

Inter-firm Cooperation in a Transitional Economy:
Comparative Experience in Two Polish Regions

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by

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Abstract

After the collapse of the communist system in 1989, Poland embarked on the transition to a market economy. One of the main issues of the transformation is the creation of a strong private sector in the economy. The privatisation of state-owned enterprises has encountered considerable problems and lags behind expectations, whereas newly established small and medium-sized firms already play an important role both in terms of employment and output.

These new firms, however, face problems which are peculiar to the transitional environment as well as difficulties which are similar to those experienced by small and medium-sized firms in more mature market economies. In response to these problems, Polish authorities and foreign donors are implementing support structures for small and medium enterprises which are based on Western models.

Drawing on evidence from two Polish regions, this thesis compares the acceptance of these imported structures with cooperation structures that endogenously evolved between local enterprises. Apart from other local initiatives, two regional chambers of commerce serve as examples for transplanted support structures. Their role in the business environment is evaluated on the basis of a questionnaire survey among their members. This evidence is then contrasted with examples of informal inter-firm cooperation examined in four case studies. The social and economic relations between firms in these case studies are analysed following the embeddedness concept as developed by Granovetter (1985).

The thesis argues that the import of formal institutions from Western market economies meets with difficulties regarding credibility and acceptance, since they reflect the specific conditions in the economies in which they evolved. Thus, the institutional support for small and medium-sized enterprises in Poland should take into account the case-specific structures of the business environment, which are rooted in the distinctive features of the transition process in general and of the regional situation in particular.

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One of the main aims of this thesis is to show how individuals draw resources from their embeddedness in networks of social relations to overcome problems which could not be tackled by the individual alone. The actual research for this thesis was – in more ways than one – a practical experience in this matter. Without the help and assistance of a number of people, who are connected to me through different kinds of social relations, this work would not have been possible in this form. Therefore, I am indebted to them.

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List of acronyms

CMEA	Council for Mutual Economic Assistance
GUS	Central Statistical Office of Poland
IPH Szczecin	Chamber of Commerce and Industry in Szczecin
ISO 9000/1/2	International standard for the documentation of quality assurance procedures
KIG	Polish Chamber of Commerce
NARDA	Polish National Association of Regional Development Agencies
PIHZ	Polish Chamber of Foreign Trade
PLN	Polish New Złoty (Polish Old Złoty divided by 10,000)
Polish SME Foundation	Polish Foundation for Small and Medium Enterprise Promotion and Development
PPNT	Science and Technology Park in Poznań
PZPR	Polish Workers' Party
RDA	Regional development agency
SCP	Business Incubator in Szczecin
SFM	Swarzędz Furniture Works
SME	Small and medium-sized enterprise(s)
SOE	State-owned enterprise(s)
SPEDD	Southwestern Pennsylvania Economic Development District
SSSA	Szczecin Shipyard
UAM	Adam Mickiewicz University
WIPH	Chamber of Commerce and Industry of Greater Poland in Poznań
ZARR	Westpomeranian Regional Development Agency in Szczecin

Introduction

The revolutions in the countries of Central and Eastern Europe in 1989 triggered not only a political but also a socio-economic transformation process at the end of which these countries – this is the hope of the reformers – will emerge as democratic market economies. This transition, however, creates considerable tasks for the reforming governments to tackle. Apart from the macro-economic stabilisation and the liberalisation of economic activity, the creation of a strong private economic sector is high on the agenda of economic reforms.

Poland as the by far largest country in Central Europe is among the front-runners in the transformation process (EBRD 1997). By and large, it has succeeded in stabilising and liberalising the economy as well as in creating a significant private sector. Thus, in 1995, the private sector in the Polish economy accounted for about 60% of GDP (EBRD 1996, p. 40). However, the experience of the first few years of the transformation process shows that the creation of a private sector through the privatisation of state-owned enterprises lags behind expectations. On the other hand, the founding and development of new enterprises has – in terms of output and employment – more than made up for this weakness (Szymanderski and Winiński 1997). Considering the recent attention that the role of private small and medium-sized enterprises in economic development has received, this development should not be regarded as a reason for concern, but seems to offer significant opportunities.

From the early 1980s onwards, small-scale economic activity was increasingly seen as a way out of the crisis that had affected large-scale industry in many advanced industrialised countries (Giaoutzi et al. 1988). This optimistic assessment was based on evidence of a rising share of employment in small and medium-sized enterprises in Western economies (e.g. Sengenberger et al. 1990). In this context, local concentrations of small and medium-sized enterprises have received particular attention, in which economic activity is co-ordinated – partly spontaneously, partly induced by formal institutions – in a form that combines competition and collaboration. It is argued that these network-like structures also give small firms the opportunity to achieve economies of scale in cooperation with other firms.

Furthermore, it allows them to gain competitive advantage due to a high degree of flexibility and specialisation, which permits them to match better the changing customer tastes in advanced industrialised societies by producing high-quality customised goods. Closely related to this emerging new pattern is the increasing importance of localities and regions as hosts of those network structures (Sabel 1989). Among the most prominent examples of this trend are the industrial districts of north-east and central Italy as well as clusters of engineering firms in south-west Germany and the concentration of electronics firms in Silicon Valley (Brusco 1986, Sabel 1987, Scott 1988). This also gave rise to the hope that indigenous local development in hitherto backward or unindustrialised regions was possible, based on the development of an appropriate small firm sector (e.g. Stöhr 1986, Sengenberger and Pyke 1992).

Some analysts even go as far as to suggest that these regional clusters are evidence of a universal re-organisation of economic activities, which has triggered a shift from the Fordist principle of mass-production to a new mode of production in which firms cooperate in network-like structures to produce customised goods (e.g. Piore and Sabel 1984; Storper and Walker 1989). Other observers, however, are more sceptical about the supposed competitiveness of small firms. They point out the pressures from globalisation and the recent efforts to introduce higher degrees of flexibility into Fordist forms of production, which once again erode the advantages of smaller industrial units (Amin and Robins 1990b; Williams et al. 1987). Furthermore, some analysts suggest that in the quoted examples place-specific characteristics led to the cooperation phenomena, which are rooted in long-standing traditions and therefore are not generally applicable (Hadjimichalis and Papamichos 1991). Thus the critics challenge the view that indeed a paradigm shift has taken place in the way industrial production and space is organised, dismissing the produced evidence of the regions in the Third Italy and other places as temporary exceptions in a world dominated by large firms (Amin and Robins 1990a, b). However, the experience of the Italian industrial districts shows that these regional clusters of small firms are more robust than predicted by the critics (e.g. Storper 1995, Pyke and Sengenberger 1996). Crucial for this success – according to many observers – was an institutional framework that complemented informal collaboration with cooperation induced by

regional public or public-private formal institutions, such as chambers of commerce, development agencies, or universities (e.g. Asheim 1992; Cossentino 1996).

The importance of collaboration between governments and small and medium-sized enterprises has also been recognised in the case of Eastern Europe (Brezinski and Fritsch 1996). Johnson and Loveman, among others, even talk explicitly about the need for the creation of “industrial districts” in Poland, resting on the two pillars of inter-firm linkages and a formal institutional support infrastructure (Johnson and Loveman 1993, p. 206, see also Arzeni 1996). Nevertheless, no coherent SME policy was formulated by the Polish central government before 1993 (Belka and Krajewski 1995). On the other hand, individual regions by then had already undertaken initiatives to create public or public-private institutions for the local support of entrepreneurship (OECD 1996a). However, since most of these initiatives are based on Western models, they constitute an institutional import, leading to particular problems concerning their credibility and appropriateness (OECD 1996b). This is exacerbated in the Polish case by a generally low credibility of public institutions as a result of socialist legacies (Sztompka 1991). Also the emergence of the second pillar of successful inter-firm networks seems to be less than certain in the context of a transitional economy, since the individualism characteristic of many Polish entrepreneurs suggests that they dislike the idea of – even informal – inter-firm cooperation (CIPE-DEMOSKOP 1996, cited in Polish SME Foundation 1997). On the other hand, Johnson and Loveman (1993) in their study of about thirty small firms in Gdańsk, emphasise the importance of personal networks in recruiting new staff, thus indicating some degree of social embeddedness.

This thesis does not aim to develop or evaluate a general theory about the supposed paradigm shift in the mode of industrial production, but assesses to what extent characteristics of successful examples of small firm development in Western economies have developed in the Polish context. For that purpose, it aims to describe and evaluate business support initiatives in Poland, which are based on Western models and on Polish pre-war traditions, as well as more informal, endogenously evolved forms of inter-firm cooperation. The research outlines the conceptualisation of selected imported institutions, which aim to induce inter-firm cooperation. For the evaluation of these initiatives, their achievements are compared with the original

objectives of the individual organisations and comparable Western structures. This is further supported by evidence regarding the level of acceptance by the organisations' target population. The thesis then goes on to explore forms of endogenous inter-firm cooperation, focusing especially on their history and social embeddedness, as well as on their potential in overcoming obstacles to small firm growth. Furthermore, comparisons with cases of successful structures in Western economies will be drawn. Supported by this evidence, the thesis offers an assessment of the current attempts to forge regional network structures as well as of the general feasibility of such attempts in the context of a transitional economy.

Thesis structure

The thesis is organised in three parts. Part I reviews the relevant theories that provide the tools to analyse and understand the forms of inter-firm cooperation in the Polish context. Chapter 1 aims to evaluate institutional legacies of the socialist system in Poland, using the theory of institutional change by Douglass C. North (1990) as the framework of analysis. Chapter 2 goes on to establish the analytical tools for the examination of spontaneously developed inter-firm networks. It starts by reviewing Williamson's transaction cost approach to the explanation of networks (Williamson 1975, 1985) and then contrasts this with Granovetter's concept of the social embeddedness of economic ties (Granovetter 1985). Following this, relevant categories for the analysis of inter-organisational networks are developed and these categories are applied to different cases of inter-firm cooperation described in the Western literature.

The second part examines the broader context of the Polish transition, with particular attention paid to the development of the private sector. After a brief introduction, reviewing the present state of the Polish economy and the political structure at regional and local level, the third chapter is mainly concerned with a comparison of the Polish situation in the socialist era and in the transition. It outlines the political situation between the end of the Second World War and the end of the socialist era and describes the development of spatial differences resulting from the socialist economic policies. The chapter then moves on to examine in more detail the situation of the agricultural and non-agricultural economy under communism. This is

followed by a description of the political changes in the transition and the related economic issues, paying particular attention to the privatisation efforts and the changes in spatial economic patterns in the transition. Chapter 4 examines the situation of small and medium-sized enterprises under socialism and in the process of socio-economic changes. It reviews the current sectoral composition of the SME sector, barriers to growth, and policies that were implemented to help overcome these barriers.

The third part of the thesis presents the original research conducted in two Polish regions and analyses the findings according to the theories reviewed in the first part. Chapter 5 introduces the Szczecin region in the north-west of the country and describes and analyses two public initiatives for the support of small and medium-sized enterprises, both aiming also at establishing links between companies. It then goes on to evaluate the performance of the regional chamber of commerce and its acceptance by the local business community. Chapter 6 and 7 produce evidence of two different groups of firms, which are linked together by some form of spontaneous cooperation. These chapters also include an analysis of those cooperation structures according to the analytical categories developed in chapter 2. Chapter 8, 9 and 10 follow the same pattern as the preceding three chapters, describing and analysing formal business support institutions and informal cooperation in the West-Polish region of Poznań.

The thesis concludes by drawing the hitherto separate analytical themes of formal and informal inter-firm cooperation together and sets them against the theoretical background of institutional change as developed in chapter 1. From there, a broader assessment is offered on the current situation of SME cooperation in Poland and implications are drawn for further SME support policies.

PART I

Chapter 1: The transition from a centrally planned to a market economy

Despite a recent improvement in the overall economic situation in at least three of the four Visegrad countries¹, the transition from a centrally planned to a market economy has proved to be more difficult than was initially foreseen by the architects of the reforms in the individual countries. The advisers of the Polish government in particular based their approach to reform on the assumption that macro-economic stabilisation, micro-economic liberalisation and privatisation will generate all the incentives necessary for economic actors to adopt market-compatible behaviour. The stabilisation measures were first of all concerned with controlling inflation, the reduction of the budget deficit, and price liberalisation. This was accompanied by micro-economic liberalisation in the form of deregulating the private sector, lifting restrictions on foreign trade, competition, labour mobility, and wage bargaining (Gomulka 1993).

According to the proponents of a 'shock therapy' policy, these measures should be introduced at roughly the same time, producing an initial sharp fall in economic activity followed by a quick recovery (Lipton and Sachs 1990a). The rationale behind this is the neo-classical assumption that a price system that reflects actual scarcities will eventually lead to an efficient allocation of resources (Hoen 1995). However, as several analysts from different viewpoints have observed, the empirical evidence is not consistent with these assumptions (e.g.: Neuber 1993, Schmieding 1993, Amsden et al. 1994, van Ees and Garretsen 1994, Hoen 1995, Nielsen et al. 1995, Smith and Pickles 1998). The decline in output, as experienced by all transitional economies, was more pronounced and prolonged than predicted by the reform governments. The proponents of the neo-liberal school attribute those experiences to problems in sequencing and priorities and to the implementation of policies not consistent with a neo-liberal approach to transformation (Nutti and Portes 1993). However, the focus of much criticism has been that a theory of transition based on neo-classical assumptions neglects the importance of informal institutions

¹ The Czech Republic, Hungary, Poland, and Slovak Republic.

and legacies from the socialist era. Neo-liberal theorists frequently hold the view that the institutions, on which Western market economies are built, can and should be imported wholesale to the transitional economies (Dornbusch 1991, pp. 173-174). However, this conception of institutions is restricted to formal institutions that ensure the legal establishment and preservation of private property rights, the guarantee of freedom of contract, and the liability of market participants (Hoen 1995). The critics of this rather narrow view of the role of institutions in economy and society include also informal institutions such as conventions or codes of behaviour (Clague 1997, Neuber 1993, Schmieding 1993). They base their understanding of the socio-economic transition in Eastern Europe on the New Institutional Economics as developed by North (1990a). In the following, a brief overview over North's theory of institutions and institutional change will provide the starting point for a further discussion of the transitional process from a centrally planned to a market economy.

Institutions and institutional change – Douglass C. North

Institutions according to North's definition are "humanly devised constraints that shape human interaction" (North 1990a, p. 3). They define the set of choice that an economic actor faces. Institutions can be both formal and informal, deliberately created or evolve over time. Formal institutions are those that are explicitly devised, whereas informal institutions are "(1) extensions, elaborations, and modifications of formal rules, (2) socially sanctioned norms of behavior, and (3) internally enforced standards of conduct" (North 1990a, p. 40). They usually "have tenacious survival ability because they have become part of habitual behavior" (North 1990a, p. 83). North concedes that these informal constraints are difficult to specify and to test in their significance. However, he argues that they are pervasive and determine most of the daily interaction between people.

Institutions in society reduce uncertainty by creating a stable environment in which human interaction takes place. Stability, however, does not mean that institutions do not change. They are constantly altered at the margins by the interaction between institutions and organisations, as these organisations evolve to take advantage of opportunities generated by the institutional environment. As both organisations and

institutions are devised by human beings, North makes an analysis of individual human behaviour the starting point of his theory of institutions and institutional change.

Behavioural assumptions

In a world that satisfies all the behavioural assumptions of neo-classical economics, there would be no role for institutions. However, since institutions are a reality, North sees the need to qualify some of the fundamental neo-classical assumptions. According to standard economics, competitive forces drive the economy towards an equilibrium in which all individuals maximise their preferences. This process is based on the assumption that “actors have stable preferences and thus evaluate the outcomes of individual choices according to stable criteria” (North 1990a, p. 19). The repetitive nature of decisions consequently exposes any available opportunities to improve outcomes further. Any economic actor who would fail to do so would in the long-run be eliminated by competition. North challenges this view on two accounts.

The first critique concerns the motivation of economic actors, which North sees as something more complex. He introduces ideologies, altruism and other self-imposed constraints “which radically change the outcomes with respect to the choices that people actually make” (North 1990a, p. 20). It is important to note in this context that North does not refer only to those – superficially altruistic – forms of behaviour that in the long-run could also serve wealth-maximising motives such as reputation or trust, but he also includes forms of altruism that do not ultimately increase the wealth of the actor. He refers to Margolis’ (1982) dual utility model in which self-interested motives compete with group-oriented preferences (North 1990a). These additional motives enter the utility function of the individual and compete with the motive of wealth maximisation.

The second point of critique concerns the ability of the individual to decipher the environment. Limited knowledge and lack of computational power on the side of the individual mean that the real world and the world as perceived by the actor are different. All actors are faced daily with a large number of decisions. The majority of

these decisions, however, do not require much reflection, as they appear repetitive and clearly evident. They are based on routines that derive from “an imbedded set of institutions that has made it possible for us not to have to think about problems or to make such choices” (North 1990a, p. 22). As situations become more complex they involve higher degrees of uncertainty about the outcomes. To deal with such situations, individuals base their decisions on subjective perceptions of the world or of how the world should be. These perceptions, which North calls ideologies, exist both at the micro-level of individual relationships and on the macro-level as “integrated explanations of the past and present, such as communism or religions” (North 1990a, p. 23). Regularised patterns of human interaction are derived from these ideologies, which connect the choice and the expected outcomes, thus reducing the uncertainty associated with decisions. The sum of these regularised patterns in turn constitutes the institutional framework of human interaction.

A transaction cost theory of exchange

North argues that the recognition of the world as something more complex than assumed in neo-classical economics, leads to different conclusions about the nature of economic exchange. Instead of being uniform, one-dimensional goods, the commodities and services of the real world carry a multitude of attributes that also vary in their levels among samples of the same type. In an exchange, the participating parties try to determine the values of all relevant attributes of a particular good or service. Consequently, due to the number of attributes and the difficulties in determining their exact level, considerable information costs arise prior to exchange in the market. Moreover, in most exchanges, an information asymmetry exists between buyer and seller and in many instances the party with more knowledge about the good or service stands to gain from concealing information. As a result, even after an exchange occurs, monitoring and policing is necessary, since the flow of income from the attributes of the good or service purchased will often extend over a period of time. However, as monitoring and policing also generate costs, it pays only to monitor to the extent that the marginal costs of monitoring are smaller than or equal to the additional marginal benefits of that activity.

According to North, the structure of exchange determines not only the cost of transacting but also the cost of transformation, i.e. the cost of production. A more complex system of specialisation and division of labour leads to higher transaction costs and lower transformation costs (North 1990a). The critical obstacle to achieving this more complex structure of exchange is, in North's view, the enforceability of contracts. In a world without institutional constraints, exchanges are more costly to monitor and police – if at all – and thus no complex exchanges are possible. Formal institutions, on the other hand, define a structure of rights in an exchange, which will be used as the basis of a contract that specifies the enforcement characteristics of the transaction. However, due to the costs of measurement, the rights to some of the benefits deriving from the exchanged commodity or service will remain unspecified, “hence informal constraints will play a major roles [sic] in the actual agreement” (North 1990a, p. 61). Therefore, the overall institutional framework determines the costs of transacting according to the extent to which it reduces uncertainty about the expected performance of contract partners.

The evolution of institutions

Yet, North objects to the view that institutions are necessarily efficient solutions to the transaction cost problem in the sense that they allow the generation of economic growth (North 1990a). The reason for this is the way in which institutional structures evolve.

In the simple exchange economy that was characteristic for the most part of human history, the local exchange of goods and services was made possible by “a dense social network of informal constraints” (North 1990a, p. 120). These informal institutions were clearly not devised with the purpose of lowering transaction costs in economic exchange, and yet they facilitated a simple system of division of labour by reducing uncertainty about the performance of exchange partners. Also in more complex systems that involve longer-distance trade, the enforcement of contracts relies mainly on informal constraints such as religious precepts, shared cultural identity or kinship ties. With the growing volume of long-distance trade through time, these institutions turned out to be not sufficient anymore. Thus they were

complemented by other institutions that were intentionally devised to reduce the uncertainty of trade with distant and foreign territories. In many instances, the devised code of behaviour was supported through a combination of voluntary or semi-coercive bodies.

Parallel to this development of economic exchange, North also points to the importance of political exchange. The structure of formal constraints in a society is shaped by the differences in the bargaining power of different interest groups. As a result, more powerful actors or interest groups will receive a larger share of the benefits that are generated by the implementation of the institutional framework. As a simple example, North describes the situation in a state that is made up of one ruler and constituents. The ruler imposes rules on the society, which result in the reduction of internal disorder and the protection of broadly defined property rights, usually in return for tax revenues. However, as this formal framework produces positive externalities due to the reduction of uncertainty, there will be additional benefits which again are redistributed according to the patterns of bargaining power between the ruler and the different constituents. As the tax income of the ruler is reduced by costs of monitoring and enforcement, certain institutional arrangements will exist that are inefficient in the sense that they are not promoting economic growth, but improve the level of benefits that the ruler receives. North gives as an example the establishment of guild monopolies that benefited both the ruler and some groups of constituents, but did nothing to improve the overall economic situation (North 1990b). The development of parliaments and democratic structures complicate the situation and give interest groups more direct influence over the specific policies that shape political institutions. However, this does not mean that the polities devised will necessarily be more efficient, since multiple interest groups have to negotiate with each other to gain sufficient influence. The result will often be the establishment of institutions that benefit one or several interest groups but not society as a whole. The close relationship between political and economic rules thus leads also to an inefficient framework of economic institutions.

Institutional change

The complexity of informal and formal institutions generates specific sets of opportunities for different individuals and different choices. The multiplicity of constraints that affect individual actors and choices also explains the relative stability of the institutional structure that allows adjustments at the margins rather than radical changes. Only groups or actors with sufficient bargaining strength will be able to alter formal rules.

North introduces the concept of organisations as “purposive entities designed by their creators to maximise wealth, income, or other objectives defined by the opportunities afforded by the institutional structure of the society” (North 1990a, p. 73). These organisations are also important agents in the process of institutional change. In maximising their preferences, organisations can choose between two options: They can make choices within the existing framework of institutions or they can try to change the existing constraints imposed by that framework. In the former case, organisations will aim to develop their knowledge and skills to take full advantage of existing opportunities. This will usually take the form of the development of both communicable and tacit knowledge (Polanyi 1967). Organisations will build a set of routines that derive from repeated interactions and thus shape their own specific stock of tacit knowledge, which evolves over time (Nelson and Winter 1982). However, North states clearly that it is not possible to draw conclusions from the outcomes as to what the original incentives for the building of knowledge were, since the consequences of even purposeful action cannot be readily anticipated. In the second case, organisations will devote resources to attempts to change the institutional framework. The success of an attempt to alter formal rules will again depend on the bargaining power of the organisation. This however, is rather an exceptional case as “formal rules are nested in a hierarchy” (North 1990a, p. 83) and a change in one rule at a lower level may well require to change another one on a higher level. However, institutions are also being altered incrementally in the interaction of economy and polity. North gives the example of investment in formal education, which not only gives rise to new organisations with specific interests in this field but also, through its perceived results, changes the perceptions of politicians and voters of the value of such an investment. These

changes again lead to modifications of the institutional framework. Whereas altering formal rules usually is the result of purposive action, informal institutions are often changed as the result of interaction between agents. Changes in relative prices² or changes in ideologies lead to new forms of interaction that do not conform with established norms of behaviour. However, as more and more interactions take place according to the same pattern, these particular norms will gradually be eroded and replaced by different norms.

Revolutionary change

Although North stresses that the predominant form of institutional change is incremental, there are also situations of discontinuous change, such as “[w]ars, revolutions, conquest, and natural disasters” (North 1990a, p. 89). Revolutions come about if an existing institutional framework does not provide enough dispute-solving mechanisms that would allow an incremental change in formal rules. The consequence is that those groups, which stand to gain from a radical change in formal institutions, will try to form coalitions. The aim of these coalitions is to break out of the deadlock, that results from unresolved disputes, by “strikes, violence, and other means” (North 1990a, p. 90). The institutional outcome of revolutions is usually unpredictable, since diverging interests exist within the succeeding coalition, leading to a lengthy period of compromise.

The result of a discontinuous change in formal institutions, however, means also that there will be a tension between the set of formal institutions and the established informal constraints. The existing informal institutions had “gradually evolved as extensions of previous formal rules” (North 1990a, p. 91). As informal rules are normally not changed as the result of purposive action and also have great survival tenacity, they require more time to change. The result is that adaptations occur to both the informal and the formal set.

² North gives the following examples for changes in relative prices: “changes in the ratio of factor prices..., changes in the cost of information, and changes in technology” (North 1990a, p. 84).

Path-dependency of institutional change

To explain the co-existence of efficient and inefficient institutional systems³, North draws a parallel between technological and institutional change, referring to Arthur's argument that small historical events can lead to one technology winning over others (Arthur 1988). According to Arthur, there are four self-reinforcing mechanisms that lead a particular technology to gain a monopolistic position, although the solutions derived from it might well turn out to be inferior to solutions potentially derived from alternative technologies. These mechanisms are:

- Large set-up or fixed costs, which give the advantage of falling unit costs as output increases;
- Learning effects, which improve products or lower their costs as their prevalence increases;
- Coordination effects, which confer advantages to cooperation with other economic agents taking similar action;
- Adaptive expectations, where increased prevalence on the market enhances beliefs of further prevalence.

Consequently, at the outset there is a situation of multiple equilibria in which several solutions are possible and the outcome is indeterminate. Also, the best technology will not necessarily prevail, since the early adoption of a particular technology might lead to a lock-in effect, i.e. it is difficult (and costly) to switch to another technology. Taken together, the self-reinforcing mechanisms mean that “the consequence of small events and chance circumstances can determine solutions that, once they prevail, lead one to a particular path” (North 1990a, p. 94).

According to North, the four mechanisms leading to technological path-dependence also apply – in slightly different form – to the process of institutional change. It requires considerable effort to set up a consistent framework of formal rules⁴. Subsequently, actors will experience learning effects as they adapt their choices to

³ Inefficient, in the context of North's study, are those institutions that do not promote economic growth.

⁴ North gives the example of the US constitution of 1787 (North 1990a, p. 95).

the new framework and therefore develop specific skills and knowledge. Moreover, actors complying with the established set of institutions will experience positive coordination effects in cooperation with others, compared to actors who act according to different rules. This is further emphasised by the development of informal rules that extend and modify formal institutions to create a complex system of constraints. Also, the repeated use of a specific institution by different actors will reduce the uncertainty about its permanence and therefore reinforce that rule. Imperfect information about possible alternatives and historically derived perceptions determine the subjective model of the world that individual actors have. This model in turn limits the perceived set of choices, which not necessarily includes the in terms of efficiency optimal solution.

The path of development that a particular institutional system takes is therefore shaped by the history of the system as well as by contingent factors that randomly work in favour of the adoption of a particular solution. Changes of the system usually take place incrementally along that path which, however, has by no means a deterministic meaning. Not only can the actions of actors within the institutional framework lead to an incremental change of direction, but also – as discussed earlier – revolutionary change is possible. However, the actual outcome of revolutionary change is also determined by the factors that shape the development path of incremental institutional change. A radical change of formal institutions in a revolution does not alter immediately the informal institutions and the historically derived perceptions of individual actors. As a result, the outcomes of different revolutions with similar objectives will differ according to the historical legacy of the societies, as North illustrates with the examples of the revolutions in North and South America, leading to independence from Britain or Spain.

Sociological critique of New Institutional Economics

The attempt to incorporate institutions into economic theory attracts criticisms from different angles. One of the protagonists of a critique from a sociological perspective is Mark Granovetter who is convinced that economic institutions can only be explained as social constructions (Granovetter 1992). His main criticism concerns the “narrow and fragile base” on which the “new economic imperialism”

(Granovetter 1992, p. 4) rests. The theorists of the New Institutional Economics – according to Granovetter’s view – neglect three classic sociological assumptions:

- Economic actors pursue a variety of objectives, including non-economic goals such as “sociability, approval, status and power” (Granovetter 1992, p. 4),
- Economic action is embedded in ongoing networks of personal relations and therefore cannot be explained by individual motives alone,
- Economic institutions are “socially constructed” (Berger and Luckmann 1966) and “do not arise automatically in some form made inevitable by external circumstances” (Granovetter 1992, p. 4).

Only a theory that takes these three suppositions into account will be constructed on a more solid foundation. However, the work of North seems to satisfy all three conditions. In the behavioural assumptions of his theory, he makes clear that the incentives for economic actors “are ones not simply of wealth-maximising behavior, but of altruism and of self-imposed constraints, which radically change the outcomes with respect to the choices that people actually make” (North 1990a, p. 20). He also maintains that altruism is not in all cases an extension of wealth-maximising behaviour, but that “issues of free-riding, fairness, and justice enter the utility function and do not necessarily fit neatly with the maximising postulates in the narrow sense” (North 1990a, p. 21).

This also feeds into the fulfilment of the second condition, since actors, according to North, are willing to trade individual goals of wealth maximisation for ideologies, altruism and self-imposed standards of conduct which usually benefit other members of a community or society. Personal relations play an important role in North’s theory, as the earliest and most basic coordinating mechanisms are based on social networks (North 1990a, p. 120). These mechanisms obviously still exist and are frequently incorporated in informal institutions that express “socially sanctioned norms of behavior” (North 1990a, p. 40) and appear nonsensical from a utility-maximising point of view. Other coordinating economic institutions became only necessary with an increasing complexity of trade and the spatial division of labour where no social relations existed. This is also consistent with Granovetter’s

observation that in the case of economic interaction across “boundaries of trust and social affiliation” it “would be a fair generalization to say that..., economic actors appear as if following the undersocialized model of action” (Granovetter 1992, p. 7).

Regarding the third assumption, North makes the evolution of institutions as a result of human interaction the central theme of his analysis. Berger and Luckmann (1966) also see institutions as the result of individual human interaction, which can easily be changed as long as only the original actors are affected by the institution. However, as more individuals become involved, the institution gains a certain objectivity, since it is perceived “as something other than a human product” (Berger and Luckmann 1966, p. 57). By complying with an established set of institutions and taking it for granted, “more possible alternatives to the institutional ‘programs’ will recede” (Berger and Luckmann 1966, p. 59), thus shaping the way in which the construction of the social world will occur. This is consistent with North’s view of the origins of institutions as “humanly devised constraints” (North 1990a, p. 3). According to North, informal institutions in particular evolve – and are also changed *de facto* – through interaction of social actors. Formal institutions are established and altered through purposeful action by powerful actors or by coalitions of actors in society. In any case, institutions are influenced by society, as their actual form reflects the power structure between individual actors or groups of actors in a society. However, it seems that Granovetter’s definition of what exactly constitutes an institution differs from both North’s and Berger and Luckmann’s. Whereas North perceives all humanly devised constraints to human interaction as institutions, Berger and Luckmann define institutions as “a reciprocal typification of habitualized actions by types of actors” (Berger and Luckmann 1966, p. 51), i.e. a recognised pattern of interaction between individuals that derives from repetition and structures all further interaction perceived to be of the same kind between actors, which are also apprehended as belonging to the same type. Granovetter, on the other hand, defines the term ‘economic institutions’ implicitly by referring to “firms, industries and inter-industry groups” (Granovetter 1992, p. 6). These structures according to North are organisations that develop as a consequence of the institutional framework. It could be argued, on the other hand, that the set of rules governing such an organisation again constitutes an institutional framework for the individuals within

the organisation. Although this would be compatible with North's notion of institutions, Granovetter's definition still appears to be narrower.

North falls neither in the culturalist nor the functionalist category, in which Granovetter groups economic theories of institutions. North mentions culture as an important factor shaping the actual form of informal constraints, but in no way does this cultural influence predispose a society to a particular institutional outcome. Instead of being an actively normative factor, culture, according to North, plays rather a retarding role as "the persistence of cultural traits in the face of changes in relative prices, formal rules, or political status makes informal constraints change at a different rate than formal rules" (North 1990a, p. 87). Moreover, North's conception of institutions is not functionalist, which, however, constitutes a considerable change compared to his earlier work in which he saw institutions as efficient outcomes of evolutionary problems (North and Thomas 1973). This shift has been recognised by Granovetter (Granovetter and Swedberg 1992, p. 15) as well as other critics of the New Institutional Economics (compare e.g. Bardhan 1989). North now contends that the "regularized interactions we call institutions may be very inadequate or very far from optimal" (North 1990a, p. 23). This is due to the complexity of the environment that makes it difficult for an actor to link *ex ante* action and exact outcome. As North states: "the maximising efforts of entrepreneurs have frequently unanticipated consequences" (North 1990a, p. 78). Another example is the set of economic institutions derived from personal relations and kinship ties. At no point does North suggest that trust, which actually lowers transaction costs, derives from its economic necessity. On the contrary, he contends that lower transaction costs in dense social networks are an *addition* to their main properties, thus making clear that these networks did not evolve as response to economic pressures (North 1990a).

Another criticism usually brought against theorists within the New Institutional Economics is that they neglect the importance of the entrepreneur. Again, this cannot be said about North's analysis. He devotes a large part of his treatise to the role that organisations play in institutional change. These organisations are "groups of individuals" (North 1990a, p. 5) and as such "purposive entities designed by their creators to maximise wealth, income, or other objectives" (North 1990a, p. 73). This

bears some resemblance to Granovetter's statement that "economic activities are carried out not by isolated individuals, but by groups that entrepreneurs get to cooperate in such larger entities as firms, industries and inter-industry groups" (Granovetter 1992, p. 6). Furthermore, North stresses the importance of entrepreneurs as the agents of institutional change (North 1990a). By forming intermediary organisations between economic organisations and political bodies entrepreneurs will aim to influence the direction of political change and therefore of the path of change of formal institutions. Again, individual action aiming to mobilise resources seems to be the crucial factor in the emergence of a particular form of institutions.

When it comes to explain the 'lock-in' of a particular institutional form or the 'path-dependency' of institutional development, both North and Granovetter draw parallels with the studies by Arthur (1988) and David (1986) that examine the causes of path-dependency in technological development (North 1990a; Granovetter 1992; Granovetter and Swedberg 1992). Both also agree on the importance of contingencies outside the economic sphere that determine the actual outcome of institutional development, starting from a situation in which several outcomes would have been possible. North attributes much of these contingencies to history and to cultural influences on the change of informal constraints (North 1990a), whereas Granovetter clearly sees "existing networks of personal and political relations " as the main contingent factor (Granovetter 1992, p. 10).

Possibly the main obstacle for Granovetter to accept North's approach was the fact that North in his earlier work defined institutions as an "efficient outcome of rational individuals pursuing their self-interest" (Granovetter 1992, p. 4). However, as Granovetter has acknowledged, North abandoned this view and cautions explicitly against the use of efficiency criteria as the key to institutional analysis. It seems therefore possible to reconcile the two approaches, bearing in mind the differences in focus that still exist. North aims to explain differences in economic performance between different societies and therefore the *results* of economic institutions, whereas Granovetter focuses on the social factors that lead to the *formation* of economic institutions. Thus, the two theories have potential to complement each other. Whereas North refers to non-economic motives of economic actors and the

importance of 'cultural' legacies, he still leaves them largely unexplained in their origin (Thelen and Steinmo 1992). At this point, Granovetter's assertion of the social embeddedness of economic institutions yields additional explanatory power. However, due to the broader concept of institutions, North's theory appears superior for the analysis of large-scale historical developments such as the macro-transition in Central and Eastern Europe. As the following discussion of the transitional process will show, the concept of the duality of formal and informal institutions is a particularly powerful instrument to explain the current difficulties in Central and Eastern Europe. Granovetter's approach on the other hand appears to be more useful with respect to the analysis of adjustment mechanisms and of the development of institutions at a micro-level.

Institutional aspects of the transitional process

In following the logic of North's approach to institutional change, it is necessary to look both at the formal and the informal constraints in present-day transitional countries. Whereas many formal rules were replaced by institutions that supposedly represent a functioning market economy, the legacy of the socialist past has wider repercussions in the realm of informal institutions. These informal rules, in turn, are also a result of social interaction within the framework of the previous, real-socialist system.

Under the planned-economic system, state bureaucracies were expected to undertake all coordinating functions that were previously left to the market. The intended structure was highly centralised with several layers of bureaucracies that would pass on decisions about production targets and resource allocation. State ownership of the means of production facilitated the state control over the production sphere, in the sense that a continuous hierarchy ranged from the politburo at the top of the state to the level of individual enterprises (Kosta 1984). The all-pervasive structure of the system also led to state/party influence in all other aspects of public life.

This basic model underwent several reforms and changes over time in different countries, resulting in two different types of planned economies: a central-hierarchical system and a decentral-parametric model (Kosta 1984). Virtually all

countries of East-Central Europe, with the exception of Hungary and Yugoslavia, adopted the former model in trying to overcome problems of planning by a reinforced centralisation process. Grabher (1994) describes the process of concentration and specialisation in the *Kombinate* of the GDR as one example of the strengthening of a central-hierarchical system. The decentral-parametric model, on the other hand, relied on indicative planning and introduced a limited range of market mechanisms into the economic coordination process.

However, even the decentral-parametric systems had properties that led to persistent shortages in the economy (Hare 1982). Kornai (1980) attributes continuous shortages in socialist economies to the 'soft budget constraint' of enterprises. Shortage in the sense of excess demand usually arises in resource-constraint economies, i.e. an economy in which firms are prevented to meet a rise in demand by their inability to secure resources from supplying more output. This constraint on resources is not linked to low capacities, but rather to the system of signalling shortages and surpluses in a centrally planned economy. The emphasis of planning in most socialist countries was on output growth rather than on efficient allocation of resources. Therefore, enterprises developed a virtually infinite demand for inputs. In the negotiation process between the different layers of the bureaucracy, enterprises were able to influence decisions on higher tiers through the information that they chose to pass on and through the inevitable lack of detail in the planning indicators (Kosta 1984). The plant managers frequently used this scope in negotiations to obtain additional resources. Even in reformed models of a centrally planned economy which placed more emphasis on profitability, state-owned firms tried to secure – and usually received – additional funds in the form of subsidies or tax favours. Kornai's term of the 'soft budget constraint' refers to this lack of rigidity in the budget of companies due to interactions between firms and planning agencies. Bankruptcy was not a realistic threat that led companies to an efficient allocation of resources and banks were rather "passive instruments for central financial control over the productive sphere" (Schmieding 1993, p. 234). In the absence of meaningful price signals it is the experience of real shortage and slack at the individual firm level that indicates excess demand or supply to the planning authorities. The result are managerial practices such as hoarding and forced substitution (Nee and Stark 1989).

Due to the peculiarities of the socialist systems, also a distinctive set of patterns of individual behaviour developed. Sztompka identifies three different processes through which the “legacy of real socialism” (Sztompka 1991, p. 298) survived into the new era. Firstly, the socialist formal institutions and ideological structures, which became impressed on people through indoctrination, still affect cultural codes. Second, due to the shortcomings in daily life in a socialist society, people developed adaptive reactions which “become petrified in social structures, cultural patterns, and popular consciousness, and remain fully operative in post-communist society” (Sztompka 1991, p. 299). Thirdly, the experiences of the final phase of socialist rule, the feelings of enthusiasm and hope, also survived into the transition phase and frequently led to disappointment with the actual achievements of the new system. The former two deserve particular attention as legacies of the socialist system.

The tension between official doctrines and formal institutions on the one hand and the adaptive reactions on the other led to an opposition between the private, or personal sphere of life, and a public, or official, sphere. However, the two spheres had different moral values. The public economic sphere was characterised by inefficiency, reluctance to take decisions and the neglect of state property. This stands in marked contrast to the discipline and devotion found among self-employed people, the self-reliance and initiative in family matters and the extensive care for private property. In society, people would be rather submissive and conformist, whereas self-realisation and individual achievement were important in private life. Citizens perceived the state authorities as hostile and inefficient and the information provided by the state media was received with scepticism. On the other hand, private connections and networks were frequently idealised and information transmitted through personal contacts was seen as much more trustworthy (Sztompka 1991). Sampson (1985) gives the example of underground cells of Solidarity, which were sheltered from the police by social ties. Many of the groups were internally connected by kinship or village ties. Thus the most serious opposition to the public sphere of the socialist state was organised in the private sphere and through that it also gained higher credibility.

The basic opposition of the public and the private spheres consequently led to particular patterns of social interaction. The dissociation of public declarations and

conduct introduced double standards. Although each person involved knew about the discrepancy between public announcements and reality, everybody would 'play the game'. Sztompka gives the example of factories that were ceremoniously inaugurated just to be closed the day after since only the facades of the building existed (Sztompka 1991). In the private sphere these contradictions were fully recognised and thus further undermined the credibility of the system. The logical consequence of this was that it was not perceived as morally wrong to take advantage of the system by using loopholes or even to commit outright fraud. Most people would try to achieve their private goals – economic or non-economic – “in spite of the system” and not “through the system” (Sztompka 1991, p. 303). Especially those who were active in the private economic sector developed a 'grab-and-run' attitude since regulations could change virtually overnight and eliminate existing business opportunities. However, not all adaptive reactions resulted in economically detrimental patterns of behaviour. Grabher (1994), for example, observed that in the former GDR informal supply networks based on personal contacts helped to relieve shortages in the state-owned *Kombinate*. Following the customary double standards of rhetoric and practice, these networks were tolerated even in the strictly central-hierarchical system of the GDR. Another case in point is the informal economy that helped to maintain the economic system throughout East-Central Europe. It did so, according to Stark (1989), by introducing the market mechanism to cope with uncertainties produced by a bureaucratic environment in contrast to bureaucratic elements in Western economies, which reduce market uncertainties.

The task of creating a new structure of formal economic institutions to replace the old socialist system is extremely complex. Schmieding (1993) identifies seven basic issues for legislation: the introduction, definition, and protection of private property; the passing of a contract law; the installation of an independent and impartial resolution mechanism for legal conflicts; the reshaping of the banking system and the establishment of financial markets; the creation of a reliable medium of exchange and store of value in the form of a national currency or a currency board; the creation of a new civil service to perform regulatory tasks; and the design of new social security system. Although the creation of a legal system addressing these issues is in itself already a difficult undertaking, matters are further complicated by the need to

implement the system through new organisational structures such as banks, courts and administrations, for which people need time to develop the appropriate skills, know-how and routines. Because of the complexity and interrelatedness of these formal institutional arrangements, the initiators of the reform process in Central and Eastern Europe had to look for models of functioning market-economic sets of institutions. However, the new systems cannot be designed from scratch, but are created by “replicating old or spatially distant” models, i.e. combining institutions of the pre-socialist era with ones imported from or imposed³ by Western market economies (Offe 1995, p. 54). One of the problems arising in the process is that, as Offe (1995) noted, the models of the past and those from abroad are frequently contradictory. Furthermore, the sequencing of reforms often created incoherent situations with perverse incentives for the economic actors. Thus, for example, managers were left in charge of companies from which they could be certain to be removed in due course (Schmieding 1993). Likewise, newly designed institutions (and also imported models) are seen by the public as serving their architects and not so much the society as a whole (Offe 1995). As a result, the newly installed institutions lack the credibility that similar institutions have in societies in which they evolved over time as an interactive process between social groups (Pejovich 1996).

Such a lack of credibility helps to perpetuate organisational behavioural patterns inherited from the socialist system. This is particularly true for those routines, which served as an extension of formal rules under the socialist system. According to Nelson and Winter (1982), organisations develop specific sets of routines to facilitate exchange within the organisation as well as between the organisation and the economic, social and political environment. A change in routines is constrained by the existing set of knowledge and skills embodied in routines and will therefore be rather gradual, even in a situation of radical change in the environment (Murrell 1992). The organisations that existed in Central and Eastern Europe in 1989 possessed sets of routines that reflected the reality of the socialist era. In particular, company managers had developed patterns of interaction, which allowed them to maximise resources in negotiations with planning authorities. On the other hand,

³ Giffin points out that the import of Western models was not always voluntary, but induced by coercive measures by international institutions such as IMF and World Bank (Giffin 1994).

firms had usually no knowledge of the possible impact of market demand for their products. They “structurally overestimate the residual demand that they face, underestimate the elasticity of demand, and set their prices too high once they have been liberalized” (Swaan 1996, p. 224). Also, the criterion of efficiency in resource allocation is neglected in a managerial practice that derives from the soft budget constraints inherent in the centrally planned system. Since the banking sector, even after the changes, was frequently almost exclusively state-owned, the former pattern of interaction between managers of state-owned firms and banks was perpetuated in the post-socialist era (Schmieding 1993) and thus inhibited borrowing by newcomers. The revolutionary change in formal institutions after 1989 and their subsequent lack of credibility led to a sudden increase in uncertainty for existing organisations. Since the new system of formal constraints is perceived as incoherent by managers of companies, it fails to give a clear direction to their development of new skills and behavioural patterns. Consequently, the search for new routines involves more trial and error situations than adaptations within an established framework of formal institutions. Thus, as a result, the learning process is more time-consuming and more costly than that of organisations in mature market economies (Schmieding 1993). Moreover, as Nelson (1981) pointed out, the reaction in organisations in situations of extreme adversity can lead to a stoppage of the adaptation process altogether. It is worth noting, however, that organisations in countries such as Hungary, which introduced reforms towards organisational efficiency already in the socialist era, have a natural advantage over others (e.g. Hooley 1993)

Murrell therefore concludes that it would be more beneficial to focus resources on the creation of new firms, rather than on the restructuring and privatisation of old state-owned companies (Murrell 1992). However, as Swaan points out, newly emerging firms are not necessarily in any better position to adapt to the changes (Swaan 1996). The new entrepreneurs are subject to constraints similar to those of managers of state-owned firms. One reason for this is the origin of many new firms in the former second economy, which also was resource-constrained whereas the new economic system brings about constraints from the demand side. Secondly, new entrepreneurs will also perceive the new institutional system as generating uncertainty and instability. As a result, potential investors will be reluctant to put

their capital at risk in new businesses, hence slowing down the reallocation of resources in transitional economies. A third consequence of the institutional uncertainty, according to Schmieding (1993), is the perception that the legal enforcement of the contract law is unreliable. "Rational economic agents will thus prefer simultaneous exchanges or resort to comparatively costly private enforcement mechanisms – or they will conclude contracts only with those few partners with whom the perceived probability of future exchanges is high enough to make the agreements self-enforcing" (Schmieding 1993, p. 238). This underlines the importance of existing networks of personal relations which, according to North (1990a), provide the most basic form of enforcement mechanism in social interaction. However, the complex division of labour of modern industrial societies requires the application of wider mechanisms of enforcement. The perceived uncertainty of the newly installed contract law thus has negative effects on new firms in at least two ways. Firstly, private entrepreneurs have no confidence that larger business partners – particularly state-owned firms – will live up to the agreement set out in the contract. Consequently, the choice of potential business partners will be severely limited. Secondly, banks will be reluctant to give loans to private business start-ups, since they have no experience in monitoring the performance of small firms and therefore fear that they might not be able to recover the credits they granted.

However, some of the institutional legacies of the socialist system can help to facilitate the transition to a new system in which the informal institutions 'fit' the formal systemic structure (Murrell 1992)⁶. The preservation of certain institutional arrangements can reduce the complexity of the changes that affect the post-socialist economy and society. Grabher and Stark argue also that the combination of new market-economic institutions with socialist legacies "increases variety and diversity within the 'genetic pool' for the evolution of new organizational forms" (Grabher and Stark 1997, p. 6). These two authors stress particularly the importance of informal networks as a means to achieve a smoother adaptation to the changed environment. The influence of those networks ranges from shaping the actual design

⁶ Murrell refers to macro-economic functions that were performed relatively well by the socialist system, such as budgetary, financial, and monetary stability (Murrell 1992, p. 50). This, however, might have applied only for the earliest phase of the transition process.

of the macro-economic policy measures (Stark 1995) to trust as an enforcement mechanism in economic exchange. In many cases informal, inter-personal networks serve as a substitute for the certainty that existed under the old system and buffer economic actors against the negative selection process. This can give those organisations and individuals the time necessary to adapt to a changed environment.

In conclusion, it seems that many of the current difficulties of the transition process in Central and Eastern Europe can be attributed to the friction between a rapidly changing structure of formal institutions and a system of informal institutions that is based on behavioural patterns which developed during the socialist era. Whereas the pre-reform informal institutions are still being reproduced in only gradually changing form, the problem is exacerbated by the not always consistent policies implemented to create a market-economic institutional framework. Both formal and informal constraints have to adapt to each other and the result will certainly be distinctively different from any particular Western market economy, hence exhibiting a pattern of path-dependence. Although many of the existing informal constraints are not conducive to economic efficiency, they still provide a structure necessary for social exchange. Without the existing informal institutions, the complexity of the environment would overwhelm individuals and render them unable to interact.

The key to an adaptation of informal institutions along the lines envisaged by the market-economic reformers seems to be the credibility of the new formal institutional framework. Only if the system provides a stable, coherent and reliable environment for social interaction, can it be expected that behavioural patterns will ultimately fit this framework. In this context it is also important to bear in mind that the private sphere and contacts based on inter-personal relation play a particular role in post-socialist societies. In the socialist era, personal informal networks had a higher credibility than state institutions and this is likely to be reinforced in the process of transformation. The state or public sphere was treated with scepticism and needs to regain the trust of its constituents. It therefore needs to build on the constructive elements of the existing informal institutions, which are most likely to be found in the private or personal sphere.

Chapter2: Inter-firm cooperation – Some theoretical considerations

In the last two or three decades, the importance of forms of economic governance other than markets has been increasingly recognised. However, whereas the early New Institutional Economics (e.g. Williamson 1975) focused much on the dichotomy between markets and organisational hierarchies, other theorists, from a range of disciplines, paid more attention to non-market arrangements between organisations as a third mode of governance. As early as 1972, Richardson described how, under certain circumstances, cooperation between distinct organisational units can be more advantageous than a market exchange (Richardson 1972). There is now a whole variety of approaches to explain and analyse inter-organisational cooperation¹. According to Sydow (1992), the approach based on transaction cost analysis, as developed further by Williamson (1985), is the dominant concept in network analysis. A review of an approach to network analysis in the tradition of Williamson also provides a good starting point for a theoretical discussion because it falls – like North's theory of institutional change discussed earlier – in the school of the New Institutional Economics. Thus, the debate of the preceding chapter about the appropriateness of transaction cost theory as a tool for institutional analysis will be continued. This chapter will briefly review the transaction-cost framework according to Williamson and then examine the sociological critique, which was put forward by Granovetter (1985) in developing the concept the social embeddedness of economic relations. It concludes that the sociological perspective has more explanatory power than the transaction cost approach in explaining the formation of social or economic institutions. Consequently, the chapter offers network-analytical categories based on the embeddedness concept and these categories are then used to examine some of the most prominent examples of the Western network literature.

¹ Sydow (1992) distinguishes broadly between economic, political, polit-economic, and inter-organisational theories. These categories, however, can again be divided in several, sometimes conflicting, sub-categories.

The transaction-cost framework

Although Williamson stressed the dichotomy between markets and hierarchies in his earlier writings, he acknowledged that “transactions in the middle range are much more common” than previously suggested in his analysis (Williamson 1985, p. 83). He now rather assumes, as suggested by Richardson (1972), a continuum with discrete markets on the one hand and hierarchical organisation on the other. However, the main principles of the analysis of economic relations remain the same.

Williamson’s approach starts with the assumption that markets are the “natural” mechanism of economic organisation (Williamson 1975, p. 21). Market failures, however, lead to the substitution of certain market relations by relations within a firm. The deficiencies of the market system are rooted in two behavioural characteristics of human beings, namely bounded rationality and opportunism, as well as two situational factors, namely complexity and the number of transaction partners. Bounded rationality is caused by the limited capability of individuals to handle information and to difficulties in communicating information and knowledge, due to neuro-physiological limits and language incompatibilities. Both deficiencies are relevant in situations that are complex and involve uncertainty. In case of absolute certainty, it would be only a matter of time to find the right allocation of factors and bounded rationality therefore plays only a marginal role. If the situation in question, however, is of merely minor complexity, the limits of human capabilities might not be reached thus bounded rationality does not come into effect.

The second behavioural factor leading to market failures is that of opportunism, which in Williamson words is “self-interest seeking with guile” (Williamson 1985, p. 47). Strategic manipulation of information might serve as an example for opportunistic behaviour. Consequently, contracts between economic actors have to be constantly monitored, since participants who potentially pursue opportunistic strategies cannot be identified *a priori*. Williamson argues that small numbers support the existence of opportunistic behaviour, i.e. it is more likely to occur in cases where an economic actor has the choice of only few potential partners (Williamson 1975). In

contrast, large numbers of potential partners make it more likely that opportunism is revealed and punished. In economic reality, however, even an initially large number of bidders for a contract are frequently reduced to a small number once a contract is concluded, due to the fact that over time contract partners develop a certain asset specificity (Williamson 1985). In the case of a contract for specified goods, both partners have to adapt their production to the specifications laid down in the contract. Consequently, the previous situation of competition is reduced to a bilateral monopoly.

Internal organisation, however, provides the means to reduce the impact of these market imperfections. As organisations deal with uncertainty and complexity by sequential methods, it is not necessary to develop a comprehensive plan of decisions in advance. The flexible nature of the internal contracts rather allows for adaptive steps when new situations emerge. Another advantage of internal organisations is the development of a common language that helps to overcome the communication problems inherent in relations between individuals. Furthermore, due to converging expectations of economic actors within the organisation, the uncertainty about future actions of partners is reduced as well.

Three features check the tendency towards opportunistic behaviour within firms. The first is the reduced chance of subgroups to make gains at the expense of the whole, since every loss of the enterprise at least in the long run also affects each subgroup within the organisation. Secondly, it is easier to monitor the performance of members of the organisation than that of outside partners. This is due to the full use of formal information and the potential use of informal information within the firm. Thirdly, the dispute settling mechanisms within firms work more smoothly than those in the market.

These basic assumptions of behavioural and situational factors leading to market failures are supplemented by three additional, transaction specific factors: Transaction

frequency, transaction atmosphere (Williamson 1975) and information impactedness³. They offer further reasons for the internalisation of transactions. Generally speaking, the more frequent a particular transaction occurs, the more advantageous it will be to internalise this transaction into a hierarchy. Secondly, a hierarchical organisation often provides better than the market an atmosphere of trust and a similar level of information for all transaction partners, thus overcoming information impactedness.

However, Williamson recognises that the distinction between the two governance structures is not clear-cut. The advantages of hierarchical organisation will diminish with growing firm size. Williamson lists a number of counteracting factors that eventually are rooted in the same mechanisms which also cause the above mentioned market failures (Williamson 1975). Bounded rationality becomes the more an obstacle the more the hierarchy is extended, due to increasing information loss through internal friction. In addition, the fact that in larger organisations the leaders are more likely to be beyond the control of lower-level members furthers opportunistic behaviour by the former. Finally, the willingness of low-level participants to cooperate decreases with the size of the hierarchy, due to a lack of consciousness to belong to the same group. This potentially causes free-rider behaviour, again limiting the effectiveness of internal organisation. In addition, the more complex the structure of an enterprise, the higher are generally the internal transaction costs.

A less frequent transaction, however, might be better done on the market, even in case of a large specific investment. The hierarchy is also inferior to external co-ordination in case of low complexity of transactions and large numbers of suppliers respectively customers.

Thus there are some preconditions for a firm to fully externalise certain activities:

- low complexity of environment

³ Information impactedness according to Williamson is a “derivative condition in the organizational failures framework”. It is attributable to a pairing of uncertainty with opportunism leading to a situation of asymmetrical information which can be overcome only at great cost by the disadvantaged party (Williamson 1975, p. 31).

- large number of potential partners
- investments not tied (at least not to a large extent) to certain transactions
- similar level of information for all partners
- frequency and environment of transaction has to be conducive to market transaction (e.g. sophisticated contract law, appropriate market information system)

However, Williamson allows also for cases of quasi-internalisation respectively quasi-externalisation, depending on whether the activity was formerly done within the firm or by an independent company. The term 'quasi' refers to cooperative links between formally independent organisations. According to Jarillo (1988), this is the appropriate form of coordination in case of a marginal difference between the transaction costs of internal and external organisation of a particular transaction. In this instance, the hybrid form of market and hierarchy might yield the best results (Sydow 1992).

There are several advantages of an externalisation into a network. The most important of these advantages is that it offers the opportunity to combine the instruments of co-ordination of hierarchies with those of the market. As normally an atmosphere of trust exists between the cooperating partners, the flow of information is better than among competing firms. This leads automatically to lower costs for finding the appropriate partner for a transaction. In addition, innovation can be introduced at the same time in the network as a whole. In a vertical network, for example, suppliers and customers may adjust their production to a local innovation.

On the other hand, opportunistic behaviour is avoided due to the threat of exclusion from the network. This is an instrument that does not exist within firms and therefore is an advantage of the network over both the market and the firm. Furthermore, within companies the real costs are very often inscrutable. Within the network transactions are performed according to 'real' prices (i.e. mutually accepted or 'negotiated' prices) which makes it easier to decide whether an activity should be internalised.

Quasi-internalisation, on the other hand, is likely to occur if a firm decides that the transaction costs for conducting a certain activity on the market are too high but it is not able to internalise the activity fully, for example by high acquisition costs or a lack of managerial capabilities. Conducive to quasi-internalisation is further the prospect of achieving cheaper access to resources or the reduction of uncertainties concerning future demand or supply of specialised goods, thus the same reasons that may lead to a full integration of an activity.

The concept of embeddedness

Even though the transaction theory delivers some convincing points for the emergence of cooperative networks, it fails to create the basis for a universal theory of networks.

The main critique that Granovetter offers to the transaction cost approach addresses that it explains institutions as “the efficient solution to certain economic problems” (Granovetter 1985, p. 488). Transaction cost theorists in the tradition of Williamson suggest that specific organisational forms are able to solve certain market failures which are due to bounded rationality and opportunism. Granovetter, on the other hand, points out “that most behavior is closely embedded in networks of interpersonal relations” (Granovetter 1985, p. 504) which blurs the boundaries between organisations on the one hand and the market on the other hand. Since under both modes of governance the economic actors are tied into networks of social relations, the actual behaviour of individuals might differ from the one expected from an efficiency point of view. Therefore, only “pressures” exist towards a particular mode of governance and there is no guarantee that the “most efficient one will be the one observed” (Granovetter 1985, p. 503).

The embeddedness approach refers back to Karl Polanyi who saw the neglect of social structure in the explanation of economic activity as a relatively recent development in economic theory. Concluding from human history before industrialisation and contemporary observations of tribal societies, Polanyi shows that “economic motives spring from the context of social life” (Polanyi 1944, p. 47). This

is the basic problem of liberal market economies: "The true criticism of market society is not that it was based on economics ... but that its economy was based on self-interest" (Polanyi 1944, p. 249). The motive of self-interest, however, is considered by Polanyi as not compatible with human nature and society (Polanyi 1944). Granovetter, on the other hand, does not agree that market economies are entirely governed by the pursuit of self-interest. The atomisation process of society in liberal market economies, which was stated by Polanyi, is not complete. Granovetter maintains that the level of embeddedness "continues to be more substantial than is allowed for by formalists and economists" (Granovetter 1985, p. 483) and therefore considerable contingencies exist on rational economic behaviour in the sense of cost-minimisation or profit-maximisation.

Zukin and DiMaggio distinguish four different kinds of embeddedness: Cognitive, cultural, political, and structural embeddedness (Zukin and DiMaggio 1990). Cognitive embeddedness refers to the limits to economic rationality that are imposed by the structures of mental processes. To some extent, Williamson, in his analysis, takes this form of embeddedness into account by developing the concept of 'bounded rationality' although he probably underestimates its impact (Zukin and DiMaggio 1990). Economic behaviour is also culturally embedded in the sense that certain socially agreed values, assumptions or beliefs can impede transactions that otherwise might appear as economically rational. This form of embeddedness is a useful analytical concept in cross-national comparisons, yet it plays a lesser role in analysis if all actors act within the same cultural framework. The political kind of embeddedness refers to the restrictions imposed by those economic institutions that are not the result of economic decision-making in the sense of cost-minimising or profit-maximising but evolve through inequalities in power among economic and social actors. The result of public policy negotiations is to a large extent based on the power of the actors involved. Therefore the struggle for power and influence also provides motives for economic and social action.

The fourth form of embeddedness is the type that Granovetter is primarily concerned about: structural embeddedness. His embeddedness approach takes into account the dyadic relations of actors as well as structure of the overall network of relations

(Grabher 1993a). Granovetter argues that actors “do not behave as atoms outside a social context... Their attempts of purposive action are instead embedded in concrete, ongoing systems of social relations” (Granovetter 1985, p. 487). His approach pays attention to the history and future of relations, thus explaining behaviour that – considered in isolation – seems to be irrational. A crucial element in these relations is trust that is not only based on social institutions like “generalised morality” (Granovetter 1985, p. 489), but is developed in personal relations. Whereas, according to transaction cost theory, opportunistic behaviour is checked by contracts between actors, Granovetter argues that personal trust is the normal and more efficient way to prevent deceptive behaviour. In the under-socialised conception of economic action there is a cost to malfeasance first by potential penalties from the breach of the contract and consequently by damage to the reputation of the culprit. Reputation in this context is little more than a “generalised commodity” (Granovetter 1985, p. 490) which would be traded against economically promising opportunities for malfeasance. However, empirical observations show that actors usually prefer to deal with partners who they know or who are at least known to trusted informants. The trust among partners then increases as more transactions are successfully conducted between them. Thus, personal relations – not only of dyadic but also of triadic nature – play a crucial role in the production of trust. Even if originally both actors were not linked by social ties, “continuing economic relations often become overlaid with social content that carries strong expectations of trust and abstention from opportunism” (Granovetter 1985, p. 490). However, this mechanism against opportunism cannot be taken as a general principle upon which an economic order can rest. The reason for this is that social networks are not all-penetrating and irregular. Granovetter mentions in this context entrepreneurial networks, which are based on ethnic ties and therefore not open to outsiders (Granovetter 1992). Moreover, once actors rely on trustworthy behaviour by their partners, they become also more vulnerable: “The more complete the trust, the greater the potential gain from malfeasance” (Granovetter 1985, p. 491). Granovetter mentions embezzlement as a typical crime that only can be committed where a trust relation exists (Granovetter 1985). Furthermore, there is also the possibility that high levels of trust are used to bind groups of malefactors together and it is exactly the feature of trust that makes it so hard to break into those networks from the outside.

Thus, Granovetter does not see the overlapping of social and economic networks as necessarily positive. In this sense, his arguments set the embeddedness concept apart from the New Institutional Economics in rejecting a functionalist view of institutions. As certain economic institutions are primarily based on existing social ties, they have the inherent risk that non-economic goals will take priority. Granovetter gives the example of cases where “the welfare of the local community is put ahead of that of the business as such” (Granovetter 1992, p. 7). Another danger is that institutions based on social relationships might become ‘locked in’. Grabher illustrates this lock-in with the example of regional development in the Ruhr area in Germany. In this case, the institutions, in which economic action is embedded, ensured initially that the region was very successful, but have now “turned into stubborn obstacles to innovation” (Grabher 1993b, p. 256) due to the strength of the established ties.

The main differences regarding network theory between transaction cost economics and the embeddedness approaches lies therefore in three points. First, all economic actors exist within a concrete network of social relations. As a consequence, the dichotomy of atomised individuals in the market versus actors tied together in a hierarchical organisation with a uniform set of objectives is misleading, since market relations are overlapping with social relations and interpersonal ties also link individuals inside organisations with others on the outside. Consequently, for the same reason also the assumption of a continuum from market to hierarchies does not reflect reality. Secondly, the embeddedness approach also rejects the functionalism implied in transaction cost analysis in the tradition of Williamson. Social embeddedness of economic relations does not necessarily serve the purpose of economic efficiency. It rather creates both specific opportunities as well as certain constraints on the economic actor. Lastly, Granovetter considers the predictions of transaction cost economics as too deterministic. He stresses the importance of contingent factors that influence the actual outcome and compares this to physical multiple equilibria (Granovetter 1992). The specific economic conditions in a situation restrict the range of possibilities whereas the existing social structure determines the actual outcome. Therefore under similar economic conditions, different solutions are possible that, however, still represent a ‘rational’ choice by the economic actors (Granovetter 1985). Taking up this point, Granovetter agrees that in

“a broader formulation of rational choice... the two views [embeddedness concept and transaction cost analysis] have much in common” (Granovetter 1985, p. 505). Also Williamson, in his response to Granovetter’s critique, stresses the similarities of the two approaches, acknowledging at the same time “that the institutional environment matters and that transaction cost economics, in its preoccupation with governance, has been neglectful of this” (Williamson 1994, p. 84).

Embeddedness and inter-organisational networks

There is an ongoing debate about the exact definition of inter-organisational networks (compare e.g. Powell 1990; Nohria and Eccles 1992). According to Nohria, the term is either “used to describe observed patterns of organization” or even in a normative way “to advocate what organizations must become if they are to be competitive in today’s business environment” (Nohria 1992, p. 1). In search for appropriate responses to the ever-increasing volatility of the business environment, the typical response is to improve the organisational flexibility through the creation of inter-firm networks (Sydow 1992). Although many of the examples of successful networks exhibit significant reductions in transaction costs between the network firms, transaction cost analysis cannot always explain why this particular principle of organising is applied. In most cases, it is the social embeddedness of particular economic ties that makes the network a feasible or even superior form of organisation. In the following, four constituent elements of networks will be considered that derive from the embeddedness concept. They highlight the main characteristics of inter-firm networks, which go beyond the most basic definition as “sets of connected exchange relations among actors” (Håkansson and Johanson 1993, p. 40).

In line with the arguments of Granovetter’s embeddedness concept, Grabher (1993a) distinguishes four basic features that can be identified in all kinds of organisational networks: reciprocity, interdependence, loose coupling, and power relations. Reciprocity was already identified by Polanyi as one of the ordering principles of an economy that is embedded in social relations (Polanyi 1944). According to that author, this principle is based on the implicit expectation of members of the network

that over the whole length of a particular relation there will be a pay-off in rewards. Polanyi stresses that the pay-off does not have to be returned “necessarily by the same individuals” (Polanyi 1944, p. 47). It is the network of relations as a whole over the entire period of its existence that eventually delivers the rewards for individual exchanges. Powell explains that the sociological understanding of reciprocity entails a measure of imbalance, which generates obligation, i.e. “a means through which parties remain connected to one another” (Powell 1990, p. 304). According to Axelrod (1984), on the other hand, reciprocity means that each action triggers an immediate response of the same type, i.e. cooperation is answered with cooperation and defection with defection. Also this kind of reciprocity, however, is a robust rule for interaction only if a long-term perspective is adopted, since in a single transaction it might be the rational choice to respond to cooperation with defection. Thus, following both definitions, a single cooperative exchange taken in isolation might seem disadvantageous to one party but considering past and future of the relation might well be sensible.

The second feature is that of interdependence. If markets, according to Williamson’s dichotomy (Williamson 1975), are characterised by independent actors and hierarchies by dependent actors, then networks can be characterised as interdependent. In other words, the entities develop a mutual orientation that can be embodied in a common language, a common business ethic and in common procedures. This also produces generalised expectations of cooperation that “reduce the cognitive complexity and uncertainty associated with most business dealings” (Powell and Smith-Duerr 1994, p. 385). That in turn saves time and costs when constructing and controlling contracts. Again, the creation of mutual interdependence involves the building of trust relations that can only be explained when looking at the history and the social embeddedness of relationships. Typically, trust builds up as trustworthiness is shown in transactions that involve low risk. Later on, as the degree of trust increases, transactions involve higher risk. As in the case of reciprocity, this could not be explained if the high risk-high trust exchange was taken in isolation.

Grabher sees loose coupling as the third factor that organisational networks have in common. Loose coupling means that organisations are not linked by ‘strong ties’, i.e.

rigid contractual relations with a high level of routine exchanges, but rather by 'weak ties' (Granovetter 1973) in the sense that exchange partners preserve some degree of autonomy (Grabher 1993a). The stronger the ties between organisational units, the more the group of these units will resemble a vertically integrated organisation. Thus strong ties create homogeneous groups within which common routines are developed that are characteristic for the group. By reducing the complexity of the set of possible choices they facilitate decisions but also limit the number of possible solutions. DiMaggio and Powell, among others, pointed out the dangers of this assimilation process between closely linked organisations, the so-called "institutional isomorphism" (DiMaggio and Powell 1982, p. 7). Weak ties on the other hand can connect different groups by a "local bridge" (Granovetter 1973, p. 1364). The resulting heterogeneity of networks linked internally by loose coupling, on the other hand, means that a larger number of solutions will be generated. At the same time, the danger of 'wrong learning' is reduced, due to less pressure for institutional isomorphism. The explanation for this is that closely linked actors usually have access to the same contacts and similar information and follow similar paths in order to solve problems, whereas loose ties provide access to new sources of information. Furthermore, loose coupling avoids that organisations are locked into specific exchange relations that, due to higher asset specificity and sunk costs, would hinder quick adaptation to a changing environment. On the contrary, loosely knit networks have a higher level of redundant capacities and resources that enhance the flexibility of the individual actors in the network.

The fourth feature is that of power relations. The aforementioned features of reciprocity and interdependence by no means constitute necessarily symmetrical relations within the network. According to Håkansson, a network is characterised by three variables: Actors, activities, and resources (Håkansson 1987). The actors strive for control of resources in order to perform transformation activities (Håkansson 1987, p. 15). The control over financial, physical, or human resources therefore determines the power position of a certain member of the network. In the case of an industrial network, actors with more power than others "can influence other actors to carry through certain investments and to choose certain technical solutions" (Håkansson and Johanson 1993, p. 42) which form the basis for the exploitation of

interdependencies. However, since networks have undefined or at least blurred boundaries, less powerful actors in the long run have the chance to form new links with actors that were not perceived to be in the network and hence change the power relations again. On the other hand, this is countered by the fact that networks also have a certain level of opacity, i.e. actors normally have a clear view of their own relations with other actors, but the more indirect the link to other actors is the less clear is the notion of this particular link. Thus, the potential influence of new or less connected actors in a certain network is severely impeded.

On the basis of these four common features, Grabher (1993a) distinguishes three main forms of networks: High-tech, supplier, and regional networks.

High-tech networks

High-tech networks are usually strategic alliances of firms in industries that are either technology-intensive or are based on new technologies. Jarillo defines strategic alliances as “long-term purposeful arrangements among distinct but related for-profit organizations that allow those firms in them to gain or sustain competitive advantage vis-à-vis their competitors outside the network” (Jarillo 1988, p. 32). These strategic alliances are usually led by one or more focal firms, which determine the form and content of the common strategy (Sydow 1992, p. 81). Jarillo’s distinction between ‘gaining’ and ‘sustaining’ a competitive advantage is in line with Grabher’s differentiation of offensive and defensive types of networks. Offensive networks are formed to achieve the leading technological edge, whereas defensive networks serve to facilitate major internal restructuring (Grabher 1993a) to sustain or regain competitive advantage over competitors. In both cases, the advantages of loosely coupled networks over integrated firms can be explained with reference to the firm theories of Penrose (1959), and Nelson and Winter (1982). The central issue of their theories is that firms are characterised in a unique way by the stock of knowledge accumulated within the organisation. The uniqueness of the characteristics is not based on “objective“, but on “experiential” knowledge (Penrose 1959, p. 53) which can be embodied in certain routines that are acquired over time in the operation of the company (Nelson and Winter 1982). For the best use of this usually tacit knowledge

it is better to cooperate in strategic alliances rather than to merge two or more companies. In alliances, loose coupling preserves the heterogeneity of the different corporate cultures and therefore adds to the innovative capacity of the network. This is particularly significant as innovation periods decrease and innovations become frequently a matter of integrating products and processes into new systems. High-tech networks exist either between large firms and are then typically internationally oriented, or between large and small firms of the same country. In both cases, the 'local bridges' are usually provided by personal relations of trust between key actors. Thus, strategic alliances are not only the result of market forces and profit-maximisation or cost-minimisation considerations, but are embedded in their social context. The personal trust relations ensure that information flows more easily and the network functions even without formal agreements between firms.

Supplier networks

The second type of network evolves when large firms subcontract tasks to suppliers due to efforts to externalise risk or achieve higher flexibility. A prototype of this kind of supplier networks can be found in the Japanese automobile industry. The large firms of this sector in the 1950s moved from predominantly vertically integrated firm structures to subcontracting relations with formally independent, small supplier firms (Cusumano 1985). Only a part of these suppliers actually delivers directly to a large car producer whereas others are again suppliers of these subcontractors, hence creating a "pyramid with several tiers of firms" (Smitka 1991, p. 15). The power within this pyramid is also clearly distinguished between the tiers. The large firm that ties the supplier network together is able to shape the norms and characteristics of the network relationships (Smitka 1991) and the lower the tier on which a firm operates, the less able are the subcontractors to influence the terms of the relationships (Grabher 1993a). Consequently, these tiers differ significantly in their relation to the leading firm. Whereas the top-tier firms usually enjoy a preferred status, the lower-tier suppliers often find themselves in fierce competition for orders from the 'top of the pyramid'.

This again is exemplified by the Japanese car industry where firms like Toyota established associations for their top suppliers which encourage personal contacts and exchange between the principal subcontractors. The direct links between carmaker and supplier also involve participation in R&D as well as in many cases capital links (Cusumano 1985). However, the leading firm usually encourages its main suppliers to diversify into other subcontracting relations in order to avoid being locked into a too specific exchange (Best 1990). It is this kind of relationship between the dominant firm at the top of the pyramid and the top-level subcontractors that can best be explained by the concept of embeddedness. Both the car maker and the top-tier suppliers become interdependent in the sense that there is investment into customer-specific machinery on the side of the supplier and, on the other hand, the customer relies much on the delivery of specific parts that cannot be purchased elsewhere.

To govern this relationship of interdependence, a high level of trust is indispensable (e.g. Imai et al. 1985, Best 1990, Smitka 1991, Helper 1993). This is usually achieved by “the gradual expansion of a purchasing relationship, so that interdependence [is] limited until trust [is] established” (Smitka 1991, p. 5). Smitka also asserts that this form of subcontracting relations is not culture-specific, stressing that “contracting draws on cultural resources, but contracting may also have helped shape these resources” (Smitka 1991, p. 18). However, the fact that the commitment is not complete ensures a higher degree of flexibility than in a vertically integrated firm. Cusumano explains that “to reduce the risk by maintaining low factory capacity in case sales for the industry slumped” (Cusumano 1985, p. 244) is one of the reasons for Toyota’s subcontracting strategy. This kind of loose coupling provides also a broader range of problem solutions, as pointed out earlier in the section about high-technology networks.

The balance between these two objectives of flexibility shifts in favour of the former for the bottom tiers of the pyramid. Applying the terms of Hirschman’s exit/voice framework (Hirschman 1970), the top tiers seem to have a ‘voice’ relationship with the customer whereas for the bottom tiers the ‘exit’ alternative prevails (Helper 1993). In the Japanese automobile industry, this group of firms is by far the most numerous and it consists predominantly of firms with often less than ten workers

(Smitka 1991). Lower-tier firms compete against each other mainly on price, as their products are often interchangeable. As Smitka states “the price is based on ‘the going rate’, varying over the business cycle, and continuity is in large part a function of inertia rather than commitment” (Smitka 1991, p. 178). The situation of third and lower-tier subcontractors therefore resembles that of suppliers to the US automotive industry up to the 1970s (Grabher 1993a). Here, arms-length contracts prevail and consequently, the insecurity of future employment prospects limits the incentives to invest and to innovate (Helper 1993). In that sense, a network of the aforementioned kind exists rather at the top tiers of the Japanese subcontracting system. This is also supported by Best’s observation that there are few personal ties between customers and suppliers in the American car industry upon which trust and more commitment could be built (Best 1990).

As Smitka observes, similar subcontracting structures can be found in several manufacturing industries in Japan, although they are not as pronounced as in the car industry. He identifies three features that make an industry particularly prone to long-term subcontracting relations (Smitka 1991, p. 190-191): highly transaction-specific assets, high complexity of the production process, and high risk due to industry-specific assets. In cases where partners must mutually adapt their physical assets, i.e. factually excluding other partners, they will do so only if they can be sure of a stable relationship. The second factor explains the tendency towards long-term relationships along similar lines, since the coordination of complex processes, which link several actors, requires mutual adaptation in their management systems. The third factor differs from the first in so far as it is in this case the nature of a particular industry, not a particular transaction, which requires asset specificity. Leading firms therefore seek to spread the industry-specific risk by employing subcontractors that in many cases can more easily diversify.

In this context, Smitka also mentions different forms that subcontracting can take in different industries. The shipbuilding sector differs significantly from the automotive sector through the extensive use of the “inside contracting” system (Smitka 1991, p. 189). Under this system, suppliers do not deliver parts and components for final assembly at the shipyard but rather provide work crews that produce alongside the

regularly employed workers of the leading firm. In many cases, these crews are highly skilled and specialised in certain tasks and therefore complement rather than substitute the shipyard's workers. This is integral to the nature of the shipbuilding process, which usually involves the purchase of basic or semi-finished products such as sheet iron, pipes or fittings. Consequently, the suppliers of these materials are interchangeable and provide only little technological input. However, as orders in shipbuilding tend to be irregular and product design changes frequently, shipyards need a high degree of flexibility. Since inside subcontractors are more easily to lay off than direct employees, they offer a source of numerical labour flexibility. On the other hand, the fact that they often complement the original workforce makes leading firm and subcontractor interdependent (Smitka 1991, p. 191). The complexity of the production process in shipbuilding can also lead to a mutual adaptation of supervisory and management structures between shipyard and subcontractor. Consequently, the subcontracting system in Japanese shipbuilding – although different in its appearance – shows features similar to those of the car industry.

Regional networks

Whereas supplier networks are often the result of vertical disintegration and retain some resemblance to hierarchically structured organisations, regional networks of small and medium-sized firms display a rather horizontal structure. Although they are also based on the principle of the vertical division of labour, there is usually no single dominant firm within the system (Garofoli 1991). The most frequently quoted example of inter-firm cooperation on a regional level is that of the so-called industrial districts of the 'Third Italy', the north-eastern and central part of the Italian peninsula. The industrial networks in those regions consist of a multiplicity of small firms that are specialised in the same or complementary industries. Examples for this are agglomerations of knitwear networks in Modena (e.g. Lazerson 1993), machine tools in Bologna (e.g. Sabel 1982), and Prato in woollen textiles (Bellandi and Romagnoli 1994). Other industries that exhibit similar patterns in the region include jewellery, shoes, ceramics, and furniture (Scott 1988). A common characteristic of all these branches is that "the production processes included in the sector... must be spatially and temporally separable" (Becattini 1990, p. 41).

The idea of industrial districts draws on the writings of Alfred Marshall, who first developed the idea of externalities, which arise from industrial clustering (Bellandi 1989, Becattini 1990). However, whereas Marshall stresses the importance of market forces for the working of an industrial district, more recent observers of the phenomenon put increasing emphasis on the institutional framework as the coordinating mechanism (Wilkinson and You 1992). The distinguishing feature of regional inter-firm networks in the form of industrial districts is the co-existence of competition and cooperation between firms (Brusco 1990). Apart from vertical cooperation along the production chain there is also horizontal cooperation either directly between firms or through the mediation of bodies of the business environment. The vertical cooperation rests on a high degree of division of labour among the companies, i.e. each firm specialises in only a small part of the production chain, with many firms competing at each stage of production. The final market suppliers, who account for up to 30% of the total number of firms in the district (Brusco 1990, p. 14), subcontract most upstream tasks along the production chain to other firms in the district. This subcontracting system, however, does not resemble the aforementioned supplier networks, as typically firms on all stages of production have several subcontractors and customers (Garofoli 1991).

The horizontal cooperation can take both formal and informal forms. Business associations and private-public partnerships are examples of formalised collaboration (Best 1990) whereas informal cooperation relies often on kinship or friendship (Sabel 1982, Best 1990). The latter form of cooperation is also frequently embodied in financial ties between firms that were established when entrepreneurs helped each other with loans or equity in setting up their businesses (Best 1990). Entrepreneurs also exchange regularly information with colleagues and friends and by that they acquire "an ever closer knowledge of the economic and social structure, and hence of the productive capacity, of the district" (Becattini 1990, p. 43). As a consequence, entrepreneurs know about possibly arising demand for new products as well as idle productive capacity within the district which could be utilised for their purposes.

Although these personal relationships are an important source of knowledge, Becattini argues that, at the same time, they can also pose “an obstacle to the high pliability of socio-economic relations which the district-form requires” (Becattini 1990, p. 43). Furthermore, the distribution of knowledge through informal information channels will be uneven, due to the fact that “networks of social relations penetrate irregularly” the economic sphere (Granovetter 1985, p. 491). These deficiencies, as well as other market imperfections (Brusco 1992), are addressed by institutions of formalised cooperation. They are designed to strengthen “the economic links between firms and relationships with the economic milieu” (Garofoli 1991, p. 131) and can take the forms of business associations, local or regional development agencies, consortia, or collective service centres (Best 1990). Whereas within entrepreneurial associations the forms of informal cooperation are frequently translated into consensual practices, it is necessary for other formal institutions in times of radical external change to break through the boundaries of the local network and establish links with the outside world, in order to enhance the adaptability of the system (Cooke and Morgan 1998). In this context, one of the most important aspects is the dissemination of information about technical innovations and long-term market developments that take place outside the district. Especially information about long-term developments is provided best by public bodies, since it is relevant to the district as a whole and not perceived to be owned by individual actors (Julien 1992).

Thus the formal institutional superstructure can also support the innovative process in the industrial districts, which is widely seen as one of the key characteristics of this form of regional inter-firm networks (e.g. Sabel 1982, Brusco 1982, 1986). Especially information about radical changes in technology has to be transmitted to regional networks by links to the outside world, for example in the form of local research universities (Cossentino 1996). On the other hand, these formal institutions only complement the innovative capacity inherent in the local productive systems (Garofoli 1991) of the Third Italy. Innovations in industrial districts usually take the form of “a continuous process of a large number of incremental technological changes, all of them small, cumulative, and interdependent” (Garofoli 1991, p. 131). Garofoli argues that the multiplicity of technical solutions, developed by the independent firms within the district, ensures the successful generation of product ideas. Again, the relatively

unobstructed flow of information inside the district facilitates the spread of successful ideas (Piore 1990) and imitation is one of the most important ways to spread successful methods or product ideas (Brusco 1982). At the same time, there is a constant incentive for workers to actively shape the product and the production process (Sabel 1982, Trigilia 1990). Thus, also employed workers contribute to the marginal, but constant, improvement of processes and products. This design capacity of the district as a “collective entrepreneur” in “Schumpeterian competition” (Best 1990, p. 206) together with a largely consensual relationship with the unions (Brusco 1982) ensures that relatively high wages are sustainable within the district. Best also argues that these wage levels serve as a further incentive for firms to “compete on the basis of innovation and quality as opposed to wages” (Best 1990, p. 222).

Although from a transaction cost point of view it could be argued that the spatial proximity of the firms helps reducing cost of the individual transactions, the same perspective would also predict increased supervision and co-ordination costs, compared with those in a hierarchical structure. The embeddedness approach, on the other hand, takes account of the fact that many relations between entrepreneurs in these networks have a long history and are frequently not based on pure business ties. On the contrary, in many cases entrepreneurs are linked by family bonds or neighbourhood relationships. Even in cases where this kind of tie is absent, the entrepreneurs still belong to the same homogeneous culture, a factor stressed by many observers (Brusco 1986, Scott 1988, Becattini 1990, Lazerson 1993). Brusco points out that, due to long-standing practices in dealings between firms, “customary conventions” developed, that enable firms “to draw up spot contracts with very low specification costs” (Brusco 1992, p. 182). He sees these conventions as “a second set of rules”, besides the state regulations, that “originates in civil society, and also carries a series of sanctions” (Brusco 1992, p. 182). As a result, transaction costs within the district are lower than between firms that have a pure market relationship. At the same time, the social embeddedness of entrepreneurs in the community of the district generates a supportive social atmosphere of trust that facilitates information flow as well as horizontal inter-firm cooperation. Thus also a certain redundancy inherent in a system of loose coupling – such as an Italian industrial district –

constitutes no problem, but increases the flexibility of the individual firms because it is possible to shift demand for free capacity within the network.

Transaction-cost theorists also argue that the “weak decision-making hierarchy” in industrial districts (Williamson 1980, p. 23) hinders innovation. The embeddedness concept, however, again offers an explanation why these networks are able to compete. The feature of community values again facilitates also the innovative process, as successful ideas spread easily throughout the district. Piore observed that producers “visit each others’ firms and freely discuss their production problems with one another, comparing notes and ultimately sharing innovations“ (Piore 1990, p. 56). Trigilia also attributes the relatively comfortable position of workers in industrial districts to the existence of community values, as they “cut across social classes” (Trigilia 1990, p. 177). However, as Becattini points out, this does not represent economically irrational behaviour, as it is long-term experience that prevents employers from cutting wages or workers from disrupting production whenever a “business contingency” would suggest to do so (Becattini 1990, p. 46). This is embodied in an astonishingly high degree of consensus between employers and unions in the Third Italy (Brusco 1982, Best 1990) as well as in the more active involvement of the workers in the organisation of production which in turn adds to the innovative capacity of the district (Sabel 1982).

It is worth noting, however, that many observers of the Italian industrial districts attribute the high level of flexibility of the small firms in the district at least partly to a segmentation of the labour market. Homeworkers, female labour and migrants provide a buffer workforce that usually does not enjoy the high standards of wages and work conditions that can be found for highly skilled regular workers (Brusco 1982). In times of economic downturn, these workers will usually be made redundant. Brutti and Calistri see this as one important factor of the labour flexibility on which the success of the Italian industrial districts relies. However, they also emphasise that “intolerable conditions of underpaid labour, breaches of labour contracts, and abnormal forms of labour relations” need not to be the norm (Brutti and Calistri 1990, p. 138). Amin and Robins also stress the importance of self-exploitation and unpaid family-labour as sources of numerical labour flexibility (Amin and Robins 1990b).

Thus, as in the case of supplier networks similar to those of the Japanese car industry, the picture of a mode of industrial production without significantly disadvantaged participants needs some qualification.

Patterns similar to those outlined above in the case of the Third Italy have been identified in several other regions in advanced industrialised countries all over the world. Frequently cited examples include machine-tool producers in Baden-Württemberg in Germany as well as furniture producers in Jutland in Denmark, but also agglomerations of high-tech firms such as Silicon Valley in the USA (Pyke and Sengenberger 1990). The latter example seems to combine characteristics of both the strategic high-tech alliances mentioned earlier and the regional networks described above. The term Silicon Valley refers to the cluster of microelectronics firms in the Santa Clara Valley between San Jose and Palo Alto in California. The genesis of this sector in the area is usually associated with the founding of Hewlett-Packard in 1937, by two graduates of Stanford University. Soon after, further companies followed that also had similar connections to Stanford. In particular, one professor at the university, Frederick Terman, played a crucial role in encouraging new start-ups by Stanford graduates (Saxenian 1994). Terman also “initiated a tradition of cooperation which his protégés in turn replicated in their relationship with other emerging Silicon Valley enterprises” (Saxenian 1989, p. 32-33; cited in Lorenz 1992).

Moreover, the university also played a very concrete role in the generation of enterprises. Ginzton reports the case of two researchers at Stanford in the 1930s who received financial support from the university to set up a company and were allowed free use of university facilities in return for a share in royalties deriving from patents generated in the company (Ginzton 1975). Later on, larger successful companies, especially in semiconductor production, started to spin off smaller companies that appeared to contribute to a general fall in production cost in the industry (Scott 1988). The relations between those, often independent, spin-offs and the mother-company were usually cooperative and based on personal ties (Saxenian 1994). A high degree of labour mobility between the high-tech firms of the area also facilitated the spread of innovations, since most employees are highly qualified professionals who have an in-depth knowledge of their respective firm. It is now widely accepted

and in some cases even encouraged by the companies that engineers usually stay only periods of not more than three years at the same firm. These two features of both a cooperative climate between firms and a high degree of labour mobility within the district contributed to the innovative environment of Silicon Valley. As Saxenian puts it: "The region's social and professional networks operated as a kind of meta-organization through which engineers, in shifting combinations, organized technological advance" (Saxenian 1994, p. 37). This kind of innovative process, however, was not merely a chance result but also the product of deliberate alliances. Saxenian points out that technology "exchange agreements and joint ventures were (...) commonplace" between high-tech firms in Silicon Valley and that the reason for this was "to pool resources or capabilities" (Saxenian 1994, p. 45). However, also in this case the social embeddedness of the inter-firm ties facilitates the setting-up and monitoring of the formal agreements.

Conclusion

In conclusion, the examination of economic relations in the light of their social embeddedness may reveal why certain companies and their practices in relation to other economic actors prove viable and successful, although from a strictly transaction-cost analytical point of view they appear to be doomed. There are examples for inter-firm cooperation, which enable economic actors to gain higher competitiveness than they would have if they acted in isolation. However, these networks are only viable due to social relations in superposition with the economic ties. These social ties either pre-exist or build up over time after the economic relationship is established. In any case, they facilitate network transactions and are often crucial to their success. On the other hand, as pointed out earlier, social networks can also lead to a lock-in of economic networks and thus impede the flexibility of both actors and networks. Therefore, it is a very "fragile balance within networks between reciprocity and power, between interdependence and loose coupling" (Grabher 1993a, p. 26) that lies at the basis of the success of socially embedded networks. To overcome the lock-in of networks, the intervention of formal support structures can be crucial in establishing 'weak ties' with the outside world. Similarly, formal institutions can also (re-)establish trust between local actors by

instigating interaction and help to foster the adaptability of networks (Sabel 1992). To make these newly established links more stable, however, it is necessary to complement them also with social ties, thus creating networks which have characteristics similar to those described above (Pratt 1997).

PART II

Chapter 3: Poland – background

This chapter aims to give the specific political and economic context of the Poland in the transition from a centrally planned to a market economy. After reviewing the basic characteristics of the country and its economy, the chapter moves on to explore the situation before 1989. It outlines the effects of socialist policies on the spatial economic structure and on economic activity in general, thus providing the historical background for the developments after 1989. These are subsequently discussed, with particular attention paid to the governmental privatisation efforts and the development of a new spatial structure in Poland.

Polish geography and population structure¹

The modern Poland has an almost circular, very compact form and is situated in eastern central Europe. Its area covers 313,895km² (GUS 1995). The landscape is mainly characterised by flatlands that stretch from the South to the Baltic Sea. Only in the very south, Poland has an area of high mountains, the Wysokie Tatry (High Tatra). Adjacent to these mountains, a zone of fairly high hills (up to 1700m) stretches from the west to the east. The main rivers of Poland are the Wisła (1047km) and the Odra (854km) which both flow into the Baltic Sea. The climate of Poland is characterised by the transition from the continental climate in the eastern parts with relatively dry and warm summers and cold winters to a rather oceanic climate in the western parts.

In 1995, Poland had a population of about 38.6 million which is more or less evenly distributed all over the country. However, there are three major agglomerations, with Upper Silesia being the largest, followed by Warsaw and Łódź. Other major cities are Gdańsk, Kraków, Wrocław, Poznań, Bydgoszcz-Toruń, and Szczecin (OECD 1992,

¹ The information in this section are based on Statistisches Bundesamt (1995)

p. 24). The Łódź voivodship has the highest population density with about 739.4 inhabitants/km² (in 1993), followed by Warsaw with 636.9 inhabitants/km² and Katowice with 594.6 inhabitants/km². The overall average of population density in Poland in 1995 was 123.6 inhabitants/km². Overall, however, the urban structure is fairly balanced (OECD 1992). The annual population increase declined from 0.9% in the period between 1970 and 1978 to 0.28% in 1992. A large emigration surplus leads to a drain of young and skilled workers who mainly look for better opportunities in the countries of Western Europe.

The current economic situation

In its present state, the Polish economy is the leading performer among the reform countries of Central and Eastern Europe. It was the first country of the region that achieved positive GDP growth rates again after 1989 and also is the first transitional economy that exceeded its 1989 level of GDP (EBRD 1997). This favourable economic situation was also translated into a reduction of unemployment, which is shown in table 3.1.

Table 3.1: GDP growth, inflation and unemployment rate in Poland in percent, 1990-1997

Year	1990	1991	1992	1993	1994	1995	1996	1997
GDP growth	-12.1	-7.6	2.4	3.8	5.3	7.0	6.1	6.9
Inflation rate	585.8	70.3	43.0	36.9	33.3	26.8	20.1	15.9
Unemployment rate*	6.1	11.8	13.6	15.5	16.1	14.8	13.4	10.3

*rate at the end of the year

Source: EIU 1998, 1995; Statistisches Bundesamt 1994

The fight against the hyperinflation of 1989-1990 was also successful, although the inflation rate remains rather high, even compared to other transitional economies. Of the four Visegrad countries, in 1996, only Hungary had a comparable level of inflation, whereas the Slovak Republic with 5% and the Czech Republic with 9% had significantly lower rates (EBRD 1997). On the other hand, the figures in table 3.1 show that there is an overall trend towards lower inflation in Poland, which indicates that the problem appears to be under control.

One of the major structural problems of the Polish economy, however, is the agricultural sector. At the end of 1994, the agricultural sector still employed about 27% of the Polish workforce, mainly in small private farms (GUS 1995, Johnson 1997). Despite this significant share in employment, agriculture contributed only 6.7% to GDP in 1993, compared with 32.7% contribution of industry (EIU 1995, p. 3, compare also figure 3.1). Since the productivity of Polish agriculture is low compared to other European countries (Johnson 1997) and was unprepared for the introduction of the market economy, Węclawowicz reckons that this sector also in the future will be one of the main obstacles to change (Węclawowicz 1996).

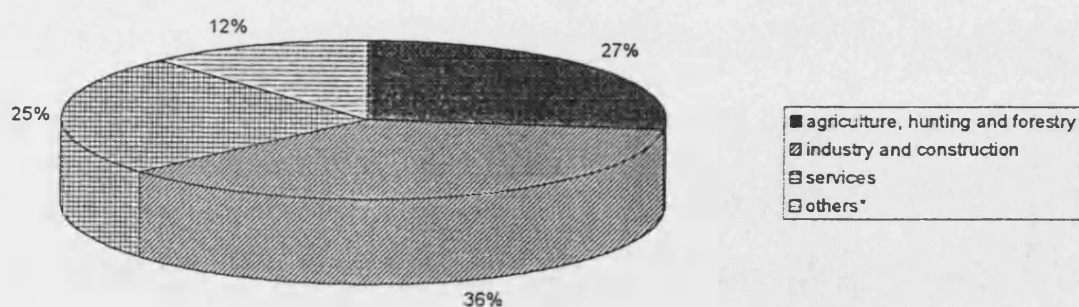


Figure 3.1: Employment according to sectors in percent (31.12.1994)

Regarding foreign trade, the Polish economy continued the trend of reorientation from CMEA-internal trade to increasing trade with Western countries, which is also evident from tables 3.2 and 3.3. This restructuring had started already in the 1980s with the liberalisation of foreign trade and the accession of Poland to IMF and World Bank (Statistisches Bundesamt 1995). In 1994, the EU countries received 63% of all Polish exports and account for 58% of all Polish imports (Statistisches Bundesamt 1995, p. 102-103). Within the EU, as well as overall, Germany is Poland's most important trade partner. In 1996, Germany imported 34.5% of all Polish exports and

accounted for 26.5% of total Polish imports, whereas the respective figures for Russia – the second biggest trade partner – are 6.8% and 7.3% (EIU 1998, p. 5). The free trade agreement with Hungary and the Czech and Slovak Republics is not likely to have significant impact on the structure of Polish foreign trade, since the specialisation of the production structure of these countries is similar rather than complementary (Statistisches Bundesamt 1995). The most important exports are manufactured goods, machinery and equipment, as well as food (EIU 1998, Statistisches Bundesamt 1995). Among the manufactured products, metal goods as well as textiles play a prominent role (Statistisches Bundesamt 1995). The main imports are machinery and equipment and manufactured goods (EIU 1998).

Table 3.2: Main destinations of exports as share of total exports, 1992-1996

	1992	1994	1996
Germany	31.4	35.7	34.5
Russia	5.5*	5.9	6.8
France	3.9	5.4	5.9
Italy	5.6	4.9	5.6
USA	2.2	4.6	4.8
Netherlands	6.0	4.0	4.1
UK	4.4	3.4	3.9

*former USSR

Source: EIU 1998, 1995, 1994

Table 3.3: Main origins of imports as share of total imports, 1992-1996

	1992	1994	1996
Germany	23.9	27.5	26.5
Italy	6.9	8.4	10.4
Russia	8.5*	6.8	7.3
UK	6.6	5.3	6.3
Netherlands	4.8	4.6	4.8
France	4.4	4.5	4.4
USA	2.9	3.9	2.3

*former USSR

Source: EIU 1998, 1995, 1994

Overall, the Polish economy seems to move towards integration with Western Europe. The macro-economic stability makes the country a prime target for foreign

direct investment, which in 1996 exceeded the volume of investment inflows into Hungary and the Czech Republic (EBRD 1997). The most serious obstacle on the way to full economic integration into Western Europe and the EU appears to be the agricultural sector, which needs major restructuring and improvements in productivity.

Political structure at local and regional level

Until the mid-1970s Poland was structured in 17 voivodships which in turn were divided into counties. The lowest tier of the administrative structure comprised the communes, several of them forming a county. In 1975, this pattern was subject to a fundamental restructuring. In order to increase party control over the regions, the county tier was abolished. The number of voivodships was increased to 49, which again were formed by some 2500 communes (*gminy*) (OECD 1996a, p. 105). As a result, the regional governments (*województwa* – voivods) lost considerable political power (OECD 1996a). The newly designed *gminy* were supervised directly by national councils (*radę narodowe*) that were instruments of the Socialist Party. However, Hicks and Kaminski (1995) point out that the power of the central state became again diluted in the last years of socialist rule. The voivodships enjoyed substantial financial autonomy, since “central government intervention was de facto circumscribed by information and political constraints” (Hicks and Kaminski 1995, p. 3). The *gminy* were mainly responsible for local services such as garbage collection and maintenance of public housing. Again, the extent of their autonomy was not clearly defined (Hicks and Kaminski 1995).

On 22 March 1990, the Sejm passed the Local Self-Government Act, laying the legal foundation for local government reform, which introduced democratically elected municipal governments (Hicks and Kaminski 1995, p. 2). The position of the communes was strengthened through the granting of a certain financial independence. The law opened up new opportunities for local political activities and gave wide administrative and executive responsibilities as well as the collection and disbursement of considerable revenues to the elected governments. Some of the communes, however, were regarded as not competent yet and consequently, some

rights concerning revenue raising were restricted again soon after (OECD 1996a). Moreover, the reform was limited to the local level, because it was feared that the scope of a simultaneous reform of both regional and local authorities would be beyond the resources available (Szlachta 1996). Therefore, the voivods remained even more clearly instruments of the central government (OECD 1992). Analysts recommend a reform of the political regional structure in order to enable regions to administer regional policy similar to EU standards. A reform of this kind would create some 12-14 larger regional units and introduce an additional layer of administration on district level. Due to the problems associated with such major restructuring, it is planned to instigate a bottom-up process in which groups of voivodships decide to cooperate (Gorzalak 1996). At present, it remains still unclear what level of autonomy these newly created regions will enjoy.

Poland before 1989

After the time of partition by the imperial powers Austria, Prussia, and Russia, Poland reappeared on the map of Europe only in 1918. The different political and economic structures in the three partitions caused significant problems for the fledgling nation-state founded after the First World War. Throughout the short period of its existence, the Polish Second Republic was several times on the brink of major economic crises and of relapses into totalitarian rule (Slay 1994). This difficult heritage was exacerbated by the shift of the Polish territory after the Second World War. Poland lost its pre-war territories east of the Bug river to the Soviet Union and in return acquired formerly German territories in the west. This shift westwards triggered the more or less forced migration of millions of people (Pounds 1969). The Poles of the areas lost to the Soviet Union mainly settled down in the western territories vacated by the Germans. A side effect of this mass migration was the subsequent relative ethnic homogeneity of Poland (Rugg 1985). By 1947, the communist Polish Workers' Party (PZPR) had taken control over the country and imposed the Soviet economic model.

The phase until 1955 was, like in other Eastern European countries, characterised by the Stalinist form of a totalitarian state system (Węclawowicz 1996). Planning was

centralised in the hands of the State Commission for Economic Planning and covered virtually all sectors of the economy (Slay 1994). Poland joined the Council for Mutual Economic Assistance in 1949 and subsequently, most of her foreign trade was done with other socialist countries, primarily the Soviet Union. However, Slay notes that the Polish form of Stalinism was “milder” than the versions implemented in other countries, since it allowed several non-communist parties to exist and also did not persecute opponents of the system as fiercely (Slay 1994, p. 24). After Stalin’s death, the Polish communists soon started to develop their “own road towards socialism” (Węclawowicz 1996, p. 20). The urgency of reform was further emphasised by outbreaks of riots in Poznań and other cities. In order to avert more uprisings, the communist party appointed Władysław Gomułka as the first secretary in October 1956, the so-called Polish October (Slay 1994). The effectiveness of the promise of reforms in strengthening the communist party led Gomułka and other leaders to an increased use of this instrument in situations of crisis. However, with repeated use, these promises became less and less credible (Slay 1994). Moreover, Polish economic policy became caught in cycles of reform and counter-reform, leading to stagnation and political crisis (Węclawowicz 1996). When the government increased the food prices in December 1970, a series of new strikes and demonstrations broke out. The police and military attempts to break up the protests resulted in the deaths of some 300 people, leading to the resignation of Gomułka (Slay 1994).

The new leader, Edward Gierek, tried to gain the support of the industrial workers by stimulating consumerism through borrowing from the West. Węclawowicz (1996) reports that the increase in power of regional party groups led to a diffusion of the industrial modernisation efforts coupled with a neglect of economic criteria. As a result, the economic situation gradually deteriorated further and a growing political opposition began to form. After a number of strikes and riots in 1976, the situation of the communist government grew more and more difficult and culminated in the creation of an independent trade union, Solidarity (Solidarnosc) in 1980 (Holzer 1990). By 1981, the membership of Solidarity had increased to 10 million and the strikes it organised were partly also supported by local branches of the PZPR (Węclawowicz 1996, p. 24).

In response to pressure from the Soviet Union, General Jaruzelski, who had become General Secretary of the PZPR in October 1981, imposed martial law in December 1981 (Jeffries 1993). At the same time, Solidarity was banned and many of its leaders arrested (Rainnie and Hardy 1995). According to some analysts, the fact that a socialist government, which claimed to represent the workers, had suppressed a workers' movement ultimately undermined the moral authority of the PZPR (Jeffries 1993). At the same time, the Catholic Church, strengthened through the Polish pope, assumed the role of the main opposition platform (Węclawowicz 1996). Economic reform concentrated on austerity measures and the '3-S' programme (self-reliance and self-financing of enterprises, self-management by workers). This reform strategy bore little success, also due to the fact that the imposition of martial law triggered the drying-up of Western credit flows (Slay 1994). After the martial law was lifted in July 1983, the Polish government started to work on a second stage of economic reform which concentrated on the introduction of more market elements in the economy and a reform of the central administration (Slay 1994). The reform programme was put to a referendum in November 1987 and was rejected due to a low turnout (Slay 1994). The government nevertheless went ahead with the reforms and increased prices. All these measures could not prevent Poland sliding into an even more serious economic crisis in 1987-89, leading to hyperinflation (Węclawowicz 1996). In August 1988, new waves of strikes broke out, eventually leading the government to accept 'roundtable talks' with the (underground-) opposition. These talks began in February 1989 and terminated in April of the same year resulting in the re-legalisation of Solidarity, free access to the media and the preparation of a semi-free general election (Węclawowicz 1996).

Spatial economic structure before 1989

The spatial structure of Poland was largely shaped by the partitions and by the socialist period. The partition resulted in a fragmentation of the country, due to the orientation of the partition areas towards the capital cities of the different occupying powers (Rugg 1985). The levels of urbanisation, industrialisation and infrastructure developed in ways that reflected the authority and the resources of the neighbouring imperial powers, which benefited from the Polish partition (Rugg 1985). As a result, a

clear west-east differential emerged with the western parts being the most developed and affluent regions of the country (Gorzelaak 1996). The few existing industries were geared towards the respective imperial markets, particularly the mining and steel industries in Upper Silesia which supplied almost the entire Prussian state with their commodities. A second early industrial centre developed in Łódź, which specialised in the production of textiles, mainly for the Russian market (Rugg 1985).

The inter-war period brought two major attempts to change the general pattern of low level of industrialisation and west-east wealth differential. The first was the creation of a central industrial district in the area between Rzeszów, Kielce, and Lublin. The main development focus in this area was on engineering, chemical and food-processing industries (Gorzelaak 1996). The second major project was the construction of the seaport of Gdynia that gave Poland an outlet to the Baltic Sea. Moreover, a railway line from Upper Silesia to Gdynia connected Poland's main industrial area to the new port (Węclawowicz 1996).

In the early years after WWII, this pattern of industrialisation persisted. Węclawowicz reports that in 1950, more than 77% of all industrial output in Poland came from the Silesia area and an axis from Katowice over Łódź to the Baltic Sea. Only around Warsaw and Poznań were other significant industrial concentrations (Węclawowicz 1996, p. 33). The rest of the country was dominated by agricultural production. Under the system of central planning, the Polish authorities originally pursued a strategy of forced modernisation of backward areas (Rugg 1985, p. 265). The focus of activities was on the development of heavy industry in peripheral areas, sometimes regardless of a lack of endowment with natural resources. Thus, in the first six-year plan, more than 1,200 new industrial plants were designed, 40% of which, however, were not actually constructed (Węclawowicz 1996, p. 33). The probably largest of these new industrial developments is the new town and steel mill at Nowa Huta, near Kraków, "in an area without coal, steel, sea connections, or a qualified labour force" (OECD 1992, p. 41). The economic problems from the mid-1950s onwards, however, led to a refocusing of investment in or close to the established industrial areas (Rugg 1985, p. 268).

A second phase of industrialisation in the periphery began in the early 1970s. In this phase, industrial investment was concentrated on the energy and mining sectors, also in peripheral areas. As a result, the concentration of industry in the traditional centres decreased relative to the overall pattern of industrialisation (Węclawowicz 1996, p. 33). Thus, in 1988 the percentage of industrial employment in the least industrialised areas in the border regions of the east and north-east was between 20 and 25%, whereas it was 40 to 50% in the most industrialised areas of central Poland and Upper Silesia. These margins can be considered as relatively narrow compared to other industrialised countries (OECD 1992). In absolute terms, however, the differences are more pronounced due to different population densities. Although about 90% of all industrial jobs are in or near cities, Buchhofer reports that the industrial way of life spread also into rural areas through worker-peasants and commuters (Buchhofer 1981). In 1988, the largest industrial centres of Poland were Upper Silesia, Warsaw, Łódź, Gdańsk, Kielce, Bydgoszcz, Poznań, and Kraków. Together they accounted for 59.7% of Polish total industrial employment (OECD 1992, p. 26). At the end of the socialist period the dominant industrial sectors in terms of employment were coal mining, machine production, production of means of transport, and the textile industry, as well as the food processing industry (Gorzelałak 1996). The metal and energy producing industries are highly concentrated in Upper Silesia, whereas the machinery, textile and food processing industries are more dispersed. However, the machinery industry is mainly located in or around large cities, whereas the latter two are also found in smaller towns. It is worth noting in this context that Łódź had lost its once dominating position in the textile industry (Węclawowicz 1996).

Differences in regional GDP were not calculated during the socialist era. The first year for which an estimate is available is 1992. The emerging pattern shows that the highest level of GDP per capita were achieved in the regions with the highest level of industrialisation (Gorzelałak 1996). The ratio between the levels of GDP per capita in the richest and in the poorest regions is 2.5 to 1, which is modest compared to some Western European countries (Gorzelałak 1996, p. 58). However, differences between revenues generated in different regions also existed under the system of central planning. The government aimed to even out these differentials by transferring

surpluses to regions with deficits. These surpluses were achieved by a positive difference between the revenues generated in a region and the centrally determined expenditures (OECD 1992). Probably as a result of this policy, the regional income distribution also shows relatively small differences, with the exception of those areas dominated by coal mining. Since this sector had extraordinarily high wages under socialist rule, Katowice had much higher average wages than the rest of the country. The income levels in the other regions are within a 83 to 110%-band of the average Polish income (OECD 1992, p. 27). A study published by the Polish Central Statistical Office (GUS) gives an indication of the wealth distribution in Poland in 1989. According to this study, the per capita household consumption was highest in the largest conurbations whereas it was lowest in the rather rural areas in the east (OECD 1992).

Concerning transport and technical infrastructure, Poland shows a distinctively even pattern as well. Despite the priority to rail transport typical for formerly socialist countries, the Polish road system is of equal (but rather modest) quality throughout the country. The same is true for the rail system that also connects rather remote areas to the other parts of Poland. In telecommunications, urban areas were – not surprisingly – much better connected than rural areas. Among urban and rural areas throughout Poland, however, relative equality exists concerning, for example, the distribution of phone lines (OECD 1992, p. 31).

One of the problems in the process of even regional development used to be rural-urban migration. This was also one of the major concerns of the socialist governments. The countermeasures usually were the promotion of small towns and rural areas through the attraction and settlement of new industries in these areas. In the late 1980s, however, the rural-urban migration almost disappeared, presumably due to the fact that the income of private farmers became higher than that of industrial workers (OECD 1992). Other factors were economic recession and shortage of housing, as well as later on a rise in unemployment (Węclawowicz 1996).

The agricultural sector

Throughout the socialist era, the agricultural sector in Poland was mainly based on private farming. Some 75% of the agricultural land was owned and cultivated by private farmers, in contrast to other socialist countries where large state-owned farms constituted the backbone of the agricultural sector. A land reform in the late 1940s, however, which limited the farm size to 5ha, led to a fragmentation of the agricultural land. The smallest units are typically in the central part whereas in the western territories larger farms prevail (Buchhofer 1981).

Although the private sector was dominant in the pre-1989 era, a three-tier system of state farms, co-operatives and private farms existed. The state farms, however, were rather designed to serve as models in terms of new methods of cultivation. The co-operatives, on the other hand, had a tradition reaching back to the 19th century. In the times of the partitions Polish farmers joined together in order to counteract the Prussian policy of land purchases that was designed to make these areas a 'genuinely' Prussian territory (Buchhofer 1981). In these co-operatives the farmers were frequently able to support each other in trade and finance, so that they could exist in a hostile political environment. In the Austrian sector the first co-operatives were established in 1899, whereas in the Russian sector no co-operatives were formed.

In 1949, the new socialist government started the collectivisation process forming agricultural productive co-operatives at different levels of integration. Some of the co-operatives only joined their forces in activities like sowing and harvesting whereas others established the common use of all property. However, soon after the introduction of co-operatives of the latter type it was realised that most peasants were unwilling to share all their property and that this led to the collapse of the incentive system. Consequently, the mass collectivisation process was reversed in 1956 (Jeffries 1993). The productive co-operatives were frequently replaced by agricultural circles (Kółka Rolnicze), which lend machinery and other equipment to otherwise independent farmers. Additionally, they also provided assistance in production methods as well as marketing. However, the co-operatives played only a minor role in

Polish agriculture. In 1985, they accounted for only 4% of the agricultural land (Jeffries 1993, p. 302).

Although the main part of the agricultural sector was in private hands, this part of the economy by no means was free from government interference. From 1951 onwards, compulsory delivery quotas were imposed on private farmers. At the same time, these farmers relied completely on state supply of inputs such as machines, chemicals, and building materials (Jeffries 1993). After the reversal of the collectivisation process in 1956, some of the compulsory delivery quotas were eased but remained for products such as grain, potatoes, meat, and milk. The productivity of the private sector is typically low. This is due to outdated technology and the dispersed pattern of small land units, often even split up geographically. Most of the small private farms were run at a subsistence level for additional income. Nevertheless, in 1985, the private sector accounted for 78% of the agricultural output (Jeffries 1993, p. 302) while cultivating only some 76% of the land (Statistisches Bundesamt 1994, p. 64).

However, the socialist government recognised the importance of the private sector for the food supply of the population. Measures were taken to promote the performance of private farms, leading to an increasing liberalisation of the private agricultural sector. In the 1980s, for example, free market prices were allowed for a small part of the grain production as well as for about 60% of the production of fruits, vegetables, flowers, and eggs. The rest of agricultural production, however, was still subject to state-determined prices.

In April 1989, the state control over producer prices was completely abolished, leading to a near hyperinflation (Jeffries 1993). On the other hand, the liberalisation of foreign trade exposes the Polish agricultural sector to the competition of producers that are far better adjusted to the requirements of modern farming. A concentration process in Polish farming therefore is inevitable, as the extensive fragmentation of agricultural land does not allow the application of modern agricultural techniques.

The non-agricultural sector

In contrast to the agricultural sector, the non-agricultural sector of the Polish economy consisted largely of state-owned enterprises (SOE). Before the Second World War, only the areas around Katowice, Warsaw and Łódź, were characterised by industry, as well as the central industrial district near the confluence of the Vistula and San rivers (Rugg 1985). The existing industries were mainly in the mining sector, in food processing, or in textile manufacturing. After the communist government took power in the aftermath of the war, they introduced a scheme of rapid industrialisation that was not tied to an existing industrial structure. This development policy followed the Soviet model in favouring heavy industry over light industry and was oriented towards the creation of a strong producers goods sector (Shen 1992). Consequently, the sectors of mechanical engineering, chemicals, and electronics were particularly promoted, whereas services were severely underdeveloped (OECD 1992).

Alongside this centrally directed industrial development, the Polish government also aimed to nationalise existing industrial enterprises. Former proprietors of nationalised enterprises were compensated with government bonds (Shen 1992). The state-owned enterprises were then subjected to control by the central planning authorities. However, the scope for decision-making at firm level varied over time. Up to the early 1970s, the executives of SOE had little decision-power. A high number of plan indicators subjected the enterprises to the strict administrative rule of the central planning authority. In the period after 1972 the government started some experiments of decentralisation in order to improve the economic performance of the state sector. This trend was continued throughout the rest of the 1970s and the 1980s, despite a limited reversal in the late 1970s (Jeffries 1993).

In contrast to most other socialist countries, a private non-agricultural sector existed throughout the socialist era (Shen 1992). Although only at a small scale, it contributed to the modest recovery of the Polish economy in the second half of the 1980s. Between 1985 and 1988, the share of the private sector rose by more than 20% (Statistisches Bundesamt 1994, p. 77). However, the conditions for private non-agricultural enterprises were subject to frequent change due to a rather erratic

government policy. Chapter 4 will review in more detail the development of this sector both before and after 1989.

Poland after 1989

As a result of the partially free elections on 4 June 1989 Solidarity won all 161 seats in the Sejm that had been open to contest. Although the communist party held the other 299 seats, it proved unable to form a government and subsequently Tadeusz Mazowiecki became on 12 September 1989 the first non-communist prime minister of Poland after the war (Jeffries 1993). The new government was faced with two immediate economic problems. The first and most urgent task was to control the inflation, which had reached 640% as the annual rate for the year to December 1989 (Jeffries 1993, p. 435). The second problem was to restore internal and external market equilibrium, which had severely been put out of balance by price controls and a multiple exchange system with different exchange rates for different products (Wellisz 1995a).

Since the new administration had only a vague idea of how to tackle these tasks, it entrusted a committee of experts under the leadership of Leszek Balcerowicz with the job of designing a comprehensive reform programme for the economy (Gomułka 1993). Balcerowicz recommended a 'shock therapy' with the almost simultaneous introduction of strict fiscal, monetary, and incomes policies (Jeffries 1993). The aims of these policies were the macro-stabilisation and the micro-liberalisation of the economy (Gomułka 1993). Both issues will be dealt with in turn below. Although the 'Balcerowicz Plan' succeeded in bringing inflation under control and eliminating shortages, the economic cost of this success in terms of fall in output and rises in prices and unemployment exceeded the most pessimistic predictions (Wellisz et al. 1993). Consequently, the public support for the plan plunged from 45% in favour of the reforms in October 1989 to 20% in October 1991 (Gomułka 1993, p. 188).

After the presidential elections in 1990, president Lech Walesa appointed Jan Krzysztof Bielecki as the new prime minister. By keeping Balcerowicz as his deputy, Bielecki ensured continuity in the economic reform process (Slay 1994). However,

the first democratically held general election in October 1991 brought Jan Olszewski to the post of prime minister and subsequently, Balcerowicz was removed from office (Jeffries 1993). Despite the promises of the election campaign, the Olszewski administration did not reverse the early reform measures (Slay 1994). Nevertheless, it relaxed some fiscal and monetary measures and thus delayed the meeting of the initially set stabilisation targets. The government fell over the rejection of its budget plans by the Sejm in June 1992 and was replaced by Hanna Suchocka's coalition government of seven parties (Jeffries 1993). Due to a further deterioration of the economic situation, strikes broke out and the government was forced to propose a law that would soften the social impact of the reforms and allow trade unions more influence over managerial decisions in state enterprises (Slay 1994).

However, from late 1992 onwards, the decline in output stopped and the rate of increase in unemployment levelled off around mid-1993 (Blanchard 1994, p. 1169). Nevertheless, Suchocka eventually resigned over a vote of no confidence in May 1993, but stayed in office until the general election in September of the same year (Jeffries 1996). Although the general election in September 1993 led to major gains of the reformed socialist party, the new coalition government was headed by Waldemar Pawlak of the Polish Peasant Party (Jeffries 1996). He resigned in February 1995 and was succeeded by Jozef Oleksy of the reformed socialist party. This shift to the political left was completed in November 1995 by the election of Aleksander Kwaśniewski as President of the Republic (Jeffries 1996). Although the governments supported by the left introduced some measures to relieve those who economically suffered most from the transition, the reform process continues (Jeffries 1993, p. 488).

As regards foreign policy in the period of transition, Poland undertook early steps to establish itself again as a fully sovereign country at the international stage. In November 1990, a treaty between Poland and Germany was signed, confirming the present borders. The receding influence of the Soviet Union was marked by the beginning of the withdrawal of the Red Army in April 1991 (Jeffries 1993). Soon afterwards, Poland was continuously seeking to re-integrate into Western Europe by joining NATO and the EU. The way to the accession to the EU was paved early on

by the signing of the 'Europe Agreements' in 1991 (Nuti and Portes 1993), whereas the route into NATO was initially blocked by the opposition of Russia (Jeffries 1996). However, by mid 1997, at the NATO summit in Madrid, Poland was formally invited to join the North-Atlantic Alliance.

Macro-stabilisation

When the first non-communist government took over in 1989, the macro-economic situation in Poland was difficult. The budget deficit for 1989 was approaching 10%, (Wellisz et al. 1993, p. 29) and the rate of inflation was more than 600% (Jeffries 1993, p. 435). The foreign currency reserves of the government "were dangerously low" (Wellisz et al. 1993, p. 30). The new government managed to reduce the budget deficit to 7.4% by the end of 1989 (Gomułka 1993, p. 194) and reduced real wages by some 15% (Wellisz et al. 1993, p. 29). However, major distortions remained, such as extensive price indexation of wages and benefits and artificially low prices for most goods (Gomułka 1993). Consequently, Leszek Balcerowicz developed a 'shock therapy' programme that was based on IMF recommendations for insolvent debtors seeking credit (Bożyk 1993), leading the IMF to grant Poland a stand-by loan to facilitate the implementation of the programme (Wellisz et al. 1993). The programme called for the application of three anchors: money supply, exchange rate, and incomes policy (Gomułka 1993). The first measure after the launch of the programme in January 1990 was to liberate prices for most commodities and to increase those that were still administered (Jeffries 1993). This led to a surge in inflation and a significant increase in money supply. However, since wage increases were controlled by imposing a heavy tax on excessive wage rises, real wages fell (Wellisz et al. 1993). This helped to ensure the profitability of enterprises despite recession (Gomułka 1993). Regarding the exchange rate anchor, the government decided to make foreign currency freely available at the official fixed rate for all current account payments. However, all revenues from exports had to be converted into Polish currency (Wellisz 1995b). Furthermore, the Balcerowicz Plan led to a significant reduction in the budget deficit. The IMF had demanded that, by the end of 1990, the budget should be balanced (Jeffries 1993). In reality, however, the budget was in surplus already after the first quarter of 1990 (Wellisz et al. 1993). The reasons for this were the better

than expected tax revenues from SOE as well as a considerable cut-down in government spending (Jeffries 1993). Among the most important expenditure reductions was the decrease in subsidies from about 15% of GDP in 1989 to around 6% in 1990 (Gomułka 1992, p. 366). The situation was also improved by the Paris agreement on foreign debts from March 1991 which reduced the burden of interest payments due by 80% (Gomułka 1993, p. 194). In the years 1991 and 1992, however, the budget deficit increased again, mainly due to “the meteoric rise of expenditure on pensions and other social insurance items” coinciding with a sharp fall in tax revenues due to recession (Gomułka 1993, p. 194). After 1992, the budget situation improved again with deficits around 3-5% (Jeffries 1996), helped by the overall economic recovery as well as the agreement with the members of the ‘London Club’ in 1994, which reduced Poland’s commercial debt by almost half (Wellisz 1995a, p. 37).

Micro-liberalisation

The micro-liberalisation measures of the Balcerowicz Plan applied to a variety of issues, including prices, regulations concerning the private sector, foreign trade, and foreign investment, labour mobility and wage bargaining, as well as financial institutions and intermediation (Gomułka 1993, p. 197).

Already in early 1990, about 90% of prices were completely liberalised (Slay 1994, p. 92) with mainly energy and housing prices remaining state-controlled (Gomułka 1993). The resulting price increases were – at least partly – reversed due to a fall in demand (Wellisz et al. 1993). At the same time, the central allocation of foreign exchange and intermediate inputs was abolished (Bożyk 1993). Moreover, virtually all quantitative trade restrictions were lifted, with the exception of exports of subsidised coal and other raw materials (Wellisz 1995b). The previously fixed exchange rate was replaced by a crawling peg mechanism in October 1992 linked to interest rate and inflation (Bożyk 1993). The initially low tariffs on imports exposed the domestic producers to intense foreign competition (Gomułka 1993). With the onset of the economic recession, tariffs were increased again, protecting the domestic industry and agricultural sector (Wellisz 1995b). Regarding foreign direct investment,

the government passed a law in June 1991, which according to the OECD is as liberal as those of most OECD countries (Schaffer 1992). Nevertheless, the volume of foreign direct investment, especially in the first phase of the transition, fell short of expectations (Jeffries 1996).

In 1989, even before the implementation of the Balcerowicz Plan, private banks were allowed in Poland (Jeffries 1996). However, the bulk of banking operations in 1993 was still performed by the state banking sector (Slay 1993), which consisted of the central bank, nine commercial banks, and six specialised banks (Gomułka 1993). In October 1991, the nine commercial banks were transformed into joint-stock companies as a prelude to privatisation (Gomułka 1993). The main obstacle in the privatisation process of these banks turned out to be the high share of bad loans to state enterprises (Gomułka 1993). Nevertheless, banks continued their lending policy after the start of the transition. Slay (1993) reports that loans to SOE were frequently given on the basis of outstanding accounts which in fact were worthless, as debtors simply refused to pay back their debts. Lamacz estimates that in 1993 bad debts accounted for more than 30% of the credit portfolio of the nine state-owned commercial banks (Lamacz 1995, p. 165). On the other hand, small private firms in 1991 had to pay up to 50% real interest (Slay 1993). In 1994, the Polish banking sector consisted of the above mentioned state-owned banks, as well as of about 1,600 local cooperative banks and roughly 90 newly established commercial banks, including those with foreign capital interest (Strykiewicz and Potrzebowski 1994, p. 5).

Privatisation

When in August 1989 Tadeusz Maszowiecki became the first non-communist Polish prime minister, the way was paved for a comprehensive privatisation programme. Already in September 1989, the government took measures to facilitate privatisation by sale or leasing of small shops and the self-transformation of the cooperative sector (Gomułka 1993).

An anti-monopoly law followed these measures in February 1990. It was designed to break up the state monopoly in most industries, which existed due to the soviet-type approach of industrialisation. Thus, in 1986, the average state enterprise had 1,132 employees (Jeffries 1993, p. 442). These large enterprises typically dominated their industrial sectors, although the domestic monopolies were mitigated by increasing international competition after the liberalisation of trade. For this reason, Lipton and Sachs (1996b) argue that monopoly is not an urgent problem anymore. However, the newly established Anti-Monopoly Office has the power to divide or liquidate companies that pose a threat to competition (Jeffries 1993).

Surprisingly, in the first period of the new non-communist government, privatisation slowed down compared to the last period of the communist rule. Miszei attributes this to a controversy over how a privatisation law should deal with the issues of foreign investment and the so-called spontaneous or nomenklatura privatisation (Miszei 1992). The reason why foreign investments were a sensitive issue is rooted in the possibility of German investments in the former German territories which was perceived as politically undesirable (Miszei 1992). Nomenklatura privatisation, on the other hand, refers to the privatisation of SOE by their state executives in the last phase of the communist regime. These managers used loopholes in the law allowing joint-ventures between private and state firms in order to transfer profits and assets to their own property (Lipton and Sachs 1990b). Eventually, on 13 July 1990 the State Enterprises Privatisation Act was passed, which abolished the basic principle of state ownership of all productive means and subsequently formed the basis for the starting privatisation process (Maczyńska and Musiał 1993). Moreover, it prevented further spontaneous privatisation and limited the share of foreign investors generally to 10% (Jeffries 1993). On the basis of this act and the State Enterprise Act from 1981, two paths of privatisation were possible for the larger enterprises of the Polish economy (Węclawowicz 1996).

The first and most frequently used way is that of privatisation through liquidation. Already under the State Enterprise Act from 1981 it was possible to sell assets of SOE to the private sector. However, this possibility was only rarely used, due to the lacking threat of bankruptcy (Maczyńska and Musiał 1993). In the privatisation

process of the post-communist era, the State Enterprise Act is mainly applied to smaller, poorly performing enterprises. After 1990, it was also possible to sell SOE as a whole. In most cases, rather profitable enterprises of less than 500 employees took advantage of this possibility (Maczyńska and Musiał 1993). Since this form of privatisation is aimed to enable employees and managers of firms to take control of their firms, it is normally the employee council that initiates the privatisation procedure by applying to the Ministry of Ownership Transformation (Ministry of Privatisation). The employees are then eligible to obtain up to 20% of the shares of their enterprise at discounted prices. The rest of the shares can either be sold on auction or leased with foreign investors being restricted to a 10% share (Mroz 1991, p. 682).

The second way of privatisation is that of capital privatisation. The first step in this process is the corporatisation of the SOE in question, i.e. the transformation into a public limited or limited liability company, which is owned by the State Treasury (Maczyńska and Musiał 1993, p. 217). This is followed by institutional and financial restructuring in order to make the transfer to the private sector possible. This frequently involves the splitting of the enterprise into smaller parts. Ciechocinska reports that in 1990 the number of state enterprises rose by 15%, hence indicating the break-up of large enterprises into smaller units (Ciechocinska 1992, p. 221). Subsequently, the shares in these companies were to be sold to investors either through initial public offering on stock markets, through coupons (mass privatisation), or through trade sales outside financial markets in the case of the limited liability companies (Frydman et al. 1993). The process can either be initiated by the SOE itself or by the Ministry of Privatisation. Since late 1991 the rules, according to which enterprises qualify for capital privatisation, were significantly tightened (Maczyńska and Musiał 1993). Generally, this path of privatisation encountered numerous problems. First of all many more firms entered the privatisation process than actually could be privatised at the same pace. This is due to the fact that firms had a tax incentive to become corporatised, so that many enterprises took this step without having the means or the will for fundamental restructuring (Maczyńska and Musiał 1993). Secondly, the financial markets were only little developed. The law establishing the securities' market, for example, was

only adopted in 1991 with the stock exchange starting trade in July of the same year (Mizsei 1991). Furthermore, the price of a company for the initial public offering was difficult to determine, despite the fact that Western consultancy firms with great experience in the similar transactions were involved. Among the main problems is that, although the selected firms usually were among the better performing companies in Poland, their asset mix is adjusted to demand and supply conditions completely different from those of a market economy. Therefore it is very difficult to assess a firm's potential once it is privatised and exposed to international competition (Frydman et al. 1993). Finally, the proposed mass privatisation bill was passed in April 1993, however only after modifications (Slay 1994). According to this bill, initially 200 enterprises would be transferred to five national investment funds and its shares freely distributed to pensioners and public-sector workers who suffered most from the post-reform inflation. Another fifteen funds will distribute the shares of about 400 more companies. A small percentage of the shares will go to the employees of the firms (Jeffries 1996). The distribution of shares, which was scheduled for early 1995, has repeatedly been delayed (Poznański 1996). Thus mass privatisation so far only plays a minor role in the privatisation process.

The privatisation of very small state firms, on the other hand, followed a more decentralised pattern, due to the fact that the bidding process was in the responsibility of local governments (Miszei 1991). The local authorities can decide rather freely on the future of the businesses left to them, mainly retail shops, consumer services, and small trade firms (Gács 1993). For the privatisation of these small entities the Communal Enterprise Activity Law rather than the State Enterprise Act apply (Frydman et al. 1993). The number of the shops that were actually privatised differs according to different sources. This is partly due to the decentralised nature of the privatisation process as well as to the fact that property titles of communally held shops are rather unclear. Therefore most communes prefer to lease or rent the premises instead of selling them. A common feature, however, is that the largest proportion of the shops is leased at prices far below those that could be achieved by open auctions. Gács reports that the lease fees for insiders were between 10 and 100 times lower than those resulting from open auctions (Gács 1993). Some analysts attribute that to corruption (Gács 1993), others to pressure by insiders who were

supported by labour unions (Frydman et al. 1993). The interest of labour unions in a take-over by insiders is based on the conditions that normally are attached to such a deal. Among other things, insiders are required to have worked in the shop for a certain period of time and they are obliged to employ between 50% and 100% of the former staff in the new company (Frydman et al. 1993).

In conclusion, the measures of the transition policies also produced mixed results. The macro-economic situation looks encouraging with strong GDP growth, moderate inflation and falling unemployment (EIU 1998). On the other hand, the recession that followed soon after the start of the reforms was much more serious and lasted longer than expected and made for most people the life harder and less secure (Poznański 1996, Wellisz et al. 1993). Furthermore, the reform of the banking sector did not fully produce the desired results. A report by the Polish Foundation for Small and Medium Enterprise Promotion and Development shows that SME still find it hard to obtain credit from banks (Polish SME Foundation 1997).

It also seems that the privatisation process through ownership transformation did not live up to the expectations. Szymanderski and Winięcki cite a report according to which at the end of 1994 transformed and privatised SOE accounted for only 4.4% of industrial output and 4.1% of industrial employment in Poland (Szymanderski and Winięcki 1997, p. 95). On the other hand, this disappointing performance was more than made up for by the new non-agricultural private sector that increased since the beginning of the transition almost four-fold and accounts for 45% of GDP and 35% of aggregate employment (Szymanderski and Winięcki 1997, p. 95). The situation of this sector will be the focus of chapter 4.

The transformation of the spatial economic structure

In the context of the transition from a system of central planning to a market economy, Poland's spatial economic structure is bound to change. The OECD (1992) identifies two basic factors that determine the emergence of new regional disparities. The first factor is the inevitable structural crisis of many of the Polish industrial branches such as coal mining and steel production. The effects of this factor will

become superimposed with the consequences of changing patterns of trade and transport that will put certain locations in a disadvantageous position. Early in the transition process, the problem of unemployment will probably become the most urgent one.

The beginning of the restructuring process brought about rising unemployment not only in heavily industrialised areas. Throughout the country, the problem is also exacerbated by a low level of labour mobility due to low wages and shortages in housing (Węclawowicz 1996). Consequently, the peripheral areas of Poland with little industry and little incentive for the establishment of new firms are most badly affected by the unemployment problem. Thus, the northern voivodships of Koszalin, Suwałki, Olsztyn, Elbląg, and Słupsk in 1994 had unemployment rates between 27.3% and 29.8%, while the Polish average was 16% (GUS 1995, p. 133). Due to their relative remoteness and their generally low level of economic development, they will have difficulties in accessing foreign, especially Western, markets.

The focus of some regions on sectors like steel production and coal mining makes them particularly liable to future problems of unemployment. The OECD estimates that the abolishment of subsidies for coal mining will cost about 160,000 to 180,000 jobs. Even a rise in productivity, and hence improved competitiveness, will eventually not lead to an increase in jobs in the mining sector (OECD 1992). The situation in the steel-producing sector is not much better. Due to outdated capital stock, Polish steelworks are not competitive on world markets. The solution for many steel-mills is either to close down or to shed labour and to invest in new technologies. In either case, there are negative employment effects for the regions dominated by those industries. According to their industrial structure, the worst effected regions will be the voivodships of Katowice, Wałbrzych, and Kraków (OECD 1992, p. 35). However, in 1994, only Wałbrzych had an unemployment rate of more than 27% whereas Katowice and Kraków had rather modest rates around 10% (GUS 1995, p. 133). Gorzelak attributes this to delayed restructuring efforts, which will lead to more significant reductions in jobs and high social costs in the future (Gorzelak 1996). The same author also includes Łódź in the category of old industrial regions that face structural crisis and high unemployment. Nevertheless, the unemployment figures for

1994 again show that the unemployment rate in Łódź with less than 20% is not as high as in the aforementioned northern regions, although it is higher than the national average (GUS 1995, p. 133).

In addition to the danger of a high number of job losses, the OECD also argues that the large-scale industrial structure of those regions does not facilitate the generation of an “entrepreneurial spirit” needed for the development of new firms in the SME sector that potentially could create the much needed new jobs (OECD 1992, p. 35). Bivand (1996) reports that the highest rate of new firm formation from the start of the transition process can be found in city regions such as Warsaw, Gdańsk, Poznań, Łódź, Wrocław, Kraków, Bydgoszcz, and Szczecin. By 1994, also the voivodships bordering Germany had caught up with the metropolitan areas (Bivand 1996). Thus the regions in this group, with the exception of Łódź, exhibit diversified industrial structures (Gorzelać 1996) as well as a varied size structure in industry (Polish SME Foundation 1997). Contrary to the OECD, Tyson et al. maintain that the management of SOE can also constitute a source of entrepreneurial activities as managers in those enterprises have both the skills and the experience to run a company (Tyson et al. 1994, p. 173). Another important factor for the shift from the state to the private sector, however, appears to be the transferability of industry-specific skills to the private sector. Skills acquired in large-scale industry like steel production cannot easily be applied in private small and medium-sized enterprises. Thus, according to Bivand (1996), in Upper Silesia the number of small private manufacturing businesses per 10,000 economically active is among the lowest in the country.

The voivodships of Upper Silesia and Łódź, however, are not the only Polish regions with structural problems in industry. Other regions such as the south-eastern voivodships also face major restructuring. In this part of the country, metallurgic, military, and transportation industries are prevalent (Gorzelać 1996). Due to their traditional orientation to the East, they are now experiencing severe problems in finding demand for their products. However, the unemployment in these voivodships is still around the Polish average (GUS 1995, p. 133). This could be due to the fact that the first wave of redundancies in industry concerned mainly so-called ‘bi-professional’, i.e. industrial workers who combine an industrial job with work in

agriculture (Gorzelał 1996). Since the reorientation process of the regional industry is hindered by their remoteness from Western markets, Węclawowicz expects this area to “remain the backward periphery of Poland for a long time” (Węclawowicz 1996, p. 169).

In conclusion, the OECD, with regard to development potential, differentiates four types of regions in Poland (OECD 1992, p. 38). The first kind is that of dominant urban centres such as Warsaw, Poznań, Wrocław, Gdańsk, and Szczecin. They have the brightest perspectives with a relatively balanced sectoral mix, qualified labour, and good links to foreign markets. These are also the regions that attract most foreign direct investment (Gorzelał 1996). Łódź and Kraków might belong to this category as well, with the important qualification that they are heavily relying on industrial sectors that are not competitive anymore and need major restructuring.

The peripheral regions of the east, north-east and west constitute the second category of regions. Although the reasons for their structural problems vary – collapse of large state farms in the north and west, little competitive industry and agriculture in the east – they suffer from similar problems of underdeveloped infrastructure and relative remoteness (Gorzelał 1996). The industry developing here is likely to show structures of small and medium sized firms belonging to the category described by Hardy and Rainnie as isolated from external markets (Hardy and Rainnie 1994). With few links to other regions or countries, the industry will probably operate at a less advanced level. Domanski points out that those regions often show less enthusiasm for transformation (Domanski 1994). Consequently, the OECD sees the potential of these regions in the development of the agricultural sector as well as of tourism in these regions (OECD 1992).

Thirdly, there are regions like Katowice and Wałbrzych in Silesia, which under socialist rule were the regions with the highest income, due to their concentration on mining and steel production. Under market conditions, these sectors have to undergo the most dramatic changes. Moreover, their environment suffered to a great extent due to the previous production conditions. The mono-structurally skilled labour and a lack of wide-spread entrepreneurship put these regions further in a disadvantageous

position. On the other hand, thanks to the fairly well developed technical and transport infrastructure, these old industrial regions can attract foreign direct investment. Thus, the voivodship of Bielsko-Biała in southern Silesia received the largest single foreign direct investment in form of a 2 billion USD commitment by the Italian car producer FIAT (Gorzalak 1996, p. 124).

The fourth category developed by the OECD is a blanket class for all those regions that could not be classified in the other categories. These regions are not likely to face particular difficulties but, on the other hand, will not be capable of serving as a locomotive for the economy. According to the OECD, this part will be reserved to the urban growth centres of the first category (OECD 1992). However, Gorzalak identifies the central-western regions around Wielkopolska as one of the potentially greatest beneficiaries of the transition (Gorzalak 1996). Rykiel attributes much of their competitive advantage to the relative demographic stability throughout the pre- and post-war period, since it was little affected by the post-war population movements. He argues that this "fact is responsible for the preservation of regional and, especially, local social ties throughout the communist period and this development explains the local/regional thrift, social self-organization and law-abiding behaviour" (Rykiel 1995, p. 118).

Generally, it seems that the economic transformation as well as the re-integration of Poland with the Western European economies will reinforce the old pattern of a west-east wealth differential. The western border regions as well as the urban metropolises will attract most of the foreign investment, precisely because of the advantageous conditions that they offer in terms of skills and infrastructure. The rural areas, especially those in the east will – at least in the medium run – not be able to match the performance of the former.

Chapter 4: The situation of small and medium-sized firms

This chapter outlines the development of private small and medium-sized enterprises in Poland after the Second World War. Since private non-agricultural business activity existed also throughout the socialist era in Poland, the chapter starts with a review of the situation of this sector until 1989. Subsequently, the larger part of the chapter is dedicated to the evaluation of the present situation of the private SME sector. After a descriptive section, the problems typically encountered by small private firms as well as the relevant governmental policies will be discussed.

The private non-agricultural sector before 1989

After the war, while the nationalisation of large-scale industry advanced very quickly, extensive restrictions were imposed for the private sector. Ciechocinska reports for this period “an almost complete destruction of the private sector in towns” (Ciechocinska 1992, p. 215). Affected by this decline were not only the firms themselves but also the infrastructure needed by private enterprises, such as banks and other business services. This lack of infrastructure is one of the major problems that small private firms in Poland face today.

At the end of the Stalinist period in the mid-1950s, “... the private sector in manufacturing, transportation, and other major industries was legally non-existent” (Bloch 1985, p. 129). The few surviving private enterprises were mainly flour-mills – as industrial firms – or artisans who were operating under the handicraft charters. The Polish artisanal sector, however, was already previously extremely affected by the German occupation during the Second World War, due to the fact that many of the Polish pre-war artisans were Jewish. Thus, in absolute numbers, only 25% of the pre-war artisanal shops existed still in 1947. The policies of the Stalinist era reduced them by another 57% between 1947 and 1953, which, however, constitutes a relatively moderate decline compared to the private industrial sector (Åslund 1985, p. 43). A negative side effect of the decline of the private sector in Poland was that only little of the capital equipment of small firms was transferred to larger SOE. As a result, a kind

of de-capitalisation took place. Åslund estimates that approximately 10,000 nationalised small industrial shops stood empty in 1951-52 (Åslund 1985, p. 49). The industrialisation policy based on the Soviet model therefore led to a situation in which in peripheral towns unsatisfied demand and unutilised resources co-existed at the same time.

As the government in principle recognised the importance of a flexible private sector consisting of small firms, this sector experienced a “cyclical recovery” (Jeffries 1993, p. 304). But nevertheless, some general principles about the role of the private sector remained unchanged. Most importantly, the structure and the products of the private sector had to be strictly complementary – and not competitive – to the state sector. In other words: Private enterprises were allowed to produce what SOE could not produce efficiently, e.g. small quantities of goods that were subject to volatile demand. The principle of complementarity also applied for the purchase of investment goods and production inputs, including the hiring of labour. In addition, private enterprises had to be limited in size, although the legal maximum size differed over time. This measure was designed to ensure that the private sector would be restricted to marginal niches of the economy and would not constitute a competitive threat to the state sector (Rostowski 1990). A further obstacle to a normal development of the private sector – similar to that in Western countries – was the fact that the reinvestment of profits was limited by administrative regulations and thus they were rather spent on luxury consumption (Mroz 1991). As a general rule, the official policy towards private firms was friendlier in times of short-supplies and more hostile in periods of relatively good economic performance (Maczyńska and Musiał 1993).

The first legislation promoting small private firms was passed in 1951. It forbade forcing artisans into co-operatives, because it was realised that their productivity sharply declined when tied into a co-operative (Åslund 1985, p. 51). In addition, a new form of taxation was introduced. According to that, an artisanal firm had to pay a modest and stable amount of taxes, hence providing a more stable environment for entrepreneurial decisions. Furthermore, small firms were exempted from bookkeeping. However, large SOE feared subsequently that a strong private sector could lead to difficulties in recruiting labour and thus strongly opposed the new

legislation. As a result, taxes for private firms rose again in 1954 and the number of legal employees in private enterprises was restricted to one, with the exception of apprentices and family labour. This period, according to Åslund constituted the “nadir of the private sector” (Åslund 1985, p. 42). Nevertheless, the productivity in small-scale private firms in 1954 was still 22% higher than in the small-scale state sector (Åslund 1985, p. 51). The late 1950s again saw a promotion of small firms and the period up to 1971 was characterised by ups and downs for the private sector, although the overall tendency was towards more liberalisation. After Edward Gierek replaced Władysław Gomułka in December 1970, a dramatic deterioration of the economic situation triggered a more positive attitude towards private firms from 1972 onwards. The artisanal sector then was increasingly used to offset the persistent short supply of the state sector. Moreover, some artisans served as subcontractors for large firms in the GDR and Czechoslovakia (Åslund 1985). An important policy to promote the private sector was the enhancement of the leasing system under which state property was rented to private individuals. Some kind of leasing had already existed since 1964 (Jeffries 1993), but now it was ‘discovered’ to create private enterprises without conflicting with the socialist principles of productive property. The main fields of leasing were catering and trade. The benefits leaseholders enjoyed stretched from more stability, e.g. through market adjusted lump taxes, to freedom in choosing suppliers (Åslund 1985). However, all these policies were rather inconsistent and hardly the product of a sound strategy, which Åslund attributes to a “sense of urgency” due to potential social unrest (Åslund 1985, p. 87). Rostowski (1990) also points out that the private sector was intentionally kept fragmented. Thus, artisans were granted only very specialised licenses, so that a shoemaker, for example, was not allowed to produce leather bags from scraps of leather or to trade any good (Rostowski 1990).

After the Solidarity movement gained strength due to persistent shortages in supply of food and consumer goods, the military imposed martial law in December 1981. The new government tried to balance the disequilibrium in the consumer good market by liberalising administrative, fiscal, and credit policies for privately owned businesses (Bloch 1985). Together with layoffs in the state sector, this created a strong incentive for engagement in the private sector. Bloch estimates that in the early 1980s about

59,000 engineers and technicians, thus a considerable part of the “technical intelligentsia”, shifted from the state to the private sector (Bloch 1985, p. 131). This shift was not always entirely voluntary but sometimes forced, due to the Solidarity background of some of these people (Johnson and Loveman 1993). However, the influx of well-educated people strengthened the position of the private sector both politically and economically (Bloch 1989).

Parallel to the development of this legally existing private sector, also a second or underground economy gained increasing importance. As Åslund puts it: “The conditions were almost ideal for the creation of an underground economy. The number of regulations was very large, so they could neither be followed nor effectively supervised” (Åslund 1985, p. 52). Furthermore, the complexity of rules left considerable decision power for subordinate officials that in turn gave rise to corruption (Slay 1994). Almost by definition, it is difficult to assess what exactly was the importance of illegal economic activity in Poland. Rostowski estimates that the share of unregistered private economic activity rose from 5% to 12% between the years 1977 and 1985 (Rostowski 1990, p. 202)¹. Slay points out that the “high demand for privately produced goods and services generally unavailable in the official economy; the extra cost of risk, uncertainty, and corruption associated with illegal production; and the absence of competition among sellers...produced rapacious private entrepreneurs whose penchant for high prices and short-term profits fit the regime’s portrayal of the private sector as a nest of blood-sucking bandits” (Slay 1994, p. 23). However, from the early 1980s onwards, the government made some attempts to formalise at least parts of the informal economy. Thus, in 1984, a law was introduced that allowed the formation of so-called economic working groups (*zespoły gospodarcze*), in which state enterprise workers contracted with the management to perform certain tasks that would otherwise not be profitable during normal working hours. The earnings from these activities were not subjected to normal taxation. The SOE management in turn gained increased flexibility and output (Slay 1994, p. 77; 194n.22).

¹ Rostowski offers various indicators, of which he judges the one developed by Bednarski et al. as the most accurate (Bednarski, M.; Kokoszczynski, R.; Stopyra, J. (1987): *Drugi obieg w Polsce w latach 1977-85*. *Wektory Gospodarki*, No. 8)

With the deterioration of the economic situation in the 1970s, the government gradually also accepted firms that were either partly or wholly owned by foreigners. The starting point in 1976 was the permission for former Polish citizens to set up private companies that were exempted from taxes for the first three years and offered the possibility to repatriate 50% of the profits in hard currency (Jeffries 1993). These so-called Polonia companies were the “Trojan horse that cleared the way for other firms and for fundamental reforms” (Ciechocinska 1992, p. 224). However, after an early strong growth in the number of these firms, the government decided from 1983 onwards to impede the further expansion of this sector (Slay 1994). Tax rates were changed arbitrarily and other intangible restrictions such as new limits on the repatriation of profits were introduced. As a result, the growth in the number of these companies tailed off (Shen 1992). The Polonia companies were followed in the second half of the 1980s by ‘real’ joint ventures between Polish and foreign firms in which the foreign firms were allowed to hold a maximum share of 49%. The transfer of hard currency profits was only possible for those that were earned through export. Otherwise the foreign partner had to purchase Polish goods for zlotys and then to transfer these goods abroad. According to Jeffries, the success of these joint ventures was rather limited and only few cooperations were actually set up (Jeffries 1993). However, some analysts argue that enterprises with foreign involvement brought market economy values closer to the people, thus preparing the ground for further development of the private sector (Ciechocinska 1992).

From 1986 onwards, the situation of the entire Polish private sector gradually improved. The pinnacle of this development was reached when in December 1988 the Sejm passed the Economic Activity Act (Slay 1994). Together with the 1934 Commercial Code, which had remained in force throughout the socialist era, this act created a legal environment in which individuals were free to set up private companies and to enter partnerships with other individuals or firms. Moreover, all restrictions on firm size and foreign capital shares were abolished. Consequently, according to an official government report, the number of private firms in 1989 alone increased by 294,000 units, or 50% (Slay 1994, p. 76).

The situation in the transformation process

While the privatisation of state-owned enterprises has encountered considerable problems, mainly due to socialist legacies in managerial practices, there was an immediate growth in economic activity by individual persons after the start of the structural transformation in Poland. This trend continued to at least 1995, a year in which the total number of new business establishments with 373,966 exceeded that of the previous year by more than 19% (Polish SME Foundation 1997). Despite the fact that initially only little capital and few commercial premises for their purposes existed, many Poles had enough funds to set up small businesses (Gács 1993). Alongside the privatisation of small firms there was also a wave of new establishments which, in fact, outnumbered the privatised firms by many times. Thus the number of trade outlets in 1990 rose from 72,000 to 346,000 while a maximum of 50,000 outlets was privatised in the same period (Gács 1993, p. 78). In 1995, the roughly two million small and medium sized firms² in Poland accounted for about 60% of employment and generated a third of the Polish GNP (Polish SME Foundation 1997, pp. 19-21; compare also table 4.1 and figures 4.1 and 4.2). Furthermore, in 1995 the relative productivity of the small and medium-size firm sector was higher than that of the large firm sector and of the economy as a whole. The same picture emerges when individual industrial branches – with the exception of the clothing industry – are analysed (Polish SME Foundation 1997, p. 141).

Table 4.1: Size distribution of Polish non-agricultural businesses in 1995

Size	Number	%
1-5 employees	1,921,151	91.5
6-50 employees	148,779	7.1
51-250 employees	23,218	1.1
250+ employees	6,429	0.3
Total	2,099,577	100

Source: Polish SME Foundation 1997, p. 20

² The Polish statistical recording system generally defines those enterprises as small and medium-sized, which employ less than 250 people. However, some statistics use different upper limits. The text indicates, when these statistics were used.

Despite this obvious significance, the SME sector in Poland still faces severe problems and its importance for future growth of the Polish economy is questioned by some analysts (e.g. Hardy and Rainnie 1994).

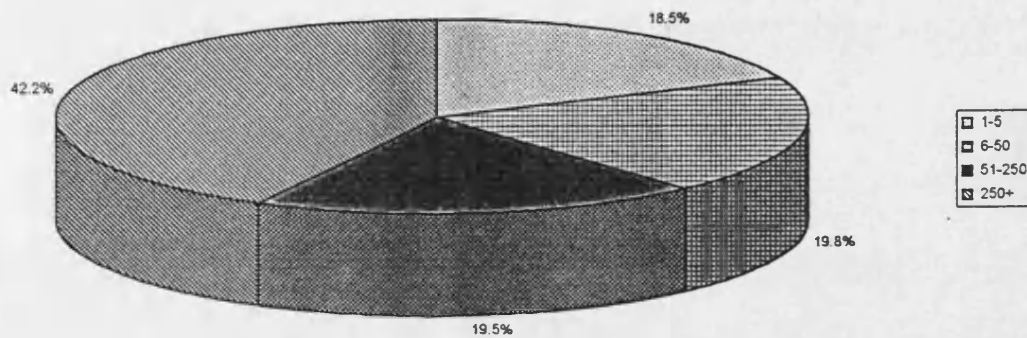


Figure 4.1: Share of national employment by economic entities, according to size (1995)

Source: Polish SME Foundation (1997)

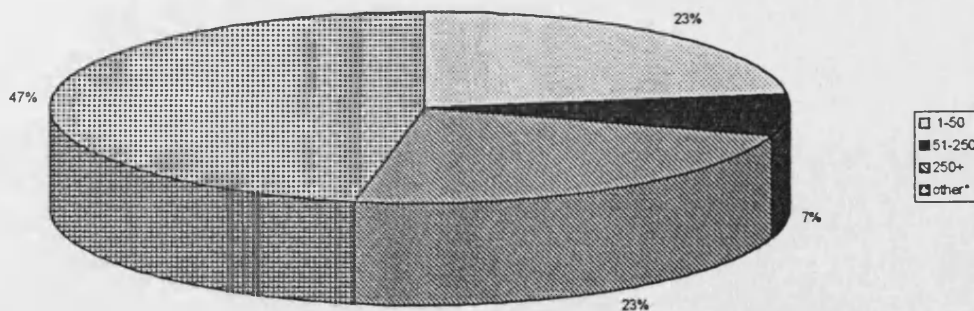


Figure 4.2: Share of GNP generated by economic entities, according to size (1994-1995) * companies financed from the budget, auxiliary companies

Source: Polish SME Foundation (1997)

The entrepreneurs³

Polish small entrepreneurs are predominantly male. According to the Polish General Social Survey, almost 66% of small enterprises in Poland were owned by men. On average, the entrepreneurs were older than 40 years of age. The mobility of entrepreneurs is very limited. In a survey of 48 small businesses in all sectors, Erutku and Vallée observed that all business owners were from the area in which their business was established (Erutku and Vallée 1997, p. 116). Entrepreneurs attended formal education on average only slightly less than employees in the public sector (11.6 years compared with 11.8 years in the public sector). Webster in her survey of 93 small manufacturing businesses found that 68% of entrepreneurs were university graduates and 18% had attended technical college (Webster 1993, p. 21). On the other hand, Kuczyńska reports that on average, private small entrepreneurs are, in terms of general education, less educated than their managerial counterparts in state firms, 82% of which have university education (Kuczyńska 1992, p. 160). The professional background of entrepreneurs very often seems to lie in the state sector⁴. Whereas, overall, only 17% of new private entrepreneurs had any previous management experience, Webster reports that approximately 40% of small manufacturers previously had management positions in the public sector (Webster 1993, p. 21). About 30% of private business owners consider their new business as similar to the organisation they were working for before, whereas another third of entrepreneurs see their company as only partly related to their previous professional field (Erutku and Vallée 1997, p. 117).

When asked about their motives to set up a company, the predominant answers by entrepreneurs in both Webster's and Erutku and Vallée's survey were the desire to achieve independence, achievement, and profits⁵. According to Webster, both push and pull factors precipitated the entry into private business activity. Push factors were mainly found in frustration with the work in the public sector, which often was rooted

³ The information in this section is based on Polish SME Foundation, unless stated otherwise.

⁴ More than 60% of private entrepreneurs used to work in the public sector (Webster 1993, p. 21).

⁵ Webster defines independence as "the freedom to work for one's own" and achievement as "the desire to use fully the skills one has" (Webster 1993, p. 22).

in the inability to put new ideas into practice. The pull factors, on the other hand, were perceived opportunities to realise the above three motives.

Sectoral Analysis

Most of the newly founded private firms were engaged in trade and services whereas a mere 13% were industrial firms (Belka and Krajewski 1995, p. 2). Accordingly, as shown in in figure 4.3, the importance of small and medium-sized firms is highest in trade and construction whereas SME account only for 26% of the GNP generated in industry (Polish SME Foundation 1997, p. 20).

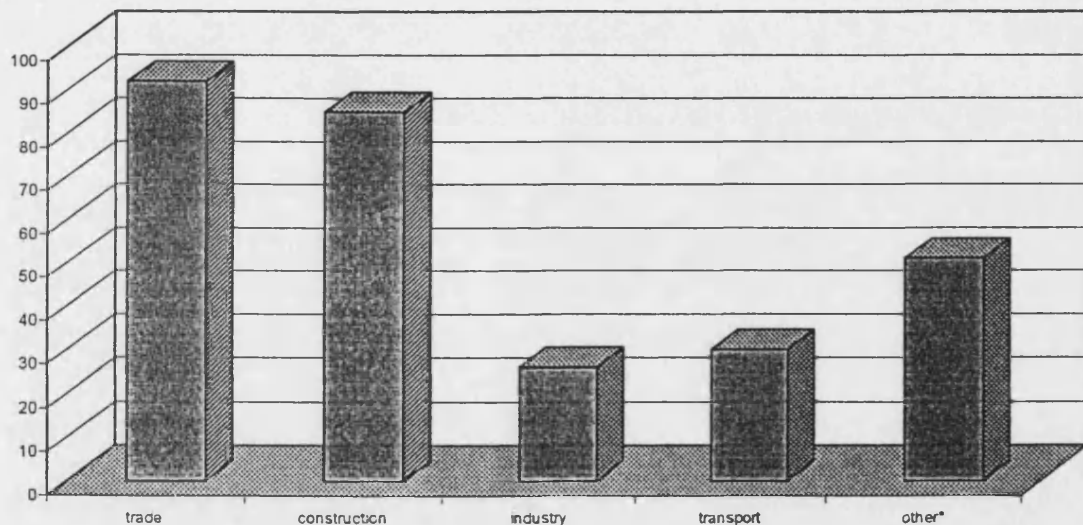


Figure 4.3: Share of sectoral GNP generated by SME in 1994-1995 (in %)

* Hotels and restaurants, real estate services, leasing and business-related activities, social and individual services

Source: Polish SME Foundation (1997)

Among the industrial branches again those are dominant that require little capital investment such as textiles, food processing, furniture, printing, i.e. traditional industries (Belka and Krajewski 1995, Polish SME Foundation 1997). However, firms with up to 200 employees account also for almost 50% of total sales in the production of computer and office equipment (Polish SME Foundation 1997, p. 29).

Hardy and Rainnie (1994) point out that the origin of newly registered SME in many branches is not only in small scale privatisation and newly generated firms but also in

firms coming from the informal sector. Kondratowicz et al. in their survey of 389 firms in 1994 found that more than half of SME developed from “an extremely simple type (and often semi-legal character)” (Kondratowicz et al. 1995, p. 22). Among the newly generated firms there might also be many ‘spin-offs’ from large state owned firms. Many SOE recently concentrated on their core activities and created for the non-core activities new companies that took over the equipment formerly used by the SOE for these particular tasks (Hardy and Rainnie 1994). These ‘new’ companies supply the large state owned firm with services like catering, transport or security as well as with products such as non-standard tools etc. (Belka and Krajewski 1995).

The artisanal sector traditionally constituted the largest non-agricultural private sector since the end of the Second World War. It was only overtaken by trade and gastronomy in September 1991 in terms of employment (Maczyńska and Musiał 1993). As discussed earlier, before 1990 the artisanal sector showed only little dynamic due to financial and locational problems, red tape, and the lack of raw materials. On the other hand, once the private entrepreneurs had passed the bureaucratic or political entry barrier, they could rely on stable demand due to the deficiencies in the supply by the state sector (Kondratowicz et al. 1995). Additionally they benefited from a favourable cost structure due to cheap energy prices and cheap rents. After the demand and cost structure changed from 1990 onwards many of the established artisanal firms had to close down (Ciechocinska 1992). Nevertheless, there was still a net growth in the number of firms while mainly the number of artisanal firms supporting agriculture declined (Maczyńska and Musiał 1993).

The trade sector is characterised by strong growth after the liberalisation of foreign trade. Trade firms benefited from the widespread perception among Polish people that foreign products are superior to local ones (Kuczyńska 1992). Especially in the period immediately after 1989, most regions bordering Germany had extraordinarily high growth rates in individual business establishments (Ciechocinska 1992). The future of these firms, however, is probably not very bright as they are founded on the “desire to make big money fast” (Kuczyńska 1992, p. 161). However, the trade sector in 1995 accounted still for the largest number of new business establishments (Polish SME Foundation 1997).

SME in the service sector showed a lower growth rate compared to the trade sector with a relatively good performance in telecommunications, transportation, and immaterial services such as tourism and financial services (Maczyńska and Musiał 1993). In the long run, however, this sector has certainly a higher growth potential than the trade sector.

In small private industry, the Polish government was hoping for foreign direct investment to play a crucial role. Although 23% (in 1994) of commercial law manufacturing companies in Poland had foreign capital involved (Belka and Krajewski 1995, table 4), the Chamber of Foreign Investors in Warsaw reported in 1993 that the interest of foreign investors had dried up completely (Hardy and Rainnie 1994). The development of this sector is, due to the lack of domestic capital, therefore rather modest (Maczyńska and Musiał 1993). Moreover, the lack of investment in manufacturing is held responsible for the slowing down of development dynamics of small industrial firms. In the manufacturing sector, small firms had the longest replacement period of fixed assets, whereas larger medium-sized companies were able to reinvest their profits and therefore had short replacement periods (Polish SME Foundation 1997).

Almost half of all Polish SME exports in 1995 came from the manufacturing sector. However, although small and medium-sized firms in manufacturing account for 46% of all Polish industrial employment, their share of Polish industrial exports is only slightly more than 15%. Generally, larger SME tend to be exporters more often than SME with less than 50 employees. The study by Piasecki et al. (1997) revealed that in the latter group, exporters are only a small minority, whereas 65% of the SME with more than 50 employees exported some of their products. Within the manufacturing sector, publishing, waste utilisation, and the production of timber and timber products generate the highest share of SME exports. Generally, small and medium-sized firms in light industry have a higher share of exports in their sectors than those in more capital intensive sectors. Many of the exporting SME have signed long-term agreements with foreign customers and deliver subcontracted work. This can also be attributed to the fact that small exporters rarely make use of professional marketing

methods, such as active market research. Existing contacts with clients, informal contacts, visits to fairs and exhibitions as well as magazines and other publications provide the most important methods of gathering market information (Polish SME Foundation 1997).

Spatial pattern

The spatial pattern of SME development exhibits large differences between regions. The Diagnostic Report of the Task Force for Regional Development in Poland (1996, cited in Polish SME Foundation 1997) identifies eight privileged voivodships, which are concentrated around large cities⁶. These voivodships account for a third of the Polish population, but accommodate almost 40% of all SME and more than 48% of enterprises employing six to fifty employees. On the other hand, the importance of small and medium-sized enterprises is highest in those regions that have lower population density, lower concentration of industry and generally lower levels of economic development (Polish SME Foundation 1997). The fourteen voivodships with above-average levels of GNP accommodate 52% of all SME employees and the fifteen voivodships with the lowest levels of GNP account for sixteen percent. However, within the richest regions, SME generate only 44% of total employment, whereas in the less developed regions about 65% of the total workforce are employed in small and medium-sized firms (Polish SME Foundation 1997, p. 32). In the latter, small firms providing services to agriculture generate the highest percentage of employment. Forst (1996) argues that also the concentration of business support services in metropolitan areas reinforces this somewhat historically rooted pattern.

Barriers to growth for SME

Small and medium sized firms in Poland face difficulties that are partly due to the exceptional circumstances of an economy in transition and on the other hand rooted in problems that are similar for SME in advanced market economies. However, Belka

⁶ These eight voivodships are Warsaw, Kraków, Katowice, Gdańsk, Łódź, Wrocław, Poznań and Szczecin.

and Krajewski (1995) report a certain improvement in conditions that were very problematic before the transition. Compared to the time of socialist rule, it is now only a formality to set up a new firm, there are no restrictions concerning foreign trade anymore, and access to resources is now – at least legally – possible for all firms. On the other hand, Belka and Krajewski (1995) still see serious problems for the small firm sector, which need to be tackled.

The recession in Poland that followed the implementation of the Balcerowicz plan led to a dramatic fall in demand, not only by state firms that had to shrink or ceased to operate, but also by private consumers who were facing a decrease in real wages and rising unemployment. At the same time, the market was opened for foreign competitors and the competition was further intensified also by new domestic firms (Webster 1993). Although the general economic climate improved significantly in the last few years, more than half of the entrepreneurs surveyed by Erutku and Vallée still feared a levelling-off of demand (Erutku and Vallée 1997).

But there are also non-market obstacles to growth. These obstacles are essentially due to socialist institutional legacies in behavioural patterns of individuals and organisations, as explained in chapter 2. Five broad areas could be identified. The first and probably most important barrier is that of restricted access to capital for SME. Belka and Krajewski (1995) attribute that to high interest rates and to underdevelopment and inefficiency of the banking sector. However, they also regard the lack of original product ideas by small and medium sized firms as a problem since the realisation of those ideas could yield profits high enough to afford the high interest rates (Belka and Krajewski 1995). High interest rates and inefficiency of the banking sector are closely linked. The inexperience of Polish bank managers in dealing with small firms and the well-known problems of high transaction costs in monitoring credits granted to small firms make the SME business both risky and unattractive for banks (Johnson and Loveman 1993). A common measure in western countries to overcome these problems is the development of systems of mutual loan guarantees. Schemes like that, however, did not exist in Poland until recently and are

now only developing slowly (Polish SME Foundation 1997). On the other hand, there are legal deficiencies that make it difficult for banks to recover loans from failed enterprises. As a result, most private enterprises are founded with private savings and only slightly more than ten percent of new firms receive bank loans and most new entrepreneurs rely on own or family savings (Kondratowicz et al. 1995). Thus it is very difficult for people employed by state firms to set up their own enterprises (Maczyńska and Musiał 1993). Moreover, this leads to little capital mobility among regions. Entrepreneurs therefore are restricted in their choice of optimal locations (Domanski 1994).

Furthermore, many entrepreneurs lack more business specific skills like managerial expertise and foreign languages. Thus, only 17% of private entrepreneurs had some kind of managerial training of which a large proportion consisted only in one-month crash courses. This problem is also generally recognised by entrepreneurs. In the survey conducted by Kondratowicz et al., more than 30% of entrepreneurs stated that they need further training in marketing techniques. This was followed by deficits in accounting, information about new technologies, banking skills, and knowledge about legal matters (Kondratowicz et al. 1995). Concerning the lack of marketing skills, a similar picture emerges from Erutku and Vallée's survey in which only 8% of companies had any kind of marketing department at all (Erutku and Vallée 1997, p. 119). Even those companies, which existed already before 1989, have no marketing experience, since "the most important task for private entrepreneurs was obtaining inputs, marketing was not necessary" (Brezinski and Fritsch 1996, p. 255). Moreover, an important obstacle to export is the relatively limited knowledge of Western languages among small entrepreneurs. About 19% of entrepreneurs surveyed in a study by the Social Research Workshop (Pracownia Badan Społecznych) were able to communicate in English (Kuczyńska 1992, p. 160). According to Belka and Krajewski (1995), those entrepreneurs who come from the informal sector have particularly severe skill deficits. This is due to the fact that the experiences and skills gained in the informal sector are not necessarily applicable in the formal SME sector. In addition to these deficits in managerial skills, in many cases also the training of staff through the public vocational education system is insufficient. Forst (1996) attributes this to a lack of adaptation to a market economic environment and to

considerable funding problems. As a result, “teachers are badly paid, learning materials are obsolete and machinery defective” (Forst 1996, p. 53).

Thirdly, the cooperation with large state-owned enterprises is rather poor. According to Belka and Krajewski (1995), state owned firms in bad economic situations tend to neglect their obligations in contracts with small firms (compare also Webster 1993). Moreover, in case of conciliation agreements between SOE and banks, private small firms are most likely to suffer financial losses (Belka and Krajewski 1995). Although a contract and bankruptcy law has been developed, it seems that particularly SME still face problems to collect dues through the state enforcement system (Forst 1996). In competition with large firms, small firms often face unfair competition by SOE that frequently sell products below their costs, due to their ‘soft’ budget constraints. Small firms, which compete with those state firms directly can do so only by exploiting the benefits of low wages and poor working conditions (Hardy and Rainnie 1994).

The fourth area of obstacles is the tax system, although surveys have shown that entrepreneurs do not consider taxes as the main impediment to the growth of their firms (Chmiel, Pawlowska, Rajewski 1992; Uplawa 1993, cited in Belka and Krajewski 1995). However, the average tax level for Polish enterprises is as high as that of Western European enterprises, albeit at a much lower level of development. Worth mentioning in this context is the relatively high tax burden on labour, which is even more serious if one considers the limited choice of production technologies due to the capital weakness of SME. In 1995 and 1996, taxes, fees and social security contributions increased the cost of labour by 50% of the wage sum (Polish SME Foundation 1997, p. 40-41). Moreover, unpredictable decisions by fiscal authorities and frequent changes in legislation prevent the entrepreneurs from developing a long-term strategy towards tax burdens (Maczyńska and Musiał 1993). Kondratowicz et al. report that almost 90% of small entrepreneurs think that stability in the legal environment is more important than its perfection (Kondratowicz et al. 1995, p. 59). Another problem is the absence of increased write-off possibilities or the chance to spread an annual loss over more periods. The creation of such possibilities would certainly facilitate investments (Brezinski and Fritsch 1996). According to Belka and

Krajewski (1995), however, some significant tax reliefs for investments were introduced in 1994.

Finally, red tape is still a common problem for Polish small and medium sized enterprises. The contacts between entrepreneurs and authorities stretch from seeking permission for the construction of new buildings to day-to-day problems like customs clearance for trans-border trade. In many cases it is difficult for small entrepreneurs to gain an overview over the complicated and ever changing regulations. By and large, the cooperation with local authorities seems to be the most difficult (Belka and Krajewski 1995).

Governmental SME policies

The transformation specific problems in Poland were significantly intensified by a lack of coherent governmental policies towards the private SME sector. This was mainly due to frequently changing governments and the fact that SME support did not have highest priority among the important economic issues (Forst 1996). In addition, small entrepreneurs were not properly organised so that they did not form a powerful lobby. In February 1993, however, a Task Force for Small and Medium Sized Enterprises was appointed. The objective of this taskforce was to identify the most urgent and useful measures to promote SME and to co-ordinate the activities of the Polish government and foreign partners, including the World Bank, the Commission of European Communities, the EBRD, the USA, and Germany. Priority was given to reforms of the civil and commercial codes and of the tax system. On a micro-level, the taskforce supports the introduction of loan guarantee schemes for SME and the establishment of SME information centres which provide relevant information for small entrepreneurs (Belka and Krajewski 1995).

On 6th June 1995, the Polish government announced a programme that was aimed at eliminating the growth barriers for small and medium sized firms (Polish SME Foundation 1997). It seeks to facilitate the legal aspects of establishing and running a business as well as at harmonising the relevant legislation with that of the European Union. In terms of financial instruments, the programme focuses on the extension of

existing loan guarantee schemes that are based on designated funds by the Bank Gospodarstwa Krajowego (National Economy Bank) and on offering preferential credits for firms in rural areas through the Agency for Agriculture (Polish SME Foundation 1997). Thirdly, it seeks to support the formation of organisations such as the Polish Foundation for Small and Medium Enterprise Development (Polish SME Foundation). This foundation aims to enhance the competitiveness of Polish SME by coordinating the SME-specific activities of other organisations as well as by establishing its own network of business support and information centres (Gurbiel 1996). Under the same objective, the government programme also promotes the establishment of other credit reassurance systems such as regional mutual assurance societies and other non-bank financial institutions (Belka and Krajewski 1995). The fourth set of objectives of the programme is in the field of training and information diffusion. The focus of activities here lies on the regional and local level and measures include the establishment of institutions that provide the easier access to information about management, finance, marketing, new technologies, and professional training. Moreover, promotion of entrepreneurship should be introduced to curricula on different levels of formal education.

Three factors will be used to implement the programme. Firstly, and probably most important, the programme will try to utilise the resources of the enterprises themselves, e.g. in the form of business associations that could introduce mutual reassurance societies. Secondly, the state budget for the years 1995-97 allocates 90 million PLN for the support of SME. The third source of funding will be foreign assistance funds within the PHARE programme of the European Union with altogether 54.9 million ECU for the same period. In addition to that, SME can also tap other foreign funds such as the Polish-American Enterprise Fund or funds by the World Bank that are distributed through banks appointed by the Narodowy Bank Polski (Belka and Krajewski 1995). Moreover, SME also receive support through several other government programmes that are not specifically aimed at small and medium-sized firms. These include industrial policy programmes, labour market programmes, and development programmes for rural areas (Polish SME Foundation 1997).

Apart from these policies designed and implemented at the national level, there are also policies at the regional and local level. Since the voivodships enjoy only limited autonomy vis-à-vis the national government, their regional development programmes are also frequently designed in cooperation with the central government. The main tool for SME promotion at the regional level seems to be Regional Development Agencies (RDA). These agencies were usually set up in the form of joint-stock companies or foundations. The shareholders or founders are one or more bodies of the central government, regional governments and in some instances banks (Hübner 1996 and personal communication Mr. Michalski and Mr. Kałużny 1997). The RDA at the time of their establishment often received a capital endowment in form of office buildings and other property. After that, the aim is to develop financial autarky with the help of rent on their property and fee income through the provision of services (personal communication Mr. Michalski and Mr. Kałużny 1997). However, some RDA in regions with particularly serious structural problems receive financial assistance from the STRUDER programme (OECD 1996a). According to Hübner, at the end of 1993 there were 123 RDA in Poland, many of them operating at a sub-regional level (Hübner 1996, p. 16). The OECD, on the other hand reports that at the beginning of 1996, 61 RDA were operational, of which 47 had a regional and 14 a local character (OECD 1996a, p. 108). The main aim in the early phase of their existence was to manage and restructure SOE in the regions, preceding their privatisation (personal communication Mr. Kałużny 1997). Later on, the range of objectives was considerably widened to include also SME development programmes, entrepreneurship promotion in the form of the provision of information, advice and training, export promotion, the organisation of exhibition and fairs, and the establishment of investment funds (Hübner 1996). In October 1993, about 50 RDA joined together and formed the National Association for Regional Development Agencies (NARDA) which aims to coordinate and support the activities of individual RDA (OECD 1996a, p. 116).

In contrast to the regional governments, local authorities have their own budget revenues and thus have also more power of disposal over their funds (Polish SME Foundation 1997). Municipal expenses account for about 16% of all public expenditures (OECD 1996a, p. 106). Since local governments are able to influence

local taxes as well as subsidies, they are able to promote economic activity in their municipality directly. Most of the local initiatives aim to improve the local technical infrastructure (e.g. telecommunications) and to promote the municipality as an investment location (OECD 1996a). Furthermore, several communes in the early 1990s established incubators, business support centres and innovation and technology centres. However, many of these SME-specific initiatives either failed or had a difficult start-up period (OECD 1996a).

SME support infrastructure

The SME support infrastructure in Poland can roughly be divided into associations representing businesses on the one hand and support institutions of the business environment, which also allow membership of other entities. The representing bodies include chambers of commerce, crafts chambers, entrepreneur organisations in other branches, employer unions, and business societies (Polish SME Foundation 1997). The objectives of all these bodies is basically two-fold: On the one hand, the constituent members pool their resources in order to provide self-help, on the other hand, they will also aim to represent their interests vis-à-vis external entities. Although the associations combine these two objectives, individual bodies tend to be stronger on one than on the other. Self-help associations can be highly localised, whereas effective lobbying bodies often need a super-regional organisational form (OECD 1994). After the abolition of the compulsory associations of the socialist period, the passing of the Chambers of Commerce Act and the Crafts Act in 1989 gave the start signal for a number of bottom-up chamber developments (Polish SME Foundation 1997). In some cases these local or regional initiatives joined together at the national level, such as the National Chamber of Commerce (Krajowa Izba Gospodarcza⁷) or the Association of Polish Crafts. Other associations such as business societies are often limited to a local or regional role. As essentially grass-roots organisations, all entrepreneurial associations have voluntary membership – even the chambers of commerce, which in many countries of continental Europe have

⁷ The National Chamber of Commerce will be discussed in more detail in chapter 5.

obligatory membership systems. However, there is an ongoing debate about the introduction of a mandatory membership system (Polish SME Foundation 1997).

In general, the situation of business associations is characterised by fragmentation and continuous underfunding (OECD 1994). As evident from table 4.2, at the end of 1996, about 1400 entrepreneurial associations existed in Poland. They are also spatially concentrated around large metropolitan areas. About 45% of all registered organisations operate in or around the seven large cities*, although less than 40% of SME were located there (Polish SME Foundation 1997, pp. 96-97).

Table 4.2: Number of entrepreneurial associations in Poland (December 1996)

Association	Number
Chambers of commerce	170
Crafts organisations (guilds, cooperatives, chambers)	894
Entrepreneur organisations in trade, catering, transport and other branches	88
Employer unions	62
Business societies	153
Total	1367

Source: Polish SME Foundation 1997, p. 96

A further problem, as Forst (1996) points out, comes from a lack of credibility of representative bodies. A recent sociological study found that only 20% of employers belong to any business association (CIPE-DEMOSKOP 1996, cited in Polish SME Foundation 1997). The reason for that – the study concluded – is that “Polish entrepreneurs are ... not typically aware of existing business organizations, and do not perceive this as a source of information”. They also “have no idea of what the organization they would like to become member of should be like” (Polish SME Foundation 1997, p. 96).

The second group of support institutions include non-commercial initiatives promoting entrepreneurship, enterprise development programmes financed by the state budget and foreign assistance, the Polish Foundation for Small and Medium

* These seven cities are Warsaw, Kraków, Katowice, Gdańsk, Łódź, Wrocław, and Poznań.

Enterprise Promotion and Development, and local and regional initiatives for entrepreneurship (Polish SME Foundation 1997). Since the state-financed programmes, the Polish SME Foundation and local and regional initiatives were dealt with earlier, only the non-commercial initiatives will be discussed here. Non-commercial initiatives comprise entrepreneurship support centres, information centres, incubators and innovation and technology centres, non-commercial loan and guarantee funds, and training centres. At the end of 1996, almost 400 of such initiatives existed in Poland (Polish SME Foundation 1997, p. 104, compare also table 4.3).

Table 4.3: Number of specialised support centres (legal entities and affiliated units) in Poland (late 1996)

Institution	Number
Entrepreneurship support centres	191
Information centres	60
Incubators, innovation and technology centres	55
Non-commercial loan and guarantee funds	68
Training centres	N/A
Total	374

Source: Polish SME Foundation 1997, p. 104

The entrepreneurship support centres provide services in consulting, information, training, and promotion, whereas information centres typically hold data bases of local, regional, national or foreign enterprises and aim to foster business links between companies. Innovation and technology centres offer consulting and attempt to speed up the diffusion of information on the implementation of high technology solutions. Business incubators, on the other hand, offer accommodation, administrative services, and consulting to small enterprises. The training centres are frequently affiliated to other organisations such as chambers of commerce or business support centres. They often contribute to the budget of these organisations through fee income (Polish SME Foundation 1997). Many of the above support institutions rely partly or entirely on state funding or on funding from foreign donors.

The spatial pattern of the non-commercial support institutions shows that – contrary to the situation concerning representing bodies – the large metropolitan areas are not

particularly favoured. The seven largest urban areas accommodate less than 36% of the support agencies while accounting for almost 40% of the total SME population (Polish SME Foundation 1997, p. 109). This also reflects the fact that many of the projects are sponsored by the government, which aims to channel support into peripheral regions.

There are few indications as to how intensively entrepreneurs make use of the services offered by support bodies. Piasecki et al. in a study of 300 SME found that about 40% of the entrepreneurs had used external services (Piasecki et al. 1997, p. 124-144). They also found, however, that to a large extent, entrepreneurs were 'forced' to use these services, as banks and other bodies demanded business or investment plans from the firms. Moreover, the study revealed that smaller enterprises with less than 20 employees only rarely used external services and mainly relied on informal information provided by colleagues (Polish SME Foundation 1997, p. 111).

In conclusion it seems that the number of different representing and support bodies is very high. This leads to an 'atomisation phenomenon' which in turn reduces the effectiveness of the support (OECD 1994, Forst 1996). A good example for this is provided by the multiplicity of enterprise databases that exist at present. According to the Polish SME Foundation report "almost every organization dealing with entrepreneurship develops their own databases" (Polish SME Foundation 1997, p. 104). Thus, apart from networks of information centres set up by foreign donors such as the Euro-Info network and the Polish-American Enterprise Clubs, also the information centres of the Polish SME Foundation, the Business Foundation of the Solidarity trade union, and regional information centres of the Polish Chamber of Commerce offer similar services (Polish SME Foundation 1997). In some cases, a number of these information centres are located in the same area, thus creating competition between the centres and confusion on the side of the potential users.

The OECD does not consider competition between business support organisations as entirely negative, as it leads them "to be more responsive to customers" (OECD 1996a, p. 118). It seems questionable, though, whether Poland can afford to divide scarce resources between several competing organisations, especially since the

multiplicity of providers can, for the user, impede the overview over relevant sources of assistance.

PART III

Methodology

As outlined earlier, the research presented in this thesis aims to explore two distinct, but related, issues. The first issue concerns SME support institutions, which were partly imported from the West and partly draw on pre-war Polish experiences. The produced evidence should give some indication about the level of acceptance of these institutions by their target population as well as about their effectiveness in supporting the transformation process. Secondly, the research should explore whether and how spontaneous inter-firm cooperation developed among Polish small and medium-sized enterprises and to what extent this cooperation can help to overcome SME-specific problems in the transition.

Official statistics about small and medium-sized private enterprises in Eastern Europe are not very reliable. Since private small firms were only unsatisfactorily included in the statistical recording systems of communist countries, there are still considerable gaps in the coverage of the private sector. The current attempts to close these gaps have sometimes led to confusion concerning categories (Polish SME Foundation 1997, OECD 1996b). These problems as well as the limited scope of a PhD research project suggested to restrict the research to two regions in Poland, in which original primary data could be gathered.

The first step in the data collection process, therefore, was to find appropriate regions. The key criterion in the search was that the site of the research should fall in an area, which is fairly advanced in the transformation process. Following Węclawowicz (1996), a high proportion of private economic activity, as well as a positive trend in unemployment was taken as an indicator for progress in the transformation to a market economy. Another prerequisite for an appropriate research site was that relatively many people should be engaged in industrial branches, in which also small-scale economic activity is possible. Finally, the region should have a reasonable standard of infrastructure so that links to outside markets can be established. All these criteria taken together should ensure that in the

examined regions patterns of cooperation in the small-scale private sector had time to become established and that these patterns were possibly also supported by information about cooperative institutions in other markets.

Following this 'checklist', a pilot-trip through several Polish regions (Szczecin, Koszalin, Gdańsk, Warsaw, Kraków, Katowice, and Poznań) was undertaken in August and September 1996. Already then, first interviews with entrepreneurs, local authorities and representatives of the business support infrastructