks

The transition of the Argentine economy had a profound impact on the banking sector as well. In the new scenario, banks diversified their operations into areas such as insurance, tourism, investment banking or retirement plans through the establishment of new subsidiaries. The relations between SMEs and banks -mostly limited to the traditional lender-borrower relation- are subject to change as the result of the inclusion by a number of banks of 'non-traditional banking products', such as cash-management or payment of salaries, as a complement to the product SMEs actually need, credit.

Moori Koenig (1997) states that the difficulty SMEs have in obtaining access to capital can be explained by the characteristics of this kind of firms, the linkages between SMEs and banks and the national regulation of the banking sector. She classifies the obstacles, using the work of various authors, as follows:

- From the point of view of banks, the willingness of possible borrowers to fulfil terms of re-payment is difficult to estimate, which causes excessive precaution to prevent so-called moral hazard. Information based on balances, P&L-sheets or projections of cash-flows is replaced by personal contact between a representative of the bank and the SME in order to obtain adequate information.
- Financial and technical information on a potential client's operations is often incomplete, non-conventional and lacks credibility. This complicates the evaluation of investment projects, the estimation of risk and the administration of a portfolio of many small clients.
- The personal approach to evaluating firms requires the representative of a bank to build a relation with the firm's owner, its business, the environment it operates in, its clients, etc. to estimate the risk involved. This approach is costly and complex when SMEs from different sectors are considered that are often located at distance.
- Banks often lack personnel with the capacity to evaluate adequately a number of firms that differ in their characteristics. Neither do banks dispose of procedures for evaluation of projects presented by SMEs that focus on actual assets and back-up by guaranties.
- Many SMEs refuse to present banks the required information due to their financial structure in which assets of the entrepreneur-owner and those of the firm are blended. Even when a firm disposes of guaranties, its access to credit is limited as a result of delays in the execution of a guaranty in case of insolvency by public entities.
- Because of their limited size, SMEs are an unattractive segment for banks. Demand for banking products is limited to traditional lending, which leaves out profitable additional products such as the emission of shares or bonds and M&A-consulting.
- Lending in function of guaranties implies a risk of adverse selection, i.e. lending to firms that dispose of guaranties irrespective of the risk involved and denying access to credit to those firms that present low-risk projects but lack guaranties.
- As a result of high monitoring costs, the risks involved and the unattractiveness of the SME-segmen, the costs of transactions, commisions and interest rates are structurally higher, while the duration of credit is shorter.

V.3.2 Banks, credit and international commerce

A survey held among 90 exporting SMEs that operate in different sectors (Moori Koenig, 1997), illustrates some of the characteristics of the relation between banks and SMEs in 1995. A first observation is that with the increase of the size of the firm, the number of banks it operates with rises. Table 5 illustrates this tendency, indicating a better access to credit for larger firms.

From the point of view of banks, this tendency implies a diversification of risk, which comes at cost of the exclusiveness of the relation between SME and the individual bank and leads to dispersion of corporate information.

A second observation is that a group that represents 80% of the firms that made part of the survey, considers one of the banks it operates with to be a so-called preferred bank. The relation between the firm and its preferred bank differs from relations with other banks in that the relation is more inclusive; the bank processes a large share of the firm's financial transactions and is often the principal creditor. As a result, the preferred bank has better access to information on the firm, which facilitates monitoring and increases transparency. The SME has better access to credit but looses independence as the relation deepens.

Table 5

NUMBER OF BANKS SME-PANEL TRANSACTS WITH, ACCORDING TO SIZE

(percentages)

	< US$ 1,000,000	Between US$ 1,000,000 and US$ 5,000,000	> US$ 5,000,000
1 or 2 banks	64	28	23
3 or 4 banks	36	50	27
5 – 7 banks	-	18	35
8 banks	-	4	15
Total	**100**	**100**	**100**

Source: Moori Koenig (1997).

As can be seen in table 6 the most important reasons to choose a preferred bank are confidence in the relation with the bank, the amount of credit obtained from the bank and a shared history. The main implication is that commitments between SMEs and a preferred bank are not based on economic performance only. The history between bank and SME and the confidence they mutually develop determine how inclusive the relation is.

Table 6

REASONS FOR CHOOSING A PREFERRED BANK

(percentages)

Reason	Weight
Trust in relation – confidence	20
Amount of credit	19
Antiquity of relation	16
Accessibility to services offered by bank	12
Personalised service	11
Services the bank offers	9
Image or prestige of bank	7
Other	6

Source: Moori Koenig (1997).

Of the 1994 international operations of the SMEs of the panel, only 24% of total export was financed with credit for export from banks. Sectoral analysis of obtained credit, however, reveals asymmetries in banks' attitudes to risk: firms from the food and medical equipment sectors financed their export for 54% and 46% respectively, while firms from the leather processing sector financed only 0.3%. Except for the food sector, between 50% and 80% of the firms in their respective sectors did not obtain any credit for export at all.

The exporting firms can be classified according to their performance in terms of sales in both local and foreign markets and the importance of exports to the firm. Of the firms that obtained credit – approximately 40% of the panel – the large and established exporters are most financed by banks. As can be deduced from table 7, small firms that export occasionally hardly qualify for credit, which creates a restraint to growth in international markets of start-ups or firms that recently changed their orientation to markets abroad.

Table 7

ACCESS TO CREDIT FOR EXPORT IN FUNCTION OF SALES AND COEFFICIENT EXPORT/SALES

(ipercentages)

Percentage of exports financed	Sales			Coefficient Export/Sales			
	Less than US$ 1 million per year	Between US$ 1-5 million per year	More than US$ 5 million per year	< 15 %	15 %-30 %	30 % - 50 %	> 50 %
> 70	-	28	45	36	22	50	25
30 - 70	-	50	45	45	44	33	75
5 - 30	100	22	10	19	34	17	-

Source: Moori Koening (1997).

The combination of the information of table 7 with the characteristics of relations between banks and SMEs may explain why a relatively large share of exports of firms that have a low export coefficient is financed. As export represents only a minor share of total sales, the risk involved will be smaller and the representative of a bank will have less difficulty to monitor foreign operations adequately.

The role of the bank as financier of operations abroad is often an extension of commitments in the local context. Of the firms of the panel, 50% received more than 50% of total credit obtained from their principal creditor, while 35% of the firms obtained more than 70%. This observation illustrates the inclusiveness of the relation between SME and bank, once established. Although an individual firm may transact with various banks, to finance its international commerce relations are deepened and centred on only a few banks.

Table 8

OTHER CHARACTERISTICS OF FIRMS THAT OBTAINED CREDIT FOR EXPORT IN 1994

(percentages)

Establishment of relation Bank – SME		Existence of relation with foreign client		Client type	
Before 1980	29	> 8 years	30	TNC	21
1980 – 1990	34	6 – 8 years	12	Large trader	17
1990 – 1993	24	4 – 6 years	9	Large end-user	31
1994 – 1995	13	2 – 4 years	21	Client is linked through	
		< 2 years	28	co-operative agreement	0
				Other	31

Source: Moori Koenig (1997).

Among the additional factors to be taken in account -see table 8- the importance of established relations, with both bank and client, is a central issue. To establish trust and to be able to monitor operations correctly, the bank and the SME need time to get to 'know' each other. The importance of low uncertainty of the transactions between the SME and its clients is reflected in

the distribution of credit according to the antiquity of the relation with the client and the kind of client. Banks' risk adverse attitudes lead them to prefer reliable clients such as TNCs or large end-users that have proven through time to be trustworthy. It should be mentioned, however, that these factors determine whether credit is granted or not. The interest rate fluctuates neither with the risk of the transaction nor with the SME's past performance.

V.4 Bargaining power, evidence from the SMEs production space

The two preceding paragraphs characterised the relations between SMEs and the players that influence the chain of production as a whole. In the following, a comparison will be made of a number of firms that together are a representation of the organisation of industrial activity in Argentina.

V.4.1 Representativeness

The data presented here has been deduced from a survey carried out by the INDEC, which aimed to assess the technological restructuring of Argentine industrial firms. To suit the information to the object of analysis of this thesis, non-SMEs were removed from the original population of 1 639 firms, leaving a total of 686 firms. Together these firms represented sales of $ 2 450 899 million in 1996, exported a total of $ 180 352 million and employed 29 312 persons.

In comparison to the original survey, which represented a more than 50% of total sales, export and employment of the Argentine industry, the SME population –obviously- represents lower values. However, since the number of SMEs included in the analysis is rather high and the population features a heterogeneity in behaviour comparable to that of the industrial sector as a whole, the conclusions to be drawn from the analysis will suffice for the final part of this thesis, the effects of different adaptation modes.

As the fieldwork of the survey was carried out at the end of 1997, the data presented here is based on firms that already existed in 1992 and survived the transition. The importance of this observation is based on the many closures of firms and plants as the result of inability to adapt, rationalisation of production, mergers and acquisitions, as can be seen in Annexes B and C. Also, firms that have been founded after 1992 were not included.

V.4.2 Characterisation

The aim of this section is to establish a relation between the performance of individual firms and the structure and content of their dependence relations. To do so, the population will be divided into categories according to evolution of sales and export. With respect to sales, five groups will be established among which will be differentiated on sales performance, the product of relative and absolute change in sales between 1992 and 1996[16]. In the range from high to low performers, one group has grown spectacularly with an average increase of 215%, the three intermediate groups have developed moderately while the sales of the final group has almost halved.

[16] The combination of absolute and relative increase to define performance has been made to prevent classifying very small firms that developed positively too high. For example: firm A sells 10 in year (i) and 20 in year (i+1); firm B sells 50 in year (i) and 75 in year (i+1). In a classification based on relative increase only, firm A would be the best performer, denying the weight of B's absolute increase. A definition of performance based on absolute increase only would classify firm B as the best performer, denying the impact on the management of a firm doubling sales has. Combining relative and absolute increases, both impact on management style and absolute weight of a mutation are considered.

Of the 686 firms of the SME population, 254 exported in the 1992-1996 period. These firms will be divided into five groups as well, differentiating on export activity *an sich* and export performance, defined comparable to sales performance. The first group contains those firms that initiated their export between 1992 and 1996, while the second group ceased to sell in markets abroad in the same period. The other three groups are firms that exported throughout the entire period and are positioned according to their performance.

The classification as presented above has been established assuming that sales in general and export in particular are indicators of a firm's competitiveness. The opening of the domestic market has given an opportunity to unorthodox, mostly foreign competitors, to exploit ownership advantages either through FDI strategies or trading at arm's length. As a result, part of a firm's ability to increase its sales needs to be ascribed to competitiveness. With respect to export, as was mentioned before, Argentine exporting SMEs are niche-players (Gatto y Ferraro, 1997). Even so, whether derived from product specificity or based on ownership advantages, the exporting firm is able to compete with other firms that offer substitutes or have different ownership advantages. In short, sales abroad result from some kind of competitiveness, be it in a particular niche.

V.4.3 Sales-export evolution 1992 - 1996

The use of both sales and export as indicators of performance requires a closer look as export is included in total sales, not all firms have export activity and the share of export in total sales varies through time. Table V.5 features a division of total sales according to the export co-efficient in 1992 and 1996.

As can be seen, the main share of the firms of the panel had export activity neither in 1992 nor in 1996. The firms that initiated export after 1992 show a stronger increase in average sales per firm than those that did not export at all. The average increase of sales of firms that switched between the polar modes, i.e. from co-efficient 0% to higher than 40%, is lower due to the size of these firms. In other words, their total sales are less, which leads to strong variation of the export co-efficient when export increases while the development of average sales is modest. A comparable bias can be identified among firms that were orientated towards foreign markets in 1992 and ceased completely their export.

In general, firms that maintained or increased their export co-efficient increased their total sales. This seems to confirm the assumption that export is an indicator of a firm's competitiveness. Another observation is that firms that have a higher export co-efficient have higher average sales. This might indicate that niche-players that have grown locally reach a point at which their domestic market becomes saturated and, to continue their growth, they need to enter foreign markets.

The sectors to which the five firms that contribute most to the total value of a category belong are included as 'predominant sectors'. Since, for example, the textiles sector (1711) is represented in all categories, the conclusion can be drawn that export performance is firm- rather than sector-dependent.

V.5 Investment

Returning to the financial dimension as indicator of a firm's bargaining power, this paragraph complements the information on the relations between SMEs and banks that was presented before.

Table 9
SALES PERFORMANCE VS. MARKET ORIENTATION 1992-1996
(thousands of pesos)

Market orientation in 1992[2]	# firms	Sales 1992	Av.	Market orientation in 1996	# firms	1992 Sales	1992 Av.	1996 Sales	1996 Av.	Predominant sectors[2]
No export at all	530	1 494 912	2 821	No export at all	432	1 152 551	2 668	1 179 463	2 730	2520, 1711, 1730, 3620 and 2811
				Local market	74	278 759	3 767	362 496	4 899	3610, 1549, 2699, 1552 and 2424
				Mixed	15	38 839	2 589	68 318	4 555	2221, 1541, 3120, 2921 and 1711
				Foreign market	9	24 263	2 696	32 993	3 666	1711, 1911, 2925, 1729 and 2922
Local market	110	539 745	4 907	No export at all	9	46 880	5 209	32 762	3 640	3430, 2511, 2926, 2221and 3120
				Local market	81	415 366	5 128	459 858	5 677	2912, 2211, 3430, 2520 and 2429
				Mixed	19	67 969	3 577	92 092	4 847	2423, 3190, 2720, 2925 and 2430
				Foreign market	1	9 530	9 530	4 451	4 451	2930
Mixed	30	99 661	3 322	No export at all	2	7 162	3 581	6 012	3 006	1511 and 2925
				Local market	7	26 222	3 746	41 390	5 913	1730, 1531, 2520, 2429 and 1912
				Mixed	11	32 408	2 946	38 645	3 513	2912, 3312, 2912, 2899 and 2925
				Foreign market	10	33 869	3 387	40 044	4 004	1531, 1711, 1911, 2211 and 2310
Foreign market	16	79 904	4 994	No export at all	2	4 500	2 250	11 762	5 881	1531 and 1711
				Local market	1	14 512	14 512	5 568	5 568	1711
				Mixed	1	4 463	4 463	3 502	3 502	2927
				Foreign market	12	58 540	4 878	70 642	5 887	1711, 1511, 1513, 2310 and 2927

Source: Elaborated upon UNGS-INDEC database
Notes: [1] Firm´s market orientation is derived from its export co-efficient: No export at all, 0%. Local market 0-15%, Mixes 15-40% and Foreign market>40%. [2] For identification of sectors, please see annex B.

Table 10

INVESTMENT IN ASSETS 1992 AND 1996

(thousands of pesos)

Group	# firms	Capital goods to be used for new products or processes, acquired locally		Other capital goods, acquired locally		Imported capital goods to be used for new products or processes		Other imported capital goods		Buildings		Maintenance	
		1992	1996	1992	1996	1992	1996	1992	1996	1992	1996	1992	1996
New exporters	98	1 140.5	2 062.7	6 095.1	45 486 6	3 719	2 616	2 842.5	1 437	4 527.4	11 798	4154	886 6
Ceased export	13	35.3	279.7	131.6	77.3	499	67	25	23	561 9	695	16	37
Best performance	48	533.0	1 183	2 705.2	2 701.9	294	975	1 162.8	180	2 444	7 009	180	366
Mid performance	45	162.0	891	1 904.6	2 180	1 044	228	250.7	104	1 540.3	2 557.2	21 841.2	18 793.4
Worst performance	49	1 747.5	867.6	1 459	1 464	807	464.3	849.2	4 082.3	5 073	2 352	304	444.2
Total	**253**	**3 618.3**	**5 284**	**12 295.5**	**51 909.8**	**6 363**	**4 350.3**	**5 130.2**	**5 826.3**	**14 146.6**	**24 411.2**	**22 756.5**	**20 527.2**

Source: Elaborated upon UNGS-INDEC database.

V.5.1 Investment

The data on investment in the 1992-1996 period show that good performers and firms that performed well in the past have access to finance. Investment in assets can be sub-divided into offensive and defensive investment. Offensive refers to investment aimed at strengthening the firm's position or initiating new operations, while defensive investments need to be interpreted as responses to competitive pressure, implying an effort to sustain the market position the firm holds or a step towards corporate renewal.[17] Comparing investments that are to be used for new products or processes with investment in buildings or maintenance as shown in table V.6, new exporters and so-called best performers can be considered offensive investors, while firms that had a weaker performance tend to invest defensively.

Imported capital goods, in particular those to be used for new products and processes, represent approaches to the international technological frontier or investment in specific assets not available in the local market. Although it should be mentioned that because of the overvalued Argentine peso, import has become cheaper as compared to the pre-convertibility period, thereby constituting a bias, the acquisition of assets abroad imply enhancement of a firm's international competitive position. Therefore, it is not surprising that the coincidence of availability of capital and the need to approach the technological state of the art -whether resulting from offensive or defensive motives- leads new exporters, best performers and worst performers to invest most in this category.

Investment in buildings and maintenance is rather concentrated in the low performance categories, except for the expenditure of new exporters in 1992, which should be ascribed to the fact that many of these firms were established or expanded considerably shortly after the convertibility plan in 1991. Returning to the low performers, their investment in buildings and maintenance results partly from their weakened position in markets abroad that led them to focus on the domestic market, and partly from the sectors they make part of. The latter is explained by the fact that many low performing SMEs produce machinery, equipment and electric devices; capital intensive sectors that developed idiosyncratically in the closed economy period that would need to change the main share of their production equipment to modernise somewhat.

V.5.2 The self-fulfilling prophecy of finance

The relations between SMEs and banks have been shown to be complex and characterised by asymmetries between demand of the first and supply of the latter. The absence of adequate procedures to evaluate investment projects or monitor SMEs' operations abroad leads banks to restrict access to capital, require conditions that minimise the risk involved and raise the cost of capital irrespective of risk.

The importance of an organisation's past and the required guaranties to obtain credit can be considered to be the point of departure of a circle in which the initial position of the SME is confirmed. Firms that perform well over time find themselves in a comfortable position in which they can gather own financial means, obtain guaranties and establish durable relations with clients and banks. When a need for additional finance surges, these firms will have relatively little difficulty in obtaining what they need. As a result, firms that have been good performers in the past can be considered to be better positioned to take advantage of opportunities that require investments. Firms that have been average or marginal performers, on the other hand, fail to establish the durable relations that lower their risk profile and, consequently, are denied access to

[17] Although corporate renewal implies a kind of offensive behaviour, it originates from an organisation's weakening position and will therefore be considered a defensive response.

capital. This leads to missed opportunities, which confirms and continues their initial position as concerned to finance.

The closed circuit approach of assessment of firms' performance does not only lead to missed opportunities for SMEs that lack financial means, it also leads banks to granting credit to yesterday's best performers. In a context of industrial restructuring this inhibits adaptation of both SMEs and banks.

V.6 Technology

In general, SMEs have less R&D activity than large firms do, especially in developing countries. A common alternative is the acquisition of licences to fabricate products for a determined market, which biases research efforts towards applied research in order to meet local product requirements or specifications. Therefore, this paragraph will consider both own R&D efforts and licenses as the constituents of technological development of SMEs.

V.6.1 Own R&D efforts

The definition of R&D as used in the INDEC survey includes not only the product- and process-orientated efforts but also takes into account the organisational context in which production takes place. This 'non-laboratory'-R&D includes activities such as project engineering, administrative re-organisation, organisational re-engineering and commercialisation of new products. Table 11 illustrates the importance of 'non-laboratory' activities in total expenditure on R&D by SMEs, which is explained by the replacement of basic R&D through licenses that need further development, adaptation and to be incorporated in the firm's operations. As a result, SME's technological development should be conceptualised as r&D.

As in the paragraph on finance, R&D efforts can be sub-divided into offensive and defensive behaviours as well. Although the differences in spending between the categories is less articulated than that on investment in assets due to the importance of technological development in the industries that constitute the lower performers, the new exporters and high performers behave offensively, while lower performers defend their positions or re-position in the domestic market.

In addition to the sector-dependent characteristics mentioned before, there are explanations at the level of the individual firm. Interpreting table 11can be interpreted as the improvement or development of phases in the production process that support the final commercial goal of the firm: selling its products. Doing so, the difference between high and low performers can be grasped as a problem of location of effort in the internal value chain. While the lower performers are more production orientated and try to improve their functioning by developing their production skills even more, the successful firms adapt their production, administrative and commercial skills.

A second reason for high expenditure on development and adaptation of products and processes by the lower performers is derived from their market orientation. As was illustrated by table V.1, the sales of firms whose export co-efficient lowered between 1992 and 1996 remained equal or fell. To prevent further erosion of their market position, many of these firms have dedicated themselves to the domestic market, using strategies based on the adaptation of internationally successful products to local standards and requirements.

Table 11

EXPENDITURE ON R&D 1992-1996, EXCLUDING INVESTMENT IN ASSETS

(thousands of pesos)

Group	# Firms	Basic R&D			Applied R&D			Development of products and processes			Adaptation of products and processes to local standards		
		Personnel	Other	total	Personnel	Other	total	Personnel	Other	total	Personnel	Other	total
New exporters	98	219	53.9	272.9	445	33.5	478.5	801	140.3	941.3	303	14.7	317.7
Ceased export	13	355	0	355	0	0	0	145	9,1	154.1	0	3.8	3.8
Best performance	48	159.3	25.9	185.2	16.0	21.2	37.2	1 588.7	298.7	1 887.4	458.5	78.3	536.8
Mid performance	45	24	5	29	544,0	112	656	1.438	372	1.810	548	139	687
Worst performance	49	114.4	4	118.4	338.0	299.1	637.1	1 501.1	246.1	1 747.2	423.5	160	583.5
Total	**253**	**871.7**	**88.8**	**960.5**	**1 343**	**465.8**	**1 808.8**	**5 473.8**	**1 066.2**	**6 540**	**1 733**	**395.8**	**2 128.8**

Technical assistance in production			Project engineering			Administrative reorganisation			Organisational re-engineering			Commercialisation of new products		
Personnel	Other	total	Personnel	Other	total	Personnel	Other	total	Personnel	Other	total	Personnel	Other	total
240	62.3	302.3	268	93.3	361.3	85	70.7	155.7	557	0	557	573.1	17	590.1
339	17.9	356.9	0	0	0	30	0	30	0	0	0	121	0	121
459	334.5	793.5	485	175.1	660.1	388	244.6	632.6	170	0	170	240	411.5	651.5
484	12	496	486	292	778	129	0	129	68	0	68	124	182	306
299.7	172.5	472.2	286.8	126	412.8	94.8	6.5	101.3	189.1	0	189.1	116	115	231
1 821.7	599.2	2 421	1 525.8	686.4	2 212	726.8	321.8	1 048.6	984.1	0	984.1	1 174.1	725.5	1 899.6

Source: Elaborated upon UNGS-INDEC database.

Finally, the differences between categories in expenditure on technological assistance in production processes are less articulated. This needs to be ascribed to the increased use of quality control systems among all firms, whether they use opportunistically accumulated, idiosyncratically engineered installations or up-to-date, integrated acquired equipment. As the unit of analysis of the INDEC questionnaire was the individual firm, the management of quality along the chain of production was not included. However, since TQM practices are being used more frequently, a growing consciousness of quality requirements for inputs can be supposed.

V.6.2 Acquired technology

The incorporation of technology through licenses has been one of the traditional sources of technological progress of Argentine industry. Even in the ISI period, in which legal restrictions were imposed on the transfer of technology, the main share of licenses was acquired abroad. When the economy was opened, the supply of technological knowledge from abroad became even more important (INDEC, 1998: 28). Meanwhile, payments for licenses from local firms almost doubled in the 1992-1996 period, which indicates the existence of a growing group of firms that is on the international technological frontier.

Table 12

TOTAL OF PAYMENTS FOR LICENSES 1992-1996

(thousands of pesos)

Group	# firms	Product technology		Process technology		Technological assistance		Patents		Trademarks	
		local	foreign	local	foreign	local	foreign	local	foreign	local	foreign
New exporters	98	17	289	0	121	8	146	0	1 128	64	314
Ceased export	13	0	0	0	0	0	0	0	0	0	0
Best performance	48	0	128	0	0	714	1 598	0	1 482	528	788
Mid performance	45	0	186	0	43	0	313	0	0	0	0
Worst performance	49	0	175	0	483	30	1 041	0	57	117	158
Total	**253**	**17**	**778**	**0**	**647**	**752**	**3 098**	**0**	**2 667**	**709**	**1 260**

Source: Elaborated upon UNGS-INDEC database.

While endogenous R&D efforts can be incremental, i.e. re-configuration or expansion of the existing technological base, the acquisition of technology implies a step towards established standards that have proven their value. Since size, capital availability and the risks involved inhibit SMEs to carry out substantial R&D projects, the secure option that leads to technological competitiveness is to obtain licenses. Consequently, the strong concentration of expenditure on licenses in the new exporters and best performers categories, as featured by table 12, should not be a surprise.

Low performers, especially the category that performs worst, seem to be aware of their deteriorating position and invest in product and process technology and the corresponding technological assistance. Again, this is due to the capital-intensive character of the sectors these firms belong to, as well as to where in the internal value chain efforts are allocated.

As in table 11, the distribution of payments for technological assistance is distributed more equally. This reflects the general tendency towards import of equipment, as was described in the preceding chapter, which is accompanied by payments for installation, education of personnel and intellectual property. The local acquisition of licenses implies the existence of a number of

Argentine firms that sells technology. Of the SME-panel of 686 firms, only five reported to have sold licenses or to have provided technological assistance on an occasional basis.

V.6.3 Engineered performance

Technological development, whether endogenous or exogenous, is positively related to sales and export performance. Technological development alone, however, is not sufficient to obtain a competitive position in the domestic market or in markets abroad. Successful firms also pay attention to the organisation of production and the commercialisation of finished products.

Comparable to the access to capital, a technologically and commercially well functioning firm occupies a competitive position in its market. The income it generates through selling its products provide it with the necessary capital to modernise its technological base or renew it, using licenses for products or processes that have proven to be commercially viable. Also, competing in different markets, satisfying different customer demands, facing different competitors that use other production techniques, gives firms better feedback on their actions, which normally leads to a more effective restructuring of production. Firms that are less technologically developed than their competitors, on the other hand, will have higher costs to produce a comparable good, leaving them lower margins. Reduced capital generation limits the possibility to invest in technology, which often leads to opportunistically incrementing the existing technological base without structurally improving the generation of profits. The relation between performance and technological development of a firm will polarise between commercially and technologically sound firms and their opposites, the more capital-intensive a sector is and the more important efficient use of that capital is.

A technologically and commercially well-engineered organisation, thus, is more prone to sustain its competitive edge than less developed counterparts.[18] Consequently, the opportunities that have come with the transition are mainly reserved to firms that already performed well before the market was opened or to newly established firms.

V.7 Vertical dependencies

The macro-economic turbulence of the pre-openness period led many firms to vertical integration in order to avoid the discontinuities in the chain of production caused by a common inability to establish correctly the prices of goods and services. The high inflation created a tension between suppliers and their clients as the former could sell at higher prices the more transactions were postponed, while the latter paid lower prices for received goods the more payments to suppliers were postponed. The vertical integration had a de-specialisation of production as its consequence, which provided firms with a basis for surviving the turbulence but constitutes an inadequate organisation of production in Argentina's present business environment.

V.7.1 Supply structure

A firm's supply structure is a reflection of how its production is organised. The more complex final products and production processes are, the more a firm will need specialised suppliers. The adjustment of production to a setting of international competition benefits from a firm's exposure to players that make part of the open system and have developed best practices that can be transferred. Therefore, table 13 distinguishes between local suppliers, foreign suppliers and suppliers that belong to an economic group, assuming the latter two to have a more articulated effect on the restructuring process.

[18] Ceteris paribus.

Most firms of the panel have increased the number of suppliers they transact with, which implies a trend towards specialisation of production. A first observation is that firms of the more competitive categories have amplified their suppliers base more than firms with lower performance, except for the category of suppliers that belong to the firm's economic group. This may be explained by the restructuring of the Argentine holding companies and trends towards independent functioning of firms within TNC systems, which leads to replacement of group-suppliers by local suppliers that offer similar inputs at a lower price.

The distribution of the number of suppliers among the categories is u-shaped, i.e. low performers transact with many suppliers, mid-performers transact with less and high performers transact with many. The difference between low and high performers is found in the direction of dependence, which has direct consequences for the restructuring of the focal firm. The growth of high performers allows them to establish relations with more suppliers that are chosen according to the needs of the focal firm. Low performers, on the contrary, need to change their organisation of production but, as the number of suppliers implies a more complex configuration of competences, cannot simply alter or break relations. As a result, the adaptation of firms in decline that are related to many suppliers requires more effort than that of firms that have a less embedded production.

The sector firms belong to does not seem to bias the supply structure too much. The established categories contain firms from all sectors and the number of suppliers per firm within a category does not vary too much. More important is the size of the firm, which also partly explains the u-shaped distribution of the number of suppliers among categories. The best and worst performers categories contain firms that have grown substantially and have reached a considerable size, or firms that were large but shrunk due to their bad performance. While the first group has been in a position to widen its suppliers base, the second has not been able to narrow it, as was explained above.

The assumption that exposure to players that already operate in the international context benefits the restructuring of firms seems to hold true. The number of supplier relations that favour restructuring decreases with the performance of the focal firm. However, exposure is not a guaranty for successful performance, as can be deduced from the supply structure of the worst performing firms.

V.7.2 Downstream

The downstream operations of a firm put it in contact with the decisive factor of its performance: the client. Whether the firm sells directly or through intermediates, the contextual changes brought about by the opening of the market will alter clients' preferences and find their way up to the firm and press for its change. Assuming firms to want to sell as much as possible, a wide customer base is not only an indicator of success. As the opening of markets causes the collapse of many firms, a wide customer base reduces the focal firm's vulnerability to discontinuities due to loss of clients and, thus, puts it in a better position to survive and restructure.

The information provided by table V.10 offers an insight into the downstream operations of the firms of the panel. Unfortunately, because the questionnaire focused on technological development and took the individual firm as its unit of analysis, more detailed information on downstream operations, e.g. the size of clients and their position in the chain of production, volume sold per client or frequency of transactions is not available.

The most important observation is that, as was expected, the most successful firms have the widest customer base. Although the intermediate performers operate more with exclusive sellers than the best performers, the latter can be expected to increase their number of agents while the

former decreases. The number of exclusive sellers seems to depend more on the size and age of the firm, which represent past performance, than on its actual performance.

The division between successful firms and the less fortunate is also encountered in the development of downstream operations through time. While firms that function well are widening their customer base even more, low performers lose clients. Sector bias is, as with suppliers, minimal due to the mixed composition of the categories.

Based on the many clients and the many suppliers (see table 13) best performers have, they can be supposed to operate from central positions at the end of the chain of production. This position explains the importance of foreign suppliers and partly protects them from being replaced by imports.

V.7.3 Width = latitude?

In this paragraph, the relations between performance and the width of a firm's supply structure and customer base have been illustrated. The general conclusion to be drawn is that successful firms have both a wide suppliers base and a wide customers base. Being related to many organisations that represent a small part of total value each, makes firms less vulnerable to losses of individual suppliers or clients than when the focal firm depends on a few large suppliers or customers, and position the organisation better to receive information on what is happening in its environment. As a result, the width of dependence relations constitutes a firm's latitude.[19]

The difference between supplies and downstream operations, however, is that a wide suppliers base not necessarily implies much latitude. Due to criticality of a few suppliers or due to the complexity of configuration of competences, a wide suppliers base may constitute an obstacle to adaptation.

[19] Uzzi (1997) considers the "paradox of embeddedness", stating that while an adequate mix of strong and weak ties (Granovetter, 1973) leads to improvement of an organisation´s performance, over-embeddedness reduces the flow of novel information, whixh inhibits adaptations.

Table 13

NUMBER OF SUPPLIERS FOCAL FIRMS TRANSACTED WITH IN 1992-1996, ACCORDING TO SALES PERFORMANCE

Group	# firms	Av. change sales %	Local suppliers						Foreign suppliers						Suppliers belonging to economic group					
			1992			1996			1992			1996			1992			1996		
				#	mean		#	mean		#	mean		#	mean		#	mean		#	mean
High performers	137	215.2	14 429	104	138.7	19 930	107	186.3	515	7	73.6	724	7	103.4	719	45	16.0	607	48	12.6
Mid-high	139	51.5	8.066	101	79.9	10 690	105	101.8	209	5	41.8	333	7	47.6	130	39	3.3	215	43	5.0
Intermediate	122	13.3	4 816	80	60.2	5.843	84	69.6	167	3	55.7	141	3	47.0	3	25	0.1	11	27	0.4
Mid-low	148	-18.3	4 348	102	42.6	6 267	105	59.7	220	6	36.7	252	7	36.0	5	29	0.2	36	32	1.1
Low performers	140	-48.0	11 828	109	108.5	13 117	112	117.1	340	4	85.0	420	4	105.0	27	44	0.6	13	46	0.3
Total	**686**	**42.0**	**43 487**	**496**	**87.7**	**55 847**	**513**	**108.9**	**1 451**	**25**	**58.0**	**1 870**	**28**	**66.8**	**884**	**182**	**4.9**	**882**	**196**	**4.5**

Source: Elaborated upon UNGS-INDEC database.

Table 14

DOWNSTREAM OPERATIONS OF FOCAL FIRMS 1992-1996, ACCORDING TO SALES PERFORMANCE

Group	Clients						Exclusive sellers						Own establishments					
	1992			1996			1992			1996			1992			1996		
		#	mean		#	mean		#	mean		#	mean		#	mean		#	mean
High performers	133 865	104	1 287.2	174 423	107	1 630.1	159	45	3.5	242	48	5.0	123	87	1.4	142	91	1.6
Mid-high	69 081	101	684.0	83 159	105	792.0	196	39	5.0	242	43	5.6	113	90	1.3	135	92	1.5
Intermediate	94 887	80	1 186.1	99 542	84	1 185.0	225	25	9.0	209	27	7.7	85	71	1.2	88	74	1.2
Mid-low	42 553	102	417.2	44 670	105	425.4	101	29	3.5	106	32	3.3	106	91	1.2	107	91	1.2
Low performers	42 328	109	388.3	38 567	112	344.3	343	44	7.8	283	46	6.2	103	80	1.3	110	83	1.3
Total	**382 714**	**496**	**771.6**	**440 361**	**513**	**858.4**	**1 024**	**182**	**5.6**	**1 082**	**196**	**5.5**	**530**	**419**	**1.3**	**582**	**431**	**1.4**

Source: Elaborated upon UNGS-INDEC database.

VI. Conclusion: restructuring and inter-player effects

VI.1 Introduction

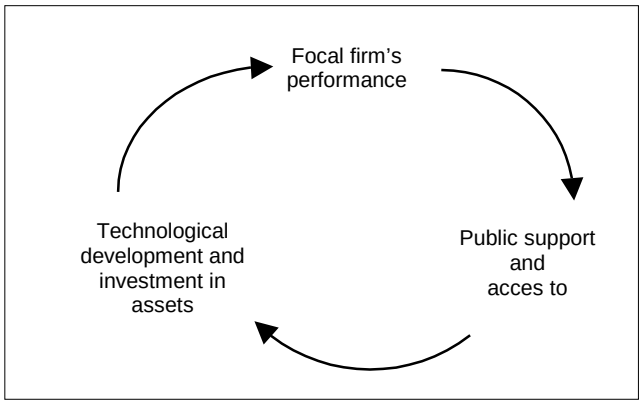
In the preceding three chapters, the transition towards market openness the Argentine economy underwent at the start of the 1990s has been analysed at different levels of aggregation. The aim of this final chapter is to establish the connection between the empirical material with the theoretical framework that was developed in chapter two, in order to respond to the initial problem statement. To do so, conclusions will be drawn from the restructuring processes as observed in the Argentine case, in which will be focussed on the negotiating aspects. These conclusions will be used to formulate answers to the research questions and, finally, to the problem statement itself. To conclude the chapter, some notes for further research on restructuring as an emergent, negotiation-based process will be presented.

VI.2 On vicious and virtuous circles: resource-based restructuring

Bargaining power has been defined as 'the cost to player A to harm player B' (Wassenberg 1995: 60). Notwithstanding the possibility of antagonistic behaviour, the definition refers more to strategic control of dependence relations in order to realise

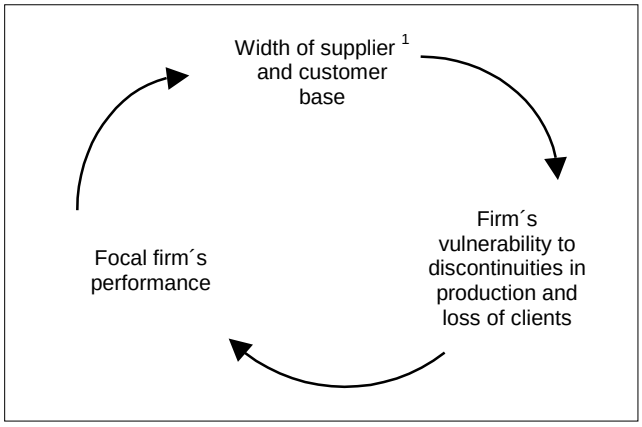
organisational goals. To restructure successfully[20] in a context of economic transition, an organisation needs to redefine dependence relations so that the organisation has access to the resources it needs to change and evades the influence the owners of those resources exert. This paragraph illustrates the importance of the initial bargaining position of an organisation to successful adaptation and future performance.

Figure 18
INTER-RELATEDNESS OF PERFORMANCE, FINANCE AND TECHNOLOGY



Source: Data prepared by the author.

Figure 19
INTER-RELATEDNESS OF SUPPLIER/CUSTOMER BASE, VULNERABILITY AND PERFORMANCE



Source: Data prepared by the author.

Note: [1] See comment on critically of supplies in V.6.3

Of the findings of chapter V, the self-fulfilling prophecies of failure and success were repeated in every bargaining dimension. Above, figures 18 and 2 represent general tendencies in the bargaining dynamics of the restructuring process from which a firm's performance can be deduced. Figure 18 needs to be interpreted as follows. To classify for public support or access to

[20] Although the opt-out strategy has been, and still is, common, the continuity of the firm is considered one of the fundamental drivers of the restructuring process.

credit, a firm needs to respond to a number of structural and performance-related requirements – to which, as concerned to Argentine banks, the organisation's past performance should be added. Firms that dispose of financial means are able to invest in assets and to develop their technological base, which usually improves performance.

Figure 19 summarises the findings on the relation between width of a firm's supplier and customer base and its performance. The number of suppliers and clients a firm is related to determines its vulnerability to discontinuities in production due to lacking inputs and diminishing sales due to loss of clients. In economies in transition, these kinds of vulnerabilities need to be managed more cautiously since many firms that are not able to adapt disappear, as has been illustrated in chapter IV. Less vulnerable firms will have more continuous production and sales, which can be expected to improve their performance.

To determine whether circles are vicious or virtuous, the firm needs to be compared to its competitors. A firm's investments in technology aimed at improving its productive processes, for example, do not necessarily lead to superior performance because other firms may invest more or continue to be more efficient without investing. The comparison of firms, in order to explain positive and negative self-fulfilling prophecies in restructuring processes, is mainly based on how the firm establishes its efficient border. This, at its turn, depends on the combination of the interpretation of the macro- and meso-factors of governance, the goals and structure of the organisation and the resources an organisation has at its disposal. Players that are able to process correctly the information they receive from the changing context, set their goals correspondingly and have sufficient resources can impose the most efficient governance structure for their operations. As a result, they occupy a more competitive position than other firms and obtain higher returns from their operations.

Hypothesis (I), as presented in paragraph II.4, holds true: a strong bargaining position facilitates firms' restructuring processes. However, firms that held very strong positions before the Argentine economy was opened have disappeared. Except for error in the processing of information, another factor has been mentioned to condition the restructuring process: the impact of the transition on the pre-openness meso-constellation. The next paragraph will focus on the dynamics caused by the impact and corroborate the validity of Hypothesis (II) as an explanation of SMEs' behaviour in a context in transition.

VI.3 Impact and bargaining dynamics

The dynamics in the meso-constellation have been characterised as a negotiation process in which players try to improve their initial position among other players to determine their own course of action and influence that of others. To understand SMEs' behaviour in response to the changes that occurred in their environment, the cycle of inter-organisational behaviour will be used to sketch the bargaining dynamics of the Argentine arena.

VI.3.1 Multi-level impact

The impact of the economic transition, as has been described in chapter IV, profoundly affected the Argentine industry as it was organised at that moment. The initial *conditions* feature firms that produced for a protected domestic market, characterised by high internal turbulence due to the macro-economic instability. Investment in assets and technological development were low, while the inability to establish prices and terms of supply-relations that resulted from inflation led to vertical integration. Competition was more a process of surviving the macro-conditions than Coase's assumed inter-firm comparison of costs.

The opening of the market has had various consequences at the different levels of analysis. At the macro-level, deregulation, privatisation and economic stabilisation shaped a business environment that was almost opposite to that of the ISI-period and, in some senses, could be compared to the scenario of the 'modelo agro-exportador' days. At the meso-level, *conditions* and *codes* were redefined. Many new players, both national start-ups and new entrants coming from abroad, entered the Argentine arena and brought with them different management styles, production technologies, capital and often relations with other players that did not operate in the Argentine context. Furthermore, the increased import of inputs, sub-assemblies and equipment indicate broadening of the formerly closed Argentine arena, which also implies influence exerted by non-traditional players. At the micro-level, the transition caused the defeat of many firms. The positions these firms occupied in meso-constellations have become obsolete in the new orchestration of industry or other firms have taken them.

VI.3.2 Latitude derived from impact

The replacement of a number of traditional players by newly established and new entrants has put the Argentine economic system in motion. Departing from the level of the individual firm, the changes in *conditions* and *codes* that drive and result from emergent governance loosened or broke the dependence relations through which the firm's behaviour was conditioned in the closed economy period. Furthermore, as the Argentine transition to market openness was accompanied by macro-economic stabilisation, the redefinition of dependence relations was not only a process of loosening or breaking dependence relations. Since many firms were vertically integrated as a response to macro-economic uncertainty, the stability allowed for firms' specialisation and widening of vertical dependence relations in the Argentine as well as in foreign arenas.

Although the impact of changes in trade openness, FDI and regulation affects *conditions* and *codes* simultaneously, a distinction can be made that will help to understand their meso-consequences. Trade openness effects, for example, consisted of a shift towards import of parts and sub-assemblies that led to the replacement of many Argentine firms that operate(d) at the upper end of the chain of production. Governmental action, on the other hand, changed the functioning of the internal market and was aimed at increasing export. To the agricultural and food industries, these changes implied an expansion of their market, which caused various firms to choose offensive strategies aimed at international expansion.

Sectoral impact changes the *conditions* and *codes* in the Argentine arena and enabled or obliged players to behave differently –as compared to pre-openness behaviour– since impact had changed the conditioning feedback mechanisms of the arena. The next paragraph will consider the implications of increased latitude to the building blocks of emerging governance structures: *commitments* between organisations.

VI.3.3 Commitments?

In the regulated, closed economy period, the characteristics of the Argentine negotiation process approximated some of the assumptions game-theoretic approaches to negotiation are based upon. Firms knew with whom they competed, as well as the strategic possibilities they and their competitors could choose from due to high barriers to entry and exit. Because of the high volatility of macro-economic variables, however, the possibility to behave strategically was limited and the results to be derived form strategic choices were difficult to estimate. One of the implications of high transparency in arenas is that *commitments* are strong, in other words, the established dependence relation will be more explicit and durable.

Since the deregulation lowered barriers to entry and exit and macro-economic stability has given firms the possibility to behave strategically, transparency has decreased. The consequent

weaker *commitments* are reflected in that they are temporary and in an increase of opportunistic behaviour, which at a higher level of aggregation means that the emergence of governance structures continues. Temporary commitments are the result of the instability that comes with emerging governance structures, which changes the criticality of particular resources and, hence, the yield of a relation. With respect to opportunistic behaviour, it should be mentioned that, besides the increase of alternative bargaining partners, opportunistically behaving firms hardly suffer negative consequences to their reputation due to the scarce exchange of information among players in the Argentine arena.

VI.3.4 Explaining restructuring to international competition

The dynamic multi-level approach, as developed in this thesis, is based on the assumption that firms' restructuring processes are context-specific, while the characteristics of a particular context originate from the agents that operate in it. The approach removes the blinkers of mono-level analysis and allows for a combination of insights that help to understand organisations' responses to a transition as profound as the Argentine. Although cluster-analysis or even entrepreneurial orientated firm-analysis may suffice to explain the restructuring of a particular organisation, these approaches normally neglect the idiosyncrasy of a particular context. The main contribution of the multi-level approach is, therefore, its explanation of commitments between organisations, based on firm-specific factors *and* firms' perceptions of the business environment. As commitments constitute emerging governance structures which, if a state of equilibrium is found, may culminate in an orchestration of industry, an explanation of commitments can be of use to strategy- and policy-makers.

While the dynamic multi-level approach helps to understand the restructuring process, the conclusion of chapter IV seems to falsify Hypothesis (II), which would deny the value of context-specific analysis in order to predict the restructuring process. Due to *intra*- and *inter*-sectoral heterogeneity in firms' responses to the transition, the conclusion can be made that the most important determinants of successful restructuring are found at the level of the firm. However, besides the argument based on the vague definition of the meso-level, there are other reasons to include the sectoral impact in an explanation of firm's restructuring.

The automotive sector has been highly regulated by the Argentine government, which has given suppliers of parts an opportunity to restructure successfully in a sector that has hosted substantial FDI. Had the import/export ratio been higher, i.e. the assemblers acquire parts from abroad and thereby replace local upstream players, less SMEs would have survived. Comparable conclusions can be drawn from analysis of the food and specialty chemicals sectors, where, respectively, trade openness and FDI have been the decisive factors for survival through restructuring.

Thus, sector variables do contribute to an explanation of the restructuring process, be it more indirectly. Furthermore, the Argentine case may be too premature to draw conclusions on as in many sectors no real orchestration has emerged yet. Hypothesis (II) will be accepted to replace Hypothesis (I) as an explanation for SMEs' restructuring to international competition.

VI.4 Answers to the research questions

The questions that were posed in chapter I to demarcate the problem and introduce the sub-problems to be solved, in order to come to an answer to the original problem statement, will be answered by coupling the theoretical framework and the insights derived form the Argentine case study.

VI.4.1 The meso-constellation

SMEs have been analysed from a multi-level perspective to understand their behaviour to condition and be conditioned by the dynamics that constitute the emergence of governance structures. The framework that has been developed places a chain of production, visualised as a layer of competing firms with their suppliers and customers, between banks and public agencies. Organisations have been shown to be related because of resource dependence and to exert influence through various dimensions in order to obtain access to the resources they need while maintaining as independent as possible.

In Argentina, SMEs have traditionally played a role of minor importance on the agenda's of policymakers and financiers. This is reflected in the late creation of a public platform for SMEs- which was mainly a bet on the miracle of flexible specialisation networks to counter unemployment-– and the lack of adequate procedures for banks to evaluate and assess SMEs. Within the chain of production organisations are connected to each other because of the flow of products. Because of the macro-economic turbulence and the closed character of the economy in the 1980s, many firms were vertically integrated, hardly exported nor imported and postponed investments in assets and technology. The transition towards an open deregulated economy has had several effects: vertical disintegration, replacement of local suppliers by foreign suppliers, an increasing orientation towards foreign markets, the disappearance of a large number of firms, the entrance of new players through FDI strategies or local start-ups and increased investment in assets and technological development. The restructuring that was required to be able to compete in the changing business environment, emphasised dependence relations in that all players, irrespective of their position, needed resources like capital, technology and information to the extent their particular situation had been affected.

VI.4.2 Determinants of governance

The governance of dependence relations, in the sense of configuring competences, depends on four factors: the macro-milieu, meso-moves, micro-motives and the past. Relations within Argentine meso-frameworks have shown particular importance of macro-factors and the past. Whereas in the ISI-period the Argentine industry was separated from influence from the international scenario due to national economic policy and corporate behaviour was strongly conditioned by macro-economic turbulence in the 1980s, the conditioning effect of the macro-milieu remained strong after the transition as the transition itself originated from a series of political decisions. Perhaps the most salient example of these decisions is the convertibility law, which was imposed as an anti-inflationary construct and changed significantly the Argentine economic landscape. The conditioning effect of the past is expressed in the structural inertia of a group of players that survives because of a particular position or possession of critical resources. The government and financiers are examples of players that are adapting slowly but that are irreplaceable. Also, the past has conditioned the management styles of entrepreneur/owners, which complicates co-operation between former competitors and inhibits a further optimisation of production through the establishment of so-called specialised supplier networks.

VI.4.3 Dependence positions and emerging governance

As indicated by the paragraph on virtuous and vicious circles, a firm's bargaining position largely determines the success of its restructuring efforts. The dynamic multi-level analysis as applied to the Argentine transition has illustrated how changes at the macro- and meso-level, considered from a historic perspective, influence the individual firm. The responses to the transition from a closed to an open economy, as expressed in changed commitments, constitute the

emergence of governance structures that, in case they stabilise, can represent the orchestration of an industry.

VI.4.4 Economic transition

The three-dimensional approach to the sectoral impact of opening markets focuses on indicators of contact between the local market and the international context instead of on the consequences to the established players. The underlying justification for doing so is based on the competence-based definition of competitiveness. Since customers' yield is derived from a comparison between alternatives, the more these alternatives change as a result of products that were imported or produced locally by new entrants, the higher incumbents' need to reconsider the yield of their products. Furthermore, the choice to consider impact at the sectoral level of analysis has been made firstly, because the sectoral level is assumed to be the *locus* of competition[21] and, secondly, because the sectoral level is the first level of aggregation at which changes in the organisation of production can be identified.

The consequences of the opening of the Argentine market are diverse. In general, the Argentine economy has witnessed a strong reduction of the number of establishments, increasing unemployment, has become a net-importer, bases its export on the exploitation of natural resources and hosts increasing amounts of FDI. Although the correlations that were found in chapter IV couple the extent to which a sector was affected to increases of the average total gross value per establishment and number of employees per establishment, the heterogeneity *between* and *within* sectors prohibits a direct relation between impact and number of establishments and employees per sector.

VI.5 Adaptation and strategy

To explain the signalled heterogeneity of SMEs' responses to the transition the Argentine economy is going through, an effort has been made to integrate elements from various disciplines to come to a coherent approach to adaptation from which the influence of inter-player effects could be deduced. The empirical evidence as presented in the preceding chapters, however, is not sufficient to fully explain strategies for adaptation, firstly, because it does not contain all the elements that make up the theoretical framework and, secondly, because it has not been the aim of this thesis to deduce strategies for adaptation from structural characteristics.

To come to a more complete understanding[22] of the strategies the SMEs that were analysed for this thesis have chosen -or whether they chose any strategy at all-[23] some dimensions should be paid more attention to. Firstly, the constituting dimension of competence-based competition, managerial cognitions, has not been included in the empirical material. The metaphorical approach to the configuration of competences as a bargaining process can only give insight in bargaining strategies if the motives of the players are known as well as their specific cognitions. Research could focus on differences in education, information on the market and information-processing capacities or differences in definitions of competitive reality resulting from the embeddedness structure of a firm. Although these gaps will undoubtedly represent a challenge to game-theorists or business-minded social scientists, the emergence perspective that was presented here cannot fill them and, hence, cannot fully explain strategic processes, due to the complexity of economic

[21] Although this assumption excludes competition based on substitution and inter-sector connections based on complementarity, the constituent of co-opetition (Brandenburger and Nalebuff, 1996).

[22] Without entering into the classic strategy vs. structure debate.

[23] See the comments of Kantis (1996) on the strategic capacities of entrepreneur/owners of Argentine SMEs, which have been referred to in paragraph II.3.3.

organisation.[24] In the Argentine case, the changes in *conditions* and *codes* as described in paragraph VI.2 represent the complex interplay and inhibit a deduction of intended strategies from the behaviour as described in this thesis.

Secondly, the transition from a closed market situation to international competition implies an expansion of the field in which organisations operate. Therefore, the conditioning effect of the business environment on strategy should contain additional national and international dimensions that represent local characteristics and tendencies in markets abroad. With concern to local characteristics, a country's or region's specialisation in production should be included. The food and agricultural sectors, for example, are responsible for a large share of total Argentine export. However, notwithstanding a number of firms that owe their success to thorough strategic analysis, Argentina has exported agricultural products since the Spaniards realised that Argentina's wealth consisted of space instead of minerals, even in the closed economy period. The successful adaptation to the new environment of these firms should therefore not be ascribed to strategic capacities but to the particular industrial structure of the Argentine economy and the role it has in the other part of the business environment, international markets. Although, the tendencies in these markets have been partly included in the theoretical framework through the analysis of changes in FDI and international trade, they do not suffice to explain the adaptive strategies of the firms of the panel. The changes in the global techno-productive paradigm brought about by the re-emergence of flexible specialisation, for example, caused the defeat of many firms with standardised production methods.

Does this mean that figure 13 (strategies classified in function of sectoral impact and a firm's perceived latitude) is useless? One of the goals of this thesis has been to illustrate the importance of corporate strategy in the emergence of an organisation of industrial production. Figure 13 has been included to demarcate the strategic options for embedded firms that are embedded in their environment. The extent to which the firm is embedded determines the possibility to adapt autonomously, i.e. a firm that has a weak bargaining position that cannot make use of latitude created by sectoral impact will not be able to determine how the production of the framework it belongs to will be restructured. Figure 13, thus, indicates the upper-limit of autonomy in bargaining strategies a firm can choose from. To understand the strategy process *'an sich'*, sectoral impact and a firm's bargaining power do not suffice.

VI.6 Restructuring of the meso-interplay

When an economy goes through a phase of transition, the *codes* and *conditions* of the existent governance structures -whether stable or not- change and require a response of the players that are affected by these changes. In this pen-ultimate paragraph, the continuous hopping between levels of analysis that has characterised this thesis so far, will be reduced to two: the micro and the meso-level. Reconsideration of the restructuring process at the micro-level in the sense of governing dependence relations that result from the efficient border, will provide the input for the conclusions to be drawn on how the interplay between SMEs and their surrounding players affects the adaptation of the former to a context in transition towards market openness.

Williamson's central problem of economic organisation, the ever changing environment, oblige firms to continuously change their governance structure, deciding which transactions to internalise and which not, in order to optimise their operations. The dynamic multi-level approach to governance that has been developed in this thesis interprets the TCE exchange conditions more broadly. Considering transactions to be conditioned by environmental particularities, strategic

[24] Complexity in economic organisation is mainly based on the number of organisations and the continuous changes, which are brought about by interaction.

considerations, cognitions and inherited routines, the establishment of the efficient border of reflects how an organisation **intends to restructure to the changes it perceives**. With the establishment of its efficient border, an organisation also defines what resources will need to be obtained from other players and what role it aspires in the emergent organisation of production.

Both the establishment of the efficient border and the re-emergence of an organisation of production have been characterised as **cyclic processes**. The interaction between SMEs and their surrounding players constitutes a repeated game in which **individual gains** represent the improvement of an individual organisation's bargaining position (i.e. access to resources that enable the organisation to fulfil its goals), while **collective gains** represent shared restructuring of the existing meso-constellation, increasing competitiveness without changing internal dependence relations.

The adaptation of SMEs to a context of market openness is conditioned more by resource-constraints and perception and processing of information than the adaptation of their larger counterparts. As a result, the **influence that is exerted by surrounding players through dependence relations** needs to be taken in account to understand their restructuring process. An individual firm's possibility to change the structure of its dependence relations is determined by its **latitude** as comprised in the meso-level framework, to which, in a context in transition, latitude derived from the impact on *conditions* and *codes* should be added. Due to the complex nature of the whole of dependence relations in the emerging governance of meso-constellations, firms are unable to predict the future, which makes it impossible to define courses for action to realise long-term goals. Instead, strategic behaviour consists largely of making short-term moves to improve the firm's bargaining position so that it is positioned better to realise long-term goals. The responses to the strategic questions, which constitute the archetypal dependence-reducing behaviour, that have been presented throughout this thesis illustrate how inter-player effects have affected the adaptation of Argentine SMEs.

The answer to the first question, *who* to involve in the constellation to be governed, is two-fold. SMEs that were performing well at the outset of the transition, generally have been able to widen the structure of their dependence relations through the inclusion of foreign players that enabled them to operate more efficiently. In doing so, they inserted themselves into the international scenario and reduced their dependence on the local arena. This behaviour applies particularly to the upstream of vertical dependence relations and acquired technology, as was deduced from the increased import of parts and equipment and the increase of payments for licenses to foreign entities. Also, initially successful SMEs had better access to capital and public support due to the importance assessment procedures assign to track records. Less successful SMEs continued the idiosyncrasy of their evolutionary path as their products could not compete in international markets, they lacked capital to modernise their production equipment or technological base and did not dispose of a track record that justified access to capital or public support. In short, the re-emergence of industrial production in Argentina is a process of selection in which strong players associate themselves with other strong players in order to respond to the competitive requirements of the context in transition.

The answer to the second question, *what* are the stakes, is based on the tension between individual and collective gains. The 'division of the pie' in Argentina's closed economy period approximated the characteristics of a zero-sum game, due to the limited size and growth of the market, a small number of alternative bargaining partners and relatively high transparency. Efforts to maximise individual gains by one firm were frustrated by negative feedback from the other organisations in the constellation to prevent reduction of their gains. This resulted in an inefficient but agreed-upon organisation of production. The direct consequences of the opening of the Argentine market, new entrants and a significant increase of import, reversed this situation. A

number of firms improved their efficiency, which allowed them to compete locally as well as in international markets. The organisation of production, on the contrary, literally became an arena in which firms with a strong bargaining position increased their individual gains, which often led to decreasing collective 'Argentine' gains. SMEs that changed their dependency relations -especially with suppliers- through internationalisation to maximise their individual gains, escaped from the feedback that would have inhibited them to do so in a closed economy.

The answer to the third question, *where* activities will take place, has much to do with the impact of the transition. Since the imperative of the market obliges adapting firms to search for the most efficient governance mode for their production, the possibility to acquire resources abroad that are more competitive than local resources will be taken advantage of. One of the consequences of the convertibility law was the overvaluation of the Argentine peso, which gave SMEs the possibility to acquire internationally competitive equipment, technology and supplies at a relatively low cost. As a result, many firms that operated upstream lost their clients and the development of local specialised supplier networks was replaced by an inward supply structure. With respect to downstream dependence relations, the new exporters and the best performers groups are widening their customers base, be it in niches, which indicates that they will be able to continue their organisation of production based on import of inputs, local production and national and international sales. The only dependence dimension that did not internationalise is finance. SMEs' limited access to capital is mainly the result of insufficient transparency, which is constituted by the inappropriate assessment procedures of banks and misrepresentation of information on behalf of SMEs. Consequently, mutual knowledge between financier and SME of who they are dealing with is very important to obtain correct information and capital respectively. Since geographical separation of financier and SME would reduce transparency even more, the answer to the *where*-question, as concerned to finance, is local.

The Argentine case study has shown how meso-level dynamics changed the composition of the group of players and the rules according to which these players operate. Although no stable governance structures have emerged yet, a distinction can be made between offensively and defensively behaving SMEs. Their bargaining strategies, however, are neither always offensive, neither always defensive. They vary through time and differ per bargaining partner. The hypothesis that successful adaptation results from the use of latitude derived from sectoral impact and the individual organisation's bargaining power to restructure to the requirements of a changing business environment, has been revised in various ways. Firstly, the Argentine transition could not be explained by analysing sectoral impact only. For better understanding of insertion of SMEs in international markets, the national and international levels of analysis should be analysed as well. Secondly, although firms that continued to perform above average were shown to have more latitude in every bargaining dimension, not every firm that was well positioned at the outset of the transition managed to adapt successfully. Apparently, strategic error, based on lack or misperception of information, should be included in the analysis.

VI.7 Notes for further research

The aim of this study, to integrate elements from various academic disciplines to come to a better understanding of how inter-player effects condition SMEs' adaptation, has been reached. However, as all constituent fields of study continue to develop, there should be no doubt that the subject of this thesis will re-appear in future research projects, that perhaps will be based upon different theoretic approaches. The study, as presented here, has a number of shortfalls that have been identified throughout the text. The two most fundamental -in my perception- are the neglect of the cognitive dimension and the incapability to clearly identify firms' strategies. To consider both, a significant reduction of the number of analysed firms would have been necessary, so that

cognitive characteristics and intended strategy could be identified through interviews. Here, I have chosen not to do so, firstly because of the heterogeneity *between* and *within* sectors of the Argentine economy that make the loss in representativity caused by any reduction too great and, secondly, because I do not consider myself qualified to classify entrepreneur/owners mindsets so that all organisational goals and structural particularities would be explained.

With concern to future research, the topic 'strategic restructuring processes' is as broad as the degree of complexity one is willing to accept. Since this thesis provides a powerful framework for understanding restructuring processes in a particular context, directions for future research could be the development of tools for strategic analysis or a shift of *locus* of analysis, e.g. from the perspective of a government in a setting of location-seeking investors or a TNC that needs to restructure its operations in different local arenas.

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Annexes

Annex A: Definitions for SMEs and SME production space

A.1 SMEs

Until now, no internationally agreed-upon definition of SMEs has been defined. The most common is the so-called Danish definition that is based on employment and states SMEs to have more than 5 and less than 100 employees. Although this definition is widely used, it does not distinguish sufficiently between SMEs that operate in capital or labour intensive sectors and have corresponding structural and performance characteristics. Actually, the Argentine definition of SMEs, as presented in Resolutions N° 401/89, 208/93 and 52/94 of the Ministry of Economy, is based on three characteristics: personnel employed, gross value of annual sales and the net value of the firm's assets. Furthermore, a distinction is made between industrial SMEs and SMEs in the service, transport or agricultural industries, based upon established maximum values. These values are represented in Table A.1.

Table A.1
MAXIMUM VALUES OF ARGENTINE SECTORAL DEFINITIONS OF SMEs

	Industry	Services and commerce	Transport	Agricultural
Personnel	300	100	300	-
Annual sales[(1)]	18	12	15	1
Assets[(1)]	10	2,5	-	3

Source: Resolutions N° 401/89, 208/93 and 52/94 of the Ministry of Economy.
Note:[1] In millions of dollars.

Although this definition is a step towards a generally accepted definition, it has its deficiencies. As for this thesis on industrial SMEs, I have chosen to reduce the personnel maximum to 100 in order to make the outcome of my research comparable with results of 'Danish' research efforts. In addition, I have chosen to maintain the annual sales maximum, in order to exclude firms from capital-intensive industries with large sales volumes but reduced personnel from the population analysed, but to reject the assets maximum since I think its goal is similar to that of the annual sales criterion. The definition of SMEs of researchers, whose work has been included in this thesis, does not always coincide with the definition I have chosen. Therefore, the chosen definition is included in the presentation of information whenever it differs from the above.

A.2 SME production space

The SME production space consists of those sectors in which SMEs are responsible for a significant share of total production. Table A.2 features a characterisation of sectors based on the participation of SMEs in sectors' total output.

Table A.2
CHARACTERISATION OF SECTORS

Designation of production space	SME share in total production in sector (%)	Characterisation
SME production space	> 70	SMEs 'dominate'
	50 - 70	SMEs 'predominate in a shared market'
	30 - 50	SMEs have a 'minority role in a shared market'
Large firm production space	< 30	Large firms 'dominate'

Source: Yoguel (forthcoming:183).

Annex B1: Principal economic indicators per sector

Table A - Page 1

SECTOR CHARACTERISTICS

		Size	Trade openness[1]			FDI[3]	Establishments		Employees		Vertical integration[4]	
Code	Description sector		1986	1994	var[2]		1986	1994	1986	1994	1986	1994
1511	Production, processing and conservation of meat	2	0.614	1.991	1.377	2	1 489	1 079	58 143	48 247	21.8	19.8
1512	Elaboration and conservation of fish	3	0.432	1.995	1.562	2	142	122	8 785	6 920	38.5	15.6
1513	Elaboration and conservation of fruit and vegetables	3	1.062	1.978	0.916	2	803	552	21 130	16 630	34.8	34.1
1514	Elaboration of vegetable oils	1	0.201	1.998	1.797	3	242	87	10 839	5 653	24.1	7.2
1520	Dairy products	2	0.867	1.985	1.118	2	1 892	738	24 095	21 736	32.4	22.5
1531	Grinded wheat	2	0.728	1.989	1.260	1	415	218	12 172	8 995	26.4	23.6
1532	Pastes and products derived from paste	1	0.395	1.995	1.601	2	343	14	3 186	1 116	42.0	19.6
1533	Elaboration of animal food	3	0.987	1.981	0.994	2	142	157	2 566	2 579	20.8	16.0
1541	Bakery products	4	1.748	1.870	0.122	1	13 586	12 640	55 087	73 367	41.8	40.3
1542	Elaboration of sugar	1	0.173	1.998	1.825	1	29	24	18 369	8 338	60.4	32.9
1543	Elaboration of cocoa	1	0.696	1.989	1.294	3	196	169	11 299	8 862	37.4	28.0
1544	Preparation of pasta, noodles and couscous	5	1.767	1.859	0.092	1	1 824	1 809	6 827	9 388	48.8	39.3
1549	Other food	2	1.115	1.975	0.860	2	690	520	10 270	11 953	39.1	29.0
1551	Spirits	1	0.589	1.992	1.402	3	91	20	3 293	1 183	42.9	24.7
1552	Elaboration of wine	3	1.114	1.975	0.861	1	1 443	700	9 632	14 623	36.3	26.3
1553	Elaboration of malted drinks	1	0.357	1.996	1.638	3	15	18	3 987	3 925	46.9	47.4
1554	Water, soft drinks and juices	2	1.529	1.937	0.408	3	5 048	2 588	22 167	26 269	47.9	32.9
1600	Tobacco products	1	0.272	1.997	1.724	3	127	25	6 540	5 877	36.0	37.1
1711	Fabrication of yarn and textiles	3	0.971	1.981	1.010	1	1 255	794	47 613	28 321	41.2	33.6
1712	Finished textiles	3	1.283	1.965	0.682	1	199	385	9 191	7 798	51.4	36.2
1721	Fabrication ofready-to-wear articles	5	1.587	1.926	0.339	1	511	609	6 456	5 415	31.3	34.1
1722	Fabrication of carpets and rugs	3	1.137	1.974	0.836	1	49	47	1 655	956	32.9	26.8
1723	Fabrication of cordage, rope and twine	4	1.317	1.962	0.645	1	53	25	740	530	50.1	40.9
1729	Other textiles	4	1.414	1.953	0.539	1	412	226	5 469	4 131	42.3	44.1
1730	Fabrication of knitted fabrics	4	1.439	1.950	0.511	1	970	769	13 904	11 339	40.6	37.8
1810	Fabrication of wearing apparel	5	1.628	1.916	0.288	1	5 180	5 125	52 330	42 423	33.2	36.3

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SECTOR CHARACTERISTICS

		Size	Trade openness[1]			FDI[3]	Establishments		Employees		Vertical integration[4]	
Code	Description sector		1986	1994	var[2]		1986	1994	1986	1994	1986	1994
1820	Elaboration of fur	5	1.731	1.879	0.148	1	243	100	1 091	520	40.2	33.5
1911	Tanning and dressing of leather	3	0.821	1.986	1.165	1	519	339	13 505	11 972	29.0	24.6
1912	Fabrication of leather bags and similar	5	1.712	1.888	0.176	1	686	496	3 716	2 795	39.8	33.4
1920	Fabrication of footwear	4	1.335	1.961	0.625	1	2 429	1 388	30 685	26 776	41.9	38.8
2010	Sanding and steeling of wood	5	1.698	1.894	0.196	1	2 602	1 321	15 198	9 761	44.7	41.5
2021	Fabrication of wooden surfaces	2	1.061	1.978	0.917	2	105	78	3 689	2 153	48.0	31.2
2022	Fabrication of wooden parts for construction and buildings	5	1.822	1.814	-0.008	1	4 934	1 612	5 528	6 257	45.5	39.8
2023	Fabrication of wooden sheds	5	1.639	1.913	0.274	1	620	359	3 051	3 101	53.0	39.2
2029	Fabrication of other products of wood and cork	5	1.873	1.742	-0.131	1	1 454	1 935	4 701	5 492	48.7	42.0
2101	Fabrication of wood-paste, paper and cardboard	1	0.339	1.996	1.657	3	133	86	14 304	6 873	36.2	16.3
2102	Paper and packaging	3	1.153	1.973	0.820	2	525	482	11 428	10 136	34.0	28.6
2109	Other paper and paperboard products	3	1.016	1.980	0.964	2	864	314	6 480	8 291	42.4	27.2
2211	Publishing of books, leaflets, partitures and other publications	4	1.663	1.906	0.242	1	354	287	1 936	2 479	51.4	42.7
2212	Publishing of newspapers, magazines and other periodicals	1	1.194	1.971	0.776	1	199	456	13 376	13 264	48.0	43.1
2213	Production and recording	1	1.492	1.943	0.451	2	4	18	117	290	32.3	47.4
2219	Other publishing and editing activities	5	1.712	1.888	0.175	1	105	168	572	1 235	51.4	43.8
2221	Printing	5	1.798	1.836	0.038	1	2 711	4 869	14 838	24 152	51.4	44.3
2222	Services related to printing	4	1.728	1.880	0.152	1	316	485	1 606	3 303	52.3	43.3
2230	Reproduction of records	3	1.603	1.922	0.320	1	4	24	117	280	32.3	47.1
2310	Fabrication of products from coal ovens	3	1.502	1.941	0.439	1	20	24	401	254	22.2	31.9
2320	Production of oil refinery products	1	0.276	1.997	1.720	3	49	71	8 380	6 896	40.3	15.6
2411	Production of base chemicals	3	1.034	1.979	0.945	3	380	290	12 939	8 244	48.7	30.4
2412	Production of fertilisers	1	0.514	1.993	1.479	3	14	16	342	1 265	33.3	27.3
2413	Production of basic plastics	2	0.748	1.988	1.240	3	212	192	5 737	4 743	37.3	14.8
2421	Production of pesticides	1	0.784	1.987	1.203	3	52	67	1 282	1 466	33.3	14.1
2422	Production of paints	3	1.261	1.966	0.705	2	356	290	7 039	5 584	36.2	32.9
2423	Production of medicine for human use	1	0.906	1.984	1.077	3	485	458	26 265	19 687	48.5	35.6

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SECTOR CHARACTERISTICS

		Size	Trade openness (1)			FDI(3)	Establishments		Employees		Vertical Integration (4)	
Code	**Description**		**1986**	**1994**	**var (2)**		**1986**	**1994**	**1986**	**1994**	**1986**	**1994**
2424	Fabrication of detergents and soaps	1	1.023	1.979	0.956	3	522	567	14 828	13 586	37.8	25.1
2429	Other chemical products	3	1.233	1.968	0.736	3	528	427	10 089	7 852	36.8	29.6
2430	Fabrication of manufactured fibres	1	0.646	1.990	1.344	3	42	44	4 174	2 741	33.4	29.8
2511	Fabrication of rubber tyres	1	0.844	1.986	1.142	3	200	123	7 781	4 976	47.3	29.5
2519	Fabrication of other rubber products	5	1.518	1.939	0.421	1	579	428	8 532	6 099	50.7	44.9
2520	Fabrication of plastic products	4	1.507	1.941	0.433	1	2 742	2 679	30 322	32 826	35.7	37.5
2610	Production of glass and products made of glass	2	1.122	1.975	0.853	2	300	252	11 765	8 739	50.6	44.3
2691	Fabrication of unfinished ceramics	2	1.587	1.926	0.340	1	440	223	9 796	3 524	58.7	60.6
2692	Fabrication of finished ceramics	5	1.353	1.959	0.606	1	84	63	1 770	884	50.8	29.4
2693	Fabrication of products of loam	3	1.656	1.908	0.252	3	5 711	1 092	9 208	11 049	61.6	48.7
2694	Production of cement and plaster	1	0.795	1.987	1.192	3	145	139	9 094	6 347	51.0	30.1
2695	Fabrication of products made of concrete, cement and plaster	5	1.695	1.895	0.199	1	3 147	1 490	10 383	9 701	51.4	36.2
2696	Cutting and shaping of stones	5	1.750	1.869	0.119	1	619	654	2 137	4 271	44.5	45.7
2699	Fabrication of other non-ferrous mineral products	5	1.430	1.951	0.521	1	473	183	7 691	2 599	43.1	35.6
2710	Basic steel and iron industries	1	0.228	1.997	1.769	3	162	119	24 889	19 842	36.3	21.5
2720	Fabrication of primary products, based precious metals	1	0.372	1.995	1.623	3	93	45	2 855	4 287	30.3	21.8
2731	Melting and casting of metal and steel	4	1.372	1.957	0.585	1	81	409	12 444	7 310	36.3	39.1
2732	Melting and casting of non-ferrous metals	4	1.495	1.942	0.447	1	160	423	4 894	4 472	30.3	31.3
2811	Fabrication of metal products for structural use	5	1.809	1.827	0.018	1	5 015	4 674	17 100	17 775	43.6	36.0
2812	Production of safes and deposits	5	1.384	1.956	0.573	2	249	250	2 982	4 006	39.8	36.0
2813	Fabrication of steam generators	3	1.600	1.923	0.324	1	135	20	3 028	285	60.8	56.9
2891	Metalurgic engineering	4	1.516	1.939	0.424	1	426	365	6 409	4 578	38.9	39.3
2893	Fabrication of cutlery	5	1.728	1.880	0.152	2	843	979	10 115	7 986	53.0	51.9
2899	Fabrication of other metal products	4	1.748	1.870	0.122	1	7 992	5 607	45 338	30 761	46.7	38.1
2911	Production of engines and turbines, except for airplanes	1	1.356	1.959	0.602	1	83	99	4 848	1 960	40.9	41.7
2912	Fabrication of pumps, compressors and valves	4	1.522	1.938	0.417	1	165	487	2 474	6 900	54.3	45.1
2913	Fabrication of steam generators	4	1.468	1.946	0.478	2	170	114	2 689	1 821	54.6	44.1

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SECTOR CHARACTERISTICS

		Size	Trade openness (1)			FDI (3)	Establishment		Employees		Vertical Integration (4)	
Code	Description sector		1986	1994	var (2)		1986	1994	1986	1994	1986	1994
2913	Fabrication of steam generators	4	1.468	1.946	0.478	2	170	114	2 689	1 821	54.6	44.1
2914	Fabrication of ovens, burners and furnaces	5	1.642	1.912	0.271	1	12	68	208	711	50.4	47.9
2915	Fabrication of elevators	5	1.733	1.878	0.145	1	104	562	1 463	3 791	48.1	43.9
2919	Fabrication of other general purpose machinery	5	1.646	1.911	0.265	1	200	1 271	2 877	9 871	51.8	36.2
2921	Fabrication of agricultural machinery	4	1.768	1.859	0.091	2	1 795	2 382	14 012	11 433	50.6	36.5
2922	Fabrication of tool machinery	5	1.728	1.881	0.153	1	216	454	2 846	3 191	57.5	44.6
2923	Fabrication of metalurgic machinery	5	1.567	1.930	0.363	1	15	72	202	773	57.7	38.8
2924	Fabrication of machinery for mines and other exploitation	5	1.705	1.891	0.186	1	314	254	4 223	1 876	53.9	42.7
2925	Fabrication of machinery for the elaboration of food	4	1.432	1.951	0.518	1	220	310	2 964	4 780	53.9	38.9
2926	Fabrication of machinery for production of textiles	5	1.665	1.905	0.240	1	30	136	823	1 153	42.0	42.1
2927	Fabrications of arms and ammunition	2	0.581	1.992	1.411	1	29	26	3 063	1 202	36.8	18.9
2929	Fabrication of special purpose machinery	5	1.731	1.879	0.149	1	735	324	9 921	2 346	53.9	46.5
2930	Fabrication of devices for domestic use	2	1.058	1.978	0.919	1	655	391	17 002	12 411	41.9	35.7
3000	Fabrication of equipment for offices, accountability and informatics	3	1.538	1.935	0.397	3	61	120	1 537	1 079	46.7	30.0
3110	Fabrication of electric motors, transformators and generators	5	1.756	1.866	0.109	1	530	1 058	5 619	6 205	52.8	42.3
3120	Fabrication of distribution and control devices	5	1.298	1.964	0.665	1	631	201	5 645	3 618	54.9	33.3
3130	Production of cables and wires	3	1.028	1.979	0.952	3	145	156	4 750	4 492	34.2	30.4
3140	Fabrication of accumulators and batteries	3	1.774	1.855	0.081	2	884	752	3 061	3 410	45.2	35.6
3150	Fabrication of light bulbs and lighting equipment	4	1.605	1.922	0.317	3	75	380	2 736	3 226	47.4	34.5
3190	Fabrication of other electric equipment	3	1.470	1.946	0.476	2	245	541	3 067	7 446	55.3	38.2
3210	Production of electronic tubes and valves	5	1.719	1.885	0.166	1	42	200	600	1 470	46.7	44.9
3220	Fabric. of radio and television transmittors and devices for telephony	1	1.083	1.977	0.893	3	111	194	2 783	4 293	51.4	26.2
3230	Fabrication of radio and television receivers	1	0.731	1.989	1.257	1	250	124	8 279	4 878	32.3	22.7
3311	Fabrication of medical equipment	5	1.801	1.834	0.032	1	107	788	1 325	3 777	64.8	43.5
3312	Fabrication of measuring, controling and navigation equipment	3	1.494	1.943	0.448	1	195	213	2 409	2 691	64.8	37.3
3313	Fabrication of industrial control equipment	4	1.763	1.862	0.099	1	121	57	1 500	407	64.8	53.1
3320	Fabrication of optic devices and equipment for photography	5	1.632	1.915	0.283	1	79	119	1 196	1 266	61.6	47.2

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SECTOR CHARACTERISTICS

		Size	Trade openness (1)			FDI (3)	Establishments		Employees		Vertical integration (4)	
Code	Description sector		1986	1994	var (2)		1986	1994	1986	1994	1986	1994
3320	Fabrication of optic devices and equipment for fotography	5	1.632	1.915	0.283	1	79	119	1 196	1 266	61.6	47.2
3330	Fabrication of clocks and watches	5	1.508	1.941	0.433	1	23	19	298	275	43.4	44.3
3410	Fabrication of motor vehicles	1	0.032	2.000	1.967	3	11	18	22 075	22 875	33.8	21.0
3420	Coachbuilding	3	1.380	1.956	0.576	1	493	439	6 014	6 741	38.9	34.2
3430	Fabrication of vehicle parts and accessories	3	1.334	1.961	0.627	2	2 694	2 076	47 473	37 985	47.1	36.6
3511	Shipbuilding and maintenance	5	1.584	1.927	0.342	1	261	164	6 499	1 765	73.9	41.0
3512	Building and maintenance of ships for recreational use	5	1.852	1.777	-0.075	1	65	137	1 625	445	73.9	40.7
3520	Fabrication of locomotives	4	0.733	1.989	1.256	1	45	19	12 395	1 068	52.3	32.5
3530	Fabrication of airplanes	5	1.764	1.861	0.097	1	46	44	3 037	306	51.6	51.9
3591	Fabrication of motorbikes	1	0.819	1.986	1.168	1	245	64	2 885	2 101	27.5	22.7
3592	Fabrication of bikes and wheelchairs	5	1.588	1.926	0.338	1	88	219	1 044	1 933	27.5	34.0
3599	Fabrication of other transport equipment	5	1.680	1.900	0.221	1	44	61	172	395	77.6	33.9
3610	Production of furniture	5	1.769	1.858	0.089	1	7 059	4 872	23 544	24 034	42.7	37.7
3691	Fabrication of jewelry	3	1.718	1.885	0.167	1	152	212	783	999	62.6	28.7
3692	Fabrication of musical instruments	5	1.806	1.830	0.025	1	55	35	245	155	55.0	41.1
3693	Fabrication of sport equipment	5	1.764	1.861	0.097	1	132	123	965	804	48.1	48.8
3694	Fabrication of toys and games	5	1.718	1.885	0.167	1	720	195	3 646	1 675	46.3	52.3
3699	Other manufacturing industries	4	1.793	1.841	0.047	2	815	923	4 112	4 740	65.1	44.5

Source: Kosacoff (1998b).

Note: 1986 is based on amounts in Australes, while 1994 is based on post-convertibillity pesos. Because of the different effects the high inflation had on different sectors, comparison is possible but should be interpreted as an approximation. 1) Trade openness has been defined in paragraph II.4.3 as 1- [(X-M)/(X+M)] ; 2) Since all sector were net-importers in 1994, the impact can be expressed as the difference as compared to 1986. The change from net-exporter to net-importer is represented by a higher value than changes of sectors that continue to be net-importers<;3) Foreign direct investment has been categorised; I means little FDI while 3 stands for much FDI; 4) Vertical integration is defined as Added Value / Gross Total Revenues.

Table B – Page 1

FIRM CHARACTERISTICS

		Size	Trade openness[1]			FDI[3]	Average size[4]		Average scale[5]		Productivity	
Code	Description sector		1986	1994	var[2]		1986	1994	1986	1994	1986	1994
1511	Production, processing and conservation of meat	2	0.614	1.991	1.377	2	1 971 378	4 270 055	46.1	44.7	9 324	18 930
1512	Elaboration and conservation of fish	3	0.432	1.995	1.562	2	1 876 358	3 799 538	72.6	56.7	9 968	10 473
1513	Elaboration and conservation of fruit and vegetables	3	1.062	1.978	0.916	2	649 039	2 110 163	27.9	30.1	8 098	23 882
1514	Elaboration of vegetable oils	1	0.201	1.998	1.797	3	6 308 881	33 439 078	42.7	65.0	35 610	37 310
1520	Dairy products	2	0.867	1.985	1.118	2	813 707	3 750 437	13.0	29.5	20 232	28 684
1531	Grinded wheat	2	0.728	1.989	1.260	1	2 034 830	5 911 988	32.6	41.3	16 468	33 858
1532	Pastes and products derived from paste	1	0.395	1.995	1.601	2	535 784	12 990 592	11.3	79.7	19 959	31 929
1533	Elaboration of animal food	3	0.987	1.981	0.994	2	2 181 454	2 623 132	17.8	16.4	25 448	25 556
1541	Bakery products	4	1.748	1.870	0.122	1	152 053	179 504	5.9	5.8	10 801	12 472
1542	Elaboration of sugar	1	0.173	1.998	1.825	1	20 338 312	18 449 002	800.7	347.4	15 334	17 496
1543	Elaboration of cocoa	1	0.696	1.989	1.294	3	2 281 800	4 624 598	53.1	52.4	16 086	24 661
1544	Preparation of pasta, noodles and couscous	5	1.767	1.859	0.092	1	179 807	236 598	5.8	5.2	15 111	17 932
1549	Other food	2	1.115	1.975	0.860	2	953 064	2 616 363	16.9	23.0	22 022	32 957
1551	Spirits	1	0.589	1.992	1.402	3	3 164 289	14 056 194	38.0	59.2	35 739	58 706
1552	Elaboration of wine	3	1.114	1.975	0.861	1	312 731	2 292 341	11.9	20.9	9 520	28 806
1553	Elaboration of malted drinks	1	0.357	1.996	1.638	3	10 223 943	30 272 766	245.3	218.1	19 532	65 835
1554	Water, soft drinks and juices	2	1.529	1.937	0.408	3	171 732	802 338	5.8	10.2	14 216	26 045
1600	Tobacco products	1	0.272	1.997	1.724	3	2 576 735	36 662 108	50.8	235.1	18 250	57 811
1711	Fabrication of yarn and textiles	3	0.971	1.981	1.010	1	1 313 348	2 354 281	40.5	35.7	13 362	22 209
1712	Finished textiles	3	1.283	1.965	0.682	1	2 171 501	1 200 437	50.9	20.3	21 909	21 477
1721	Fabrication ofready-to-wear articles	5	1.587	1.926	0.339	1	434 879	507 117	14.9	8.9	9 142	19 470
1722	Fabrication of carpets and rugs	3	1.137	1.974	0.836	1	1 400 342	1 397 506	31.4	20.3	14 637	18 431
1723	Fabrication of cordage, rope and twine	4	1.317	1.962	0.645	1	360 160	887 761	13.0	21.2	13 848	17 131
1729	Other textiles	4	1.414	1.953	0.539	1	588 301	1 218 813	16.3	18.3	15 273	29 399
1730	Fabrication of knitted fabrics	4	1.439	1.950	0.511	1	404 514	831 496	16.2	14.7	10 136	21 317
1810	Fabrication of wearing apparel	5	1.628	1.916	0.288	1	306 070	387 092	12.1	8.3	8 406	16 962

Table B – Page 2

FIRM CHARACTERISTICS

		Size	Trade openness (1)			FDI (3)	Average size (4)		Average scale (5)		Productivity	
Code	Description sector		1986	1994	var (2)		1986	1994	1986	1994	1986	1994
1820	Elaboration of fur	5	1.731	1.879	0.148	1	61 202	363 585	7.0	5.2	3 541	23 396
1911	Tanning and dressing of leather	3	0.821	1.986	1.165	1	1 013 834	2 928 049	28.0	35.3	10 491	20 399
1912	Fabrication of leather bags and similar	5	1.712	1.888	0.176	1	102 732	260 589	7.3	5.6	5 589	15 460
1920	Fabrication of footwear	4	1.335	1.961	0.625	1	284 362	753 642	13.8	19.3	8 664	15 142
2010	Sanding and steeling of wood	5	1.698	1.894	0.196	1	111 799	248 774	8.1	7.4	6 199	13 974
2021	Fabrication of wooden surfaces	2	1.061	1.978	0.917	2	1 001 651	1 569 038	41.6	27.6	11 558	17 725
2022	Fabrication of wooden parts for construction and buildings	5	1.822	1.814	-0.008	1	39 143	127 792	2.7	3.9	6 488	13 107
2023	Fabrication of wooden sheds	5	1.639	1.913	0.274	1	74 974	224 392	7.1	8.6	5 599	10 191
2029	Fabrication of other products of wood and cork	5	1.873	1.742	-0.131	1	82 535	86 677	5.2	2.8	7 752	12 813
2101	Fabrication of wood-paste, paper and cardboard	1	0.339	1.996	1.657	3	6 272 622	7 307 688	112.5	79.9	20 157	14 921
2102	Paper and packaging	3	1.153	1.973	0.820	2	987 098	1 772 611	23.4	21.0	14 342	24 121
2109	Other paper and paperboard products	3	1.016	1.980	0.964	2	306 511	2 671 891	9.6	26.4	13 522	27 566
2211	Publishing of books, leaflets, partitures and other publications	4	1.663	1.906	0.242	1	204 739	857 533	7.4	8.6	14 157	42 369
2212	Publishing of newspapers, magazines and other periodicals	1	1.194	1.971	0.776	1	2 692 275	3 545 734	64.1	29.1	20 161	52 571
2213	Production and recording	1	1.492	1.943	0.451	2	2 743 458	5 071 196	30.0	16.1	29 578	149 045
2219	Other publishing and editing activities	5	1.712	1.888	0.175	1	204 739	556 533	7.4	7.4	14 157	33 147
2221	Printing	5	1.798	1.836	0.038	1	204 739	257 990	7.4	5.0	14 157	23 022
2222	Services related to printing	4	1.728	1.880	0.152	1	155 372	378 232	7.1	6.8	11 472	24 046
2230	Reproduction of records	3	1.603	1.922	0.320	1	2 743 458	1 816 169	30.0	11.7	29 578	73 252
2310	Fabrication of products from coal ovens	3	1.502	1.941	0.439	1	1 932 793	2 199 135	19.3	10.6	22 231	66 373
2320	Production of oil refinery products	1	0.276	1.997	1.720	3	90 372 170	80 006 412	179.4	97.1	203 190	128 292
2411	Production of base chemicals	3	1.034	1.979	0.945	3	2 786 132	3 955 323	35.9	28.4	37 824	42 355
2412	Production of fertilisers	1	0.514	1.993	1.479	3	2 397 832	3 526 848	21.5	79.1	37 228	12 189
2413	Production of basic plastics	2	0.748	1.988	1.240	3	3 134 045	4 332 850	27.2	24.7	43 070	25 890
2421	Production of pesticides	1	0.784	1.987	1.203	3	2 397 832	5 839 514	21.5	21.9	37 228	37 635
2422	Production of paints	3	1.261	1.966	0.705	2	1 117 261	2 403 289	22.2	19.3	18 254	41 037
2423	Production of medicine for human use	1	0.906	1.984	1.077	3	3 385 503	7 081 584	49.3	43.0	33 340	58 669
2424	Fabrication of detergents and soaps	1	1.023	1.979	0.956	3	1 357 350	3 238 500	28.1	24.0	18 221	33 907

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FIRM CHARACTERISTICS

		Size	Trade openness [1]			FDI [3]	Average size [4]		Average scale [5]		Productivity	
Code	**Description sector**		**1986**	**1994**	**var [2]**		**1986**	**1994**	**1986**	**1994**	**1986**	**1994**
2429	Other chemical products	3	1.233	1.968	0.736	3	1 013 680	2 235 231	20,4	18,4	18 331	35 922
2430	Fabrication of manufactured fibres	1	0.646	1.990	1.344	3	6 366 069	6 004 498	131,8	62,3	16 148	28 680
2511	Fabrication of rubber tyres	1	0.844	1.986	1.142	3	1 774 013	2 806 632	42,9	40,5	19 593	20 473
2519	Fabrication of other rubber products	5	1.518	1.939	0.421	1	413 442	646 262	16,6	14,3	12 646	20 369
2520	Fabrication of plastic products	4	1.507	1.941	0.433	1	416 183	873 589	12,1	12,3	12 281	26 717
2610	Production of glass and products made of glass	2	1.122	1.975	0.853	2	1 170 672	2 306 939	41,5	34,7	14 280	29 475
2691	Fabrication of unfinished ceramics	2	1.587	1.926	0.340	1	462 192	666 000	26,4	15,8	10 261	25 557
2692	Fabrication of finished ceramics	5	1.353	1.959	0.606	1	746 927	818 878	33,7	14,0	11 264	17 133
2693	Fabrication of products of loam	3	1.656	1.908	0.252	3	28 694	394 423	3,8	10,1	4 663	18 979
2694	Production of cement and plaster	1	0.795	1.987	1.192	3	2 698 934	4 618 861	75,8	45,7	18 163	30 479
2695	Fabrication of products made of concrete, cement and plaster	5	1.695	1.895	0.199	1	97 155	292 256	5,5	6,5	9 122	16 261
2696	Cutting and shaping of stones	5	1.750	1.869	0.119	1	107 924	297 412	5,6	6,5	8 576	20 812
2699	Fabrication of other non-ferrous mineral products	5	1.430	1.951	0.521	1	461 463	1 114 659	18,2	14,2	10 891	27 962
2710	Basic steel and iron industries	1	0.228	1.997	1.769	3	6 649 265	21 696 591	153,1	166,7	15 772	27 912
2720	Fabrication of primary products, based precious metals	1	0.372	1.995	1.623	3	2 702 882	12 699 467	31,1	95,3	26 404	29 046
2731	Melting and casting of metal and steel	4	1.372	1.957	0.585	1	6 649 265	1 018 737	153,1	17,9	15 772	22 266
2732	Melting and casting of non-ferrous metals	4	1.495	1.942	0.447	1	2 702 882	833 516	31,1	10,6	26 404	24 704
2811	Fabrication of metal products for structural use	5	1.809	1.827	0.018	1	118 629	148 388	5,3	3,8	9 771	14 039
2812	Production of safes and deposits	5	1.384	1.956	0.573	2	355 161	764 971	16,0	16,0	8 800	17 168
2813	Fabrication of steam generators	3	1.600	1.923	0.324	1	664 299	917 062	26,5	14,3	15 218	36 641
2891	Metalurgic engineering	4	1.516	1.939	0.424	1	691 711	747 937	16,8	12,5	16 065	23 408
2893	Fabrication of cutlery	5	1.728	1.880	0.152	2	309 855	410 817	15,6	8,2	10 494	26 153
2899	Fabrication of other metal products	4	1.748	1.870	0.122	1	229 628	298 429	7,7	5,5	13 950	20 713
2911	Production of engines and turbines, except for airplanes	1	1.356	1.959	0.602	1	2 545 967	1 569 299	51,6	19,8	20 214	33 076
2912	Fabrication of pumps, compressors and valves	4	1.522	1.938	0.417	1	433 455	977 648	17,6	14,2	13 346	31 097
2913	Fabrication of steam generators	4	1.468	1.946	0.478	2	425 152	855 463	18,8	16,0	12 325	23 621
2914	Fabrication of ovens, burners and furnaces	5	1.642	1.912	0.271	1	539 299	595 459	19,7	10,5	13 821	27 276

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FIRM CHARACTERISTICS

		Size	Trade openness [1]			FDI [3]	Average size [4]		Average scale [5]		Productivity	
Code	Description sector		1986	1994	var [2]		1986	1994	1986	1994	1986	1994
2915	Fabrication of elevators	5	1.733	1.878	0.145	1	316 242	369 916	18.1	6.7	8 389	24 047
2919	Fabrication of other general purpose machinery	5	1.646	1.911	0.265	1	384 874	508 194	17.4	7.8	11 489	23 656
2921	Fabrication of agricultural machinery	4	1.768	1.859	0.091	2	283 252	252 988	11.3	4.8	12 734	19 241
2922	Fabrication of tool machinery	5	1.728	1.881	0.153	1	781 986	363 105	14.9	7.0	30 264	23 044
2923	Fabrication of metalurgic machinery	5	1.567	1.930	0.363	1	797 362	407 298	14.6	10.7	31 591	14 730
2924	Fabrication of machinery for mines and other exploitation	5	1.705	1.891	0.186	1	447 392	444 506	15.7	7.4	15 408	25 670
2925	Fabrication of machinery for the elaboration of food	4	1.432	1.951	0.518	1	447 392	811 073	15.7	15.4	15 408	20 471
2926	Fabrication of machinery for production of textiles	5	1.665	1.905	0.240	1	560 257	347 839	32.3	8.5	7 277	17 282
2927	Fabrications of arms and ammunition	2	0.581	1.992	1.411	1	1 782 159	1 183 168	106.0	46.2	6 185	4 848
2929	Fabrication of special purpose machinery	5	1.731	1.879	0.149	1	446 965	396 496	15.7	7.2	15 337	25 477
2930	Fabrication of devices for domestic use	2	1.058	1.978	0.919	1	1 083 979	3 307 519	30.4	31.7	14 916	37 179
3000	Fabrication of equipment for offices, accountability and informatics	3	1.538	1.935	0.397	3	2 603 525	1 800 277	23.2	9.0	52 494	60 012
3110	Fabrication of electric motors, transformators and generators	5	1.756	1.866	0.109	1	306 221	296 708	14.1	5.9	11 431	21 383
3120	Fabrication of distribution and control devices	5	1.298	1.964	0.665	1	331 456	1 058 706	11.8	18.0	15 471	19 585
3130	Production of cables and wires	3	1.028	1.979	0.952	3	1 567 404	2 985 865	39.0	28.8	13 729	31 551
3140	Fabrication of accumulators and batteries	3	1.774	1.855	0.081	2	144 639	271 490	5.7	4.5	11 425	21 294
3150	Fabrication of light bulbs and lighting equipment	4	1.605	1.922	0.317	3	1 656 904	593 607	37.4	8.5	20 981	24 137
3190	Fabrication of other electric equipment	3	1.470	1.946	0.476	2	465 566	864 012	15.9	13.8	16 162	23 979
3210	Production of electronic tubes and valves	5	1.719	1.885	0.166	1	677 115	417 888	17.2	7.4	18 326	25 547
3220	Fabrication of radio and television transmittors and devices for telephony	1	1.083	1.977	0.893	3	1 015 316	3 641 897	29.1	22.1	17 931	43 045
3230	Fabrication of radio and television receivers	1	0.731	1.989	1.257	1	2 743 458	7 638 675	30.0	39.3	29 578	44 023
3311	Fabrication of medical equipment	5	1.801	1.834	0.032	1	447 075	230 554	14.2	4.8	20 439	20 913
3312	Fabrication of measuring, controling and navigation equipment	3	1.494	1.943	0.448	1	447 075	752 942	14.2	12.6	20 439	22 255
3313	Fabrication of industrial control equipment	4	1.763	1.862	0.099	1	447 075	697 208	14.2	7.1	20 439	51 850
3320	Fabrication of optic devices and equipment for fotography	5	1.632	1.915	0.283	1	313 650	499 676	16.1	10.6	12 035	22 171
3330	Fabrication of clocks and watches	5	1.508	1.941	0.433	1	427 092	1 655 421	14.7	14.5	12 621	50 719
3410	Fabrication of motor vehicles	1	0.032	2.000	1.967	3	187 730 842	298 599 128	2051.1	1270.8	30 955	49 278

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FIRM CHARACTERISTICS

		Size	Trade openness [1]			FDI [3]	Average size [4]		Average scale [5]		Productivity	
Code	**Description sector**		**1986**	**1994**	**var [2]**		**1986**	**1994**	**1986**	**1994**	**1986**	**1994**
3420	Coachbuilding	3	1.380	1.956	0.576	1	320 244	1 074 316	14.9	15.4	8 369	23 915
3430	Fabrication of vehicle parts and accessories	3	1.334	1.961	0.627	2	465 533	1 192 229	21.1	18.3	10 372	23 867
3511	Shipbuilding and maintenance	5	1.584	1.927	0.342	1	543 858	706 016	32.9	10.8	12 203	26 902
3512	Building and maintenance of ships for recreational use	5	1.852	1.777	-0.075	1	543 858	127 972	32.9	3.2	12 203	16 040
3520	Fabrication of locomotives	4	0.733	1.989	1.256	1	4 606 042	1 431 107	286.6	56.2	8 407	8 276
3530	Fabrication of airplanes	5	1.764	1.861	0.097	1	1 071 396	314 913	73.0	7.0	7 569	23 512
3591	Fabrication of motorbikes	1	0.819	1.986	1.168	1	665 799	4 556 330	11.0	32.8	16 602	31 571
3592	Fabrication of bikes and wheelchairs	5	1.588	1.926	0.338	1	665 799	492 314	11.0	8.8	16 602	18 949
3599	Fabrication of other transport equipment	5	1.680	1.900	0.221	1	197 645	311 044	6.0	6.5	25 367	16 300
3610	Production of furniture	5	1.769	1.858	0.089	1	92 195	189 693	4.9	4.9	7 989	14 509
3691	Fabrication of jewelry	3	1.718	1.885	0.167	1	82 020	336 322	6.0	4.7	8 554	20 478
3692	Fabrication of musical instruments	5	1.806	1.830	0.025	1	82 495	134 039	6.9	4.4	6 537	12 443
3693	Fabrication of sport equipment	5	1.764	1.861	0.097	1	219 172	271 045	7.9	6.5	13 334	20 233
3694	Fabrication of toys and games	5	1.718	1.885	0.167	1	180 159	418 093	6.7	8.6	12 540	25 456
3699	Other manufacturing industries	4	1.793	1.841	0.047	2	465 236	267 383	6.4	5.1	47 192	23 167

Source: Kosacoff (1998b).

Note: 1986 is based on amounts in Australes, while 1994 is based on post-convertibillity pesos. Because of the different effects the high inflation had on different sectors, comparison is possible but should be interpreted as an approximation.[1)] Trade openness has been defined in paragraph II.4.3 as 1- [(X-M)/(X+M)].[2)] Since all sector were net-importers in 1994, the impact can be expressed as the difference as compared to 1986. The change from net-exporter to net-importer is represented by a higher value than changes of sectors that continue to be net-importers. [3)] Foreign direct investment has been categorised; I means little FDI while 3 stands for much FDI.[4)] Average size is defined as Gross Total Revenues / # establishments.[5)] Average scale is defined as Gross Total Revenues / # employees **.**

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INTERNATIONAL TRADE

		Size	Trade openness[1]			FDI[3]	Export/vbp (%)		Import/vbp (%)	
Code	Description sector		1986	1994	var[2]		1986	1994	1986	1994
1511	Production, processing and conservation of meat	2	0.614	1.991	1.377	2	14.0	17.2	0.6	3.3
1512	Elaboration and conservation of fish	3	0.432	1.995	1.562	2	53.4	152.5	3.8	9.6
1513	Elaboration and conservation of fruit and vegetables	3	1.062	1.978	0.916	2	13.8	25.4	3.2	11.8
1514	Elaboration of vegetable oils	1	0.201	1.998	1.797	3	76.2	84.4	0.2	0.5
1520	Dairy products	2	0.867	1.985	1.118	2	1.3	2.7	0.6	2.4
1531	Grinded wheat	2	0.728	1.989	1.260	1	8.6	5.8	0.0	0.8
1532	Pastes and products derived from paste	1	0.395	1.995	1.601	2	3.1	8.5	2.8	6.4
1533	Elaboration of animal food	3	0.987	1.981	0.994	2	0.2	0.6	0.8	2.9
1541	Bakery products	4	1.748	1.870	0.122	1	0.1	0.6	0.0	0.8
1542	Elaboration of sugar	1	0.173	1.998	1.825	1	3.9	4.5	0.0	0.4
1543	Elaboration of cocoa	1	0.696	1.989	1.294	3	1.4	3.3	7.7	12.5
1544	Preparation of pasta, noodles and couscous	5	1.767	1.859	0.092	1	0.0	2.2	0.0	1.3
1549	Other food	2	1.115	1.975	0.860	2	3.8	11.1	2.2	5.0
1551	Spirits	1	0.589	1.992	1.402	3	3.0	7.9	1.1	6.3
1552	Elaboration of wine	3	1.114	1.975	0.861	1	1.3	2.4	0.0	1.0
1553	Elaboration of malted drinks	1	0.357	1.996	1.638	3	0.4	3.4	1.6	5.4
1554	Water, soft drinks and juices	2	1.529	1.937	0.408	3	0.1	0.1	0.1	1.0
1600	Tobacco products	1	0.272	1.997	1.724	3	0.0	0.1	0.1	0.2
1711	Fabrication of yarn and textiles	3	0.971	1.981	1.010	1	7.5	8.5	4.1	15.2
1712	Finished textiles	3	1.283	1.965	0.682	1	0.0	0.0	0.0	0.0
1721	Fabrication ofready-to-wear articles	5	1.587	1.926	0.339	1	1.0	1.0	0.2	17.6
1722	Fabrication of carpets and rugs	3	1.137	1.974	0.836	1	0.2	1.2	0.1	30.3
1723	Fabrication of cordage, rope and twine	4	1.317	1.962	0.645	1	3.5	1.1	7.0	28.6
1729	Other textiles	4	1.414	1.953	0.539	1	0.9	6.4	1.0	24.7
1730	Fabrication of knitted fabrics	4	1.439	1.950	0.511	1	1.4	1.8	0.5	13.0
1810	Fabrication of wearing apparel	5	1.628	1.916	0.288	1	0.3	2.3	0.3	11.5

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INTERNATIONAL TRADE

		Size	Trade openness [1]			FDI [3]	Export /vbp (%)		Import/vbp (%)	
Code	**Description sector**		**1986**	**1994**	**var [2]**		**1986**	**1994**	**1986**	**1994**
1820	Elaboration of fur	5	1.731	1.879	0.148	1	204.4	119.8	2.2	4.2
1911	Tanning and dressing of leather	3	0.821	1.986	1.165	1	52.4	60.3	0.1	0.4
1912	Fabrication of leather bags and similar	5	1.712	1.888	0.176	1	2.9	41.8	0.7	21.3
1920	Fabrication of footwear	4	1.335	1.961	0.625	1	1.1	8.8	0.3	13.0
2010	Sanding and steeling of wood	5	1.698	1.894	0.196	1	1.3	1.8	15.1	17.3
2021	Fabrication of wooden surfaces	2	1.061	1.978	0.917	2	0.1	6.2	0.1	24.3
2022	Fabrication of wooden parts for construction and buildings	5	1.822	1.814	-0.008	1	0.0	0.1	0.0	1.8
2023	Fabrication of wooden sheds	5	1.639	1.913	0.274	1	0.5	5.3	0.3	1.2
2029	Fabrication of other products of wood and cork	5	1.873	1.742	-0.131	1	0.1	0.6	1.8	9.0
2101	Fabrication of wood-paste, paper and cardboard	1	0.339	1.996	1.657	3	2.8	9.0	7.5	59.4
2102	Paper and packaging	3	1.153	1.973	0.820	2	0.2	1.6	1.3	2.7
2109	Other paper and paperboard products	3	1.016	1.980	0.964	2	1.6	2.0	13.8	10.7
2211	Publishing of books, leaflets, partitures and other publications	4	1.663	1.906	0.242	1	2.0	15.7	1.2	14.8
2212	Publishing of newspapers, magazines and other periodicals	1	1.194	1.971	0.776	1	0.5	0.8	0.0	1.3
2213	Production and recording	1	1.492	1.943	0.451	2	0.1	36.1	33.2	60.5
2219	Other publishing and editing activities	5	1.712	1.888	0.175	1	2.0	11.0	1.2	17.4
2221	Printing	5	1.798	1.836	0.038	1	2.0	0.1	1.2	1.9
2222	Services related to printing	4	1.728	1.880	0.152	1	0.0	0.2	0.0	0.6
2230	Reproduction of records	3	1.603	1.922	0.320	1	0.1	0.0	33.2	0.0
2310	Fabrication of products from coal ovens	3	1.502	1.941	0.439	1	5.4	0.1	3.0	10.1
2320	Production of oil refinery products	1	0.276	1.997	1.720	3	2.4	12.4	0.1	5.5
2411	Production of base chemicals	3	1.034	1.979	0.945	3	16.1	27.1	58.7	72.6
2412	Production of fertilisers	1	0.514	1.993	1.479	3	3.5	2.8	43.2	137.6
2413	Production of basic plastics	2	0.748	1.988	1.240	3	7.0	10.0	34.5	43.9
2421	Production of pesticides	1	0.784	1.987	1.203	3	3.5	6.8	43.2	30.3
2422	Production of paints	3	1.261	1.966	0.705	2	0.4	1.5	2.7	7.9

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INTERNATIONAL TRADE

		Size	Trade openness[1]			FDI [3]	Export/vbp (%)		Import/vbp (%)	
Code	Description sector		1986	1994	var[2]		1986	1994	1986	1994
2423	Production of medicine for human use	1	0.906	1.984	1.077	3	1.3	3.0	7.6	13.3
2424	Fabrication of detergents and soaps	1	1.023	1.979	0.956	3	0.5	3.1	2.6	5.7
2429	Other chemical products	3	1.233	1.968	0.736	3	9.3	14.3	22.2	42.2
2430	Fabrication of manufactured fibres	1	0.646	1.990	1.344	3	2.9	18.7	9.7	22.1
2511	Fabrication of rubber tyres	1	0.844	1.986	1.142	3	2.4	9.1	2.7	27.5
2519	Fabrication of other rubber products	5	1.518	1.939	0.421	1	1.6	3.9	3.5	32.8
2520	Fabrication of plastic products	4	1.507	1.941	0.433	1	0.3	3.0	1.0	15.4
2610	Production of glass and products made of glass	2	1.122	1.975	0.853	2	2.9	7.1	3.3	12.7
2691	Fabrication of unfinished ceramics	2	1.587	1.926	0.340	1	0.9	3.4	1.6	21.0
2692	Fabrication of finished ceramics	5	1.353	1.959	0.606	1	0.1	1.4	25.0	39.6
2693	Fabrication of products of loam	3	1.656	1.908	0.252	3	1.0	4.4	0.8	6.0
2694	Production of cement and plaster	1	0.795	1.987	1.192	3	0.6	1.0	0.1	0.6
2695	Fabrication of products made of concrete, cement and plaster	5	1.695	1.895	0.199	1	0.0	0.2	0.0	0.3
2696	Cutting and shaping of stones	5	1.750	1.869	0.119	1	1.8	4.1	0.1	2.6
2699	Fabrication of other non-ferrous mineral products	5	1.430	1.951	0.521	1	0.7	2.2	6.5	14.6
2710	Basic steel and iron industries	1	0.228	1.997	1.769	3	14.9	16.7	12.1	14.0
2720	Fabrication of primary products, based precious metals	1	0.372	1.995	1.623	3	12.4	24.4	14.9	40.3
2731	Melting and casting of metal and steel	4	1.372	1.957	0.585	1	14.9	0.0	12.1	0.0
2732	Melting and casting of non-ferrous metals	4	1.495	1.942	0.447	1	12.4	2.0	14.9	6.1
2811	Fabrication of metal products for structural use	5	1.809	1.827	0.018	1	0.9	0.7	0.1	2.1
2812	Production of safes and deposits	5	1.384	1.956	0.573	2	2.1	0.8	3.1	8.0
2813	Fabrication of steam generators	3	1.600	1.923	0.324	1	0.0	0.2	0.0	4.2
2891	Metalurgic engineering	4	1.516	1.939	0.424	1	10.8	0.0	9.6	0.3
2893	Fabrication of cutlery	5	1.728	1.880	0.152	2	1.8	20.2	5.8	29.2
2899	Fabrication of other metal products	4	1.748	1.870	0.122	1	0.8	2.7	1.5	14.0
2911	Production of engines and turbines, except for airplanes	1	1.356	1.959	0.602	1	1.8	1.2	10.5	43.5
2912	Fabrication of pumps, compressors and valves	4	1.522	1.938	0.417	1	16.8	14.4	78.8	74.3

Table C – Page 4

INTERNATIONAL TRADE

		Size	Trade openness [1]			FDI [3]	Export/vbp (5)		Import/vbp (%)	
Code	**Description sector**		**1986**	**1994**	**var[2]**		**1986**	**1994**	**1986**	**1994**
2913	Fabrication of steam generators	4	1.468	1.946	0.478	2	24.1	31.0	107.0	164.0
2914	Fabrication of ovens, burners and furnaces	5	1.642	1.912	0.271	1	15.3	7.8	69.8	34.1
2915	Fabrication of elevators	5	1.733	1.878	0.145	1	11.7	6.9	48.8	54.1
2919	Fabrication of other general purpose machinery	5	1.646	1.911	0.265	1	20.3	12.6	88.3	57.9
2921	Fabrication of agricultural machinery	4	1.768	1.859	0.091	2	4.5	1.7	1.0	17.1
2922	Fabrication of tool machinery	5	1.728	1.881	0.153	1	4.0	10.0	27.4	129.8
2923	Fabrication of metalurgic machinery	5	1.567	1.930	0.363	1	3.9	18.5	27.2	51.1
2924	Fabrication of machinery for mines and other exploitation	5	1.705	1.891	0.186	1	5.1	23.5	33.9	127.0
2925	Fabrication of machinery for the elaboration of food	4	1.432	1.951	0.518	1	5.1	5.5	33.9	43.3
2926	Fabrication of machinery for production of textiles	5	1.665	1.905	0.240	1	2.4	10.1	26.8	390.2
2927	Fabrications of arms and ammunition	2	0.581	1.992	1.411	1	0.6	14.4	0.5	53.8
2929	Fabrication of special purpose machinery	5	1.731	1.879	0.149	1	5.5	39.6	35.2	327.1
2930	Fabrication of devices for domestic use	2	1.058	1.978	0.919	1	0.9	0.9	5.4	23.3
3000	Fabrication of equipment for offices, accountability and informatics	3	1.538	1.935	0.397	3	55.8	37.8	80.9	308.5
3110	Fabrication of electric motors, transformators and generators	5	1.756	1.866	0.109	1	5.2	5.4	31.2	76.5
3120	Fabrication of distribution and control devices	5	1.298	1.964	0.665	1	2.8	30.8	23.6	73.7
3130	Production of cables and wires	3	1.028	1.979	0.952	3	4.3	1.6	2.5	33.5
3140	Fabrication of accumulators and batteries	3	1.774	1.855	0.081	2	1.2	3.4	7.2	32.4
3150	Fabrication of light bulbs and lighting equipment	4	1.605	1.922	0.317	3	0.9	1.6	17.8	33.3
3190	Fabrication of other electric equipment	3	1.470	1.946	0.476	2	2.9	4.9	25.0	30.1
3210	Production of electronic tubes and valves	5	1.719	1.885	0.166	1	1.9	8.4	28.1	381.6
3220	Fab. of radio and television transmittors and devices for telephony	1	1.083	1.977	0.893	3	4.1	0.8	57.3	74.2
3230	Fabrication of radio and television receivers	1	0.731	1.989	1.257	1	0.1	0.4	33.2	64.8
3230	Fabrication of radio and television receivers	1	0.731	1.989	1.257	1	0.1	0.4	33.2	64.8
3311	Fabrication of medical equipment	5	1.801	1.834	0.032	1	5.5	9.8	48.3	80.5
3012	Fabrication of measuring controling and navigation equipment	3	1.494	1.943	0.448	1	5.5	14.3	48.3	106.4

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INTERNATIONAL TRADE

		Size	Trade openness (1)			FDI (3)	Export/vbp (%)		Import/vbp (%)	
Code	**Description sector**		**1986**	**1994**	**var (2)**		**1986**	**1994**	**1986**	**1994**
3313	Fabrication of industrial control equipment	4	1.763	1.862	0.099	1	5.5	7.6	48.3	91.3
3320	Fabrication of optic devices and equipment for fotography	5	1.632	1.915	0.283	1	3.3	3.8	124.9	117.0
3330	Fabrication of clocks and watches	5	1.508	1.941	0.433	1	1.8	4.5	354.6	162.6
3410	Fabrication of motor vehicles	1	0.032	2.000	1.967	3	1.7	7.4	4.1	25.0
3420	Coachbuilding	3	1.380	1.956	0.576	1	0.3	0.1	15.5	8.2
3430	Fabrication of vehicle parts and accessories	3	1.334	1.961	0.627	2	4.8	16.9	15.3	38.1
3511	Shipbuilding and maintenance	5	1.584	1.927	0.342	1	41.2	23.9	4.2	81.7
3512	Building and maintenance of ships for recreational use	5	1.852	1.777	-0.075	1	41.2	14.6	4.2	55.3
3520	Fabrication of locomotives	4	0.733	1.989	1.256	1	0.3	9.7	2.5	11.7
3530	Fabrication of airplanes	5	1.764	1.861	0.097	1	1.0	165.6	7.6	1539.6
3591	Fabrication of motorbikes	1	0.819	1.986	1.168	1	0.1	1.5	0.7	77.2
3592	Fabrication of bikes and wheelchairs	5	1.588	1.926	0.338	1	0.1	0.9	0.7	41.7
3599	Fabrication of other transport equipment	5	1.680	1.900	0.221	1	1.7	3.6	4.8	8.6
3610	Production of furniture	5	1.769	1.858	0.089	1	0.2	1.3	0.2	7.2
3691	Fabrication of jewelry	3	1.718	1.885	0.167	1	1.5	61.7	7.6	20.2
3692	Fabrication of musical instruments	5	1.806	1.830	0.025	1	0.3	11.8	99.9	495.6
3693	Fabrication of sport equipment	5	1.764	1.861	0.097	1	1.5	11.3	25.1	92.0
3694	Fabrication of toys and games	5	1.718	1.885	0.167	1	0.8	3.0	8.7	160.5
3699	Other manufacturing industries	4	1.793	1.841	0.047	2	0.1	6.5	0.9	52.2

Source: Kosacoff (1998b).

Note: 1986 is based on amounts in Australes, while 1994 is based on post-convertibillity pesos. Because of the different effects the high inflation had on different sectors, comparison is possible but should be interpreted as an approximation.[1)] Trade openness has been defined in paragraph II.4.3 as 1- [(X-M)/(X+M)].[2)] Since all sector were net-importers in 1994, the impact can be expressed as the difference as compared to 1986. The change from net-exporter net-importer is represented by a higher value than changes of sectors that continue to be net-importers.[3)] Foreign direct investment has been categorised; I means little FDI while 3 stands for much FDI.

Annex B2: Correlations and covariances

Table B2.1

CORRELATIONS AND COVARIANCES

Correlations	FDI	openness	size	var av. Scale	var. Size	var integr	var establ	var employ
FDI	1							
openness	0,601331535	1						
size	-0,666614361	-0,817091232	1					
var av. Scale	0,252299841	0,376030026	-0,332888138	1				
var. Size	0,216031399	0,283551998	-0,277003139	0,881928584	1			
var integr	-0,363363196	-0,387824792	0,268765855	-0,130860188	-0,149829706	1		
var establ	-0,144217726	-0,274112338	0,214605826	-0,337390294	-0,304630687	0,235503058	1	
var employ	-0,065462719	-0,213049291	0,172177026	0,037672036	-0,083934781	0,123508311	0,67756826	1

Covariance	FDI	openness	size	var av. Scale	var. Size	var integr	var establ	var employ
FDI	0,669465547							
openness	0,256533357	0,271851353						
size	-0,832133813	-0,649966072	2,327602292					
var av. Scale	0,178894664	0,169904377	-0,440117869	0,750987292				
var. Size	0,509223821	0,42591818	-1,217493906	2,201797785	8,299567018			
var integr	-0,061444428	-0,041790615	0,084743409	-0,02343696	-0,089207855	0,042712491		
var establ	-0,169690134	-0,205526661	0,470836072	-0,420458088	-1,262046046	0,069991908	2,067986337	
var employ	-0,039110699	-0,081111657	0,191808133	0,023838165	-0,176566013	0,018638504	0,711482652	0,533181238

Source: Data prepared by the author.

Annex C: Principal indicators of SMEs in their respective sectors

Table C1

MAIN ECONOMIC INDICATORS

				Indicators sectorial impact[1]							
		SMEs' share in production sector (%)	Share in total production by SMEs (%)	FDI[2]	Openness[3]			Employment		# Establishments in sector	
Code subsector	Description subsector	1994	1994		1986	1994	var	1994	change 1984 – 1994 (%)	1994	change 1984 – 1994 (%)
36101	Furniture	69.5	1.10	1	1.769	1.858	0.089	10 304	-39.58	790	-39.37
24130	Base plastics	39.1	1.06	3	0.748	1.988	1.24	2 464	-3.22	121	14.15
24290	Other chemical products	44.6	0.98	3	1.233	1.968	0.735	3 158	-33.52	155	-29.22
20100/210	Ovens, furnaces and burners	64.5	0.91	1	1.698	1.894	0.196	1 792	-54.04	52	-46.94
21090	Other paper and paperboard products	42.7	0.89	2	1.016	1.980	0.964	3 461	71.47	157	34.19
32100 + other	Electronic tubes and valves	25.1	0.87	1	1.719	1.885	0.166	2 596	-15.00	123	-0.81
17302/9	Knitted fabrics	61.1	0.82	1	1.439	1.950	0.511	4 748	-47.38	217	-49.42
15519	Spirits	74.9	0.74	3	0.589	1.992	1.403	594	19.28	15	-16.67
33110/20/30	Medical equipment	65.1	0.74	1	1.801	1.834	0.033	4 113	22.01	246	26.80
36940/90	Games and toys	59.2	0.73	1	1.718	1.885	0.167	4 296	-1.45	268	-8.22
34200	Coachbuilding	48.7	0.71	1	1.380	1.956	0.576	3 933	-5.73	201	-2.43
29219	Agricultural machinery	60.5	0.68	2	1.768	1.859	0.091	4 539	-49.59	261	-44.70
17117	Yarn and textiles	49.3	0.66	1	0.971	1.981	1.01	964	-40.59	119	-37.37
22190/220	Other publishing	73.6	0.63	1	1.712	1.888	0.176	3 261	89.70	200	78.57
24249	Cosmetics and perfumes	18.6	0.61	3	1.023	1.979	0.956	2 497	-21.68	109	-16.79
15131	Sweets and jams	75.5	0.59	2	1.062	1.978	0.916	876	-20.58	42	-20.75
28930	Cutlery	54.0	0.59	2	1.728	1.880	0.152	4 488	-33.18	248	-33.33
17111	Cordage, rope and twine	87.7	0.58	1	0.971	1.981	1.01	1 819	-36.35	62	-33.33
25190	Other rubber products	66.3	0.57	1	1.518	1.939	0.421	4 260	-40.71	215	-35.63

Source: Gatto and Ferraro (1997b).

Note: Because of the macro-economic turmoil of the 1980s and the lack of attention for SMEs' activities, no exact information can be given on their sales in 1986.1) impact on entire sector is supposed to affect subsectors.2) FDI is classified as in Annex II. 3) Openness refers to the intra-industrial trade index.

Table C2 – Page 1

STRUCTURAL INDICATORS

				Indicators sectorial impact[1]							
		SMEs' share in production sector (%)	Share in total production by SMEs (%)	FDI[2]	Openness[3]			Employment		# Establishments in sector	
Code subsector	Description subsector	1994	1994		1986	1994	var	1994	change 1984 – 1994 (%)	1994	change 1984 – 1994 (%)
29120 + other	Other general pupose machinery	55.7	5.48	1	1.522	1.938	0.416	25 234	-9.09	1 333	-1.77
25201/8	Plastic products	69.6	5.05	1	1.507	1.941	0.434	22 637	-8.76	1 170	-14.29
28910/20/98	Metalurgic engineering	64.2	4.49	1	1.516	1.939	0.423	23 196	-35.81	1 544	-33.25
18107/8/200	Wearing apparel	59.6	3.69	1	1.628	1.916	0.288	23 725	-32.70	1 349	-29.85
22110/120	Publishing	36.5	3.57	1	1.663	1.906	0.243	17 349	0.52	1 027	-3.30
34300	Vehicle parts and accessories	41.1	3.18	2	1.334	1.961	0.627	18 576	-33.03	1 031	-28.90
24231/9	Medicine (human use)	28.7	2.68	3	0.906	1.984	1.078	5 699	3.81	190	-5.00
15419	Bakery products	52.4	2.47	1	1.748	1.870	0.122	28 230	-14.61	2 699	-19.79
15200	Dairy products	26.8	2.34	2	0.867	1.985	1.118	6 863	-28.90	364	-31.19
15111/2	Meat	21.9	2.34	2	0.614	1.991	1.3769	7 537	-9.02	246	-3.91
15521/8	Wines	52.2	2.29	1	1.114	1.975	0.861	7 445	-25.14	299	-47.17
17118/120	Carpets and rugs	45.1	2.17	1	0.971	1.981	1.01	8 861	-23.07	409	-15.67
15541/2/9	Water, soft drinks, juices	28.2	2.03	3	1.529	1.937	0.408	6 044	-13.09	556	-22.67
15139	Canning	58.6	1.80	2	1.062	1.972	0.91	6 111	-13.63	222	-24.49
15499	Other food	48.9	1.67	2	1.115	1.975	0.86	3 392	-22.49	139	-32.52
3110/20/90	Electric motors and generators	58.0	1.67	1	1.756	1.866	0.11	4 113	-30.81	439	-24.18
15311	Grinded wheat	51.7	1.58	1	0.728	1.989	1.261	3 163	-17.11	73	-1.35
28110	Other fabricated metal products	70.4	1.51	1	1.809	1.827	0.018	10 333	-26.77	682	-27.37
21020	Paper and packaging	51.9	1.42	2	1.153	1.973	0.82	6 055	-3.17	254	-14.48
19201/2/9	Footwear	44.8	1.41	1	1.335	1.961	0.626	11 157	-40.45	630	-41.50
19110	Tanning and dressing of leather	43.1	1.32	1	0.821	1.986	1.165	4 985	-27.74	205	-31.89
17210/290	Other textiles	63.7	1.27	1	1.414	1.953	0.539	6 132	-5.78	290	-9.09
24220	Paints	55.0	1.18	2	1.261	1.966	0.705	3 341	1.46	149	-11.83
15113/119	Preparation of snacks, delicacies	30.0	1.16	2	0.614	1.991	1.377	5 167	-30.64	246	-30.70

Table C2 - Page 2

STRUCTURAL INDICATORS

				Indicators sectorial impact[1]							
		SMEs' share in production sector (%)	Share in total production by SMEs (%)	FDI[2]	Openness[3]			Employment		# Establishments in sector	
Code subsector	Description subsector	1994	1994		1986	1994	var	1994	change 1984–94(%)	1994	change 1984–94(%)
36101	Furniture	69.5	1.10	1	1.769	1.858	0.089	10 304	-39.58	790	-39.37
24130	Base plastics	39.1	1.06	3	0.748	1.988	1.24	2 464	-3.22	121	14.15
24290	Other chemical products	44.6	0.98	3	1.233	1.968	0.735	3 158	-33.52	155	-29.22
20100/210	Ovens, furnaces and burners	64.5	0.91	1	1.698	1.894	0.196	1 792	-54.04	52	-46.94
21090	Other paper and paperboard products	42.7	0.89	2	1.016	1.980	0.964	3 461	71.47	157	34.19
32100 + other	Electronic tubes and valves	25.1	0.87	1	1.719	1.885	0.166	2 596	-15.00	123	-0.81
17302/9	Knitted fabrics	61.1	0.82	1	1.439	1.950	0.511	4 748	-47.38	217	-49.42
15519	Spirits	74.9	0.74	3	0.589	1.992	1.403	594	19.28	15	-16.67
33110/20/30	Medical equipment	65.1	0.74	1	1.801	1.834	0.033	4 113	22.01	246	26.80
36940/90	Games and toys	59.2	0.73	1	1.718	1.885	0.167	4 296	-1.45	268	-8.22
34200	Coachbuilding	48.7	0.71	1	1.380	1.956	0.576	3 933	-5.73	201	-2.43
29219	Agricultural machinery	60.5	0.68	2	1.768	1.859	0.091	4 539	-49.59	261	-44.70
17117	Yarn and textiles	49.3	0.66	1	0.971	1.981	1.01	964	-40.59	119	-37.37
22190/220	Other publishing	73.6	0.63	1	1.712	1.888	0.176	3 261	89.70	200	78.57
24249	Cosmetics and perfumes	18.6	0.61	3	1.023	1.979	0.956	2 497	-21.68	109	-16.79
15131	Sweets and jams	75.5	0.59	2	1.062	1.978	0.916	876	-20.58	42	-20.75
28930	Cutlery	54.0	0.59	2	1.728	1.880	0.152	4 488	-33.18	248	-33.33
17111	Cordage, rope and twine	87.7	0.58	1	0.971	1.981	1.01	1 819	-36.35	62	-33.33
25190	Other rubber products	66.3	0.57	1	1.518	1.939	0.421	4 260	-40.71	215	-35.63

Source: Gatto and Ferraro (1997b)

Note: Because of the macro-economic turmoil of the 1980s and the lack of attention for SMEs' activities, no exact information can be given on their sales in 1986. (1) impact on entire sector is supposed to affect subsectors; (2) FDI is classified as in Annex; (3) Openness refers to the intra-industrial trade index.

Annex D: Deregulation of the Argentine economy 1989-1991

Table D.1

SYNTHESIS OF DEREGULATION OF TRADE OF GOODS AND SERVICES IN THE LOCAL MARKET

Measure	Content	Observations (Ministry of Economy)
Establishment of free market (except for privatised public services)	Regulation contrary to competition and transparency abolished	Ministry of Economy obtains considerable freedom to interpret and apply new regulation
Modification of anti-trust Law 22.262	Pre-eminence of principle of liberty, increased ability to control monopolies	Possibility to effectively limit monopolistic behaviour
Suspension of the effect of the Law on Provisioning 20.680	Law can only be applied by intervention of Congress (Emergency of Provisioning)	Ministry maintains the possibility to close enterprises in case of illegal competitive practices
Liberalisation of road transport and unloading	Commence of lawsuits based on unconstitutionality of limiting provincial laws	Decreased cost of transport between provinces (estimate –30%)
Elimination of protective perimeters of Law 19.227	Liberalisation of wholesale market in the food sector	Decreased wholesale prices and improved possibilities for market entry
Liberalisation of regulation on honorariums and other for professional services	Derogation of public interference in all activities	Decreased cost of professional services and commissions (‘Argentine cost’)
Liberalisation of practising university professions	Elimination of corporate and other restrictions	Universities are allowed to offer professional services, which lowers cost
Liberalisation of the market for commercialisation of medicines throughout the country	Modification of Law 17.565 and liberalisation of import	Decrease of 15% of prices and lower cost of Social Insurance
Liberalisation of opening hours and port activity	Activities concerned: sales, packaging, expedition, administration and ports	Better use of commercial capital, decrease of commercial cost and costs of ports

Source: Rojo y Canosa (1992).

Table D.2
DEREGULATION OF FOREIGN TRADE

Measures	Content	Observations (Ministry of Economy)
Deregulation and elimination of limitations on export of goods and products	Customs department is the only entity authorised to intervene, except for protection of public health and environment	Elimination of more than 100 earlier interventions, decreased cost of export (1% of FOB)
Modification of Law 22.802 on certificate of origin	Elimination of anti-competitive regulation for export	Increase of export facilities
Liberalisation of export of unelaborated leather and living bovines	idem	Increase of income for farmers and processors
Perfection of regulation on import of fresh food	Goods are handled more rapidly, rigorous control of SENASA and IASCAV	Improved sanitary barriers, higher administrative efficiency
Elimination of earlier interventions in regulation on import (except for fresh food)	Derogation of authorisations, restrictions and other barriers to foreign trade	Lower costs and prices of import, less corruption
Elimination of restrictions on import for origin or place of shipping	Possibility to import from the most competitive markets	Lower prices of import
Derogation of Laws 18.250, 22.763 and 23.341	Elimination of exceptions on freight for air-transport and shipping	Lower cost of freights, higher competitiveness and increased speed of transport
Modification of Customs regulation (Law 22.415)	Direct shipping instead of enlisted import	Elimination of deposit costs, lower prices, less corruption
Simplification of requirements for inscription in the registers of the Administración Nacional de Aduanas (ANA)	Less administrative barriers to import and export	More firms obtain access to international trade
Unification of customs tax collecting procedures	One form to cover all taxes (customs, internal, etc.)	Simplified administration, lower cost of international trade
Specialisation of Customs Department in its principal tasks	Tasks of Customs Department: receive tax payments, estimate values, enforcement of restrictions	Improved efficiency of ANA, more resources for substantial functions
Reconsideration of regimens on re-embursement, temporary imports and draw back	Operating principles: full re-embursement, GATT regulation and rationalisation of temporary import	30 days to establish new regimen

Source: Rojo and Canosa (1992).

Table D.3

PUBLIC REGULATING ENTITIES

Measures	Content	Observations (Ministry of Economy)
Dissolution of administrative units responsible for abolished interventions	Consistency with the norms for de-regulation from the decree	Simplification of administration, lower public expenditure, replacement of personnel
Dissolution of National Board for Grains and the National Board for Meat	Transfer of functions to the Secretary of Agriculture and to the SENASA and IASCAV	Continued operation of silos until their privatisation, saving of US$ 88 million per year
Dissolution of the IFONA, MCP, CAP, Actividad Hípica and the Market of Liniers	Redistribution of functions of dissoluted organisations between areas of SAGyP	Deregulation and liberalisation of markets, saving of US$ 150 million per year
Support to the Customs Department, DGI, Sanidad Animal y Vegetal from personnel of dissoluted organisations	Reorganisation and strengthening of organisations that have priority	Improved sanitary and tax control
Modification of Law 23.359 about regulation on dairy products	Progressive convergence of local and international price levels	Improved resource allocation in the sector, rationalisation of subsidies
Dissolution of Vitivinicultura, Dirección del Azucar and Comisión de Yerba Maté	Full liberalisation of markets (plantation, harvesting, industry and commerce)	Improved resource allocation in sector, fixed market prices
Strengthening of parts of the Secretary of Industry and Commerce	Transfer of remaining functions of dissoluted organisations	Increase of staff by 15%
Voluntary retirements for the personnel of dissoluted organisations	One salary for antiquity, plus 20%	Estimated 3.500 retirements; cost: US$ 42 million
Rapid liquidation of the assets of dissoluted organisations	Term of liquidation or privatisation: 90 days	Previewed fiscal income: US$ 200 million

Source: Rojo and Canosa (1992).

Table D.4

CAPITAL MARKETS

Measure	Content	Observations (Ministry of Economy)
Modification of the activities of the CNV	Establishment of requirements for information of companies with limited liability	Increased transparency in markets
Liberalisation of commissions for traders on the stock exchange	Establishment of commission by supply and demand	Lower commissions, improved market access
Modification of the regime for public offers		Deregulation, increased market expansion

Source: Rojo and Canosa (1992).

Table D.5
FISCAL REFORMS

Measures	Content	Observations (Ministry of Economy)
Reform of the tariff structure for imported products (resolution SIC)	10%: basic inputs, raw materials, food, capital goods not produced in Argentina 20%: other goods	Except for car producers, tariffs raise 5% on average. US$ 450 million extra in 1992
Modification of Laws 23.550 and 19.800	Elimination of the wine tax; Reform of the regime of the special account of the Tobacco Fund	Consistent with the dissolution of the INV, Revision of the regulation on tobacco
Modification of Law 21.740 and Decree Law 6.698/63	Elimination of taxes on the commercialisation of grains and meat	Lower costs and a better real currency exchange, equal to US$ 113 per year
Modification of Law 22.260, 19.590 and Decree Law 18.231/43 and other	Elimination of taxes on the commercialisation of forestal products and products derived from fishery	Decrease of costs to producers, equal to US$ 5 million per year
Modification of Law 23.664 and 23.697	Elimination of statistical rights on export	Improvement of the real currency exchange, equals US$ 360 per year
Elimination of consular rights, Decree 1.411/83 and Law 22.766	Lower bureaucratic and administrative costs	Without fiscal cost
Elimination of taxes on sugar and yerba maté, Law 19.597 and 20.371	Consistent with the deregulation of these activities	Fiscal cost zero because of elimination of organisations
Derogation of Law 22.211	Elimination of lower taxes on real estate of low productivity	
Derogation of Article 10 of Law 19.870	Elimination of the Marina Mercante Fund	Decrease of costs of import and export
Derogation of remaining regimens of campaigns resulting from industrial policy	Affects steel and aluminium industries, producers of means of transport by road, sea and air	Does not affect obtained rights except for exceptions on applied tariffs
Elimination of apostille-taxes and taxes on transfer of bonds or securities	Lowering of taxes on operations, stimulates activity on the exchange markets	Expansion of capital markets

Source: Rojo and Canosa (1992).

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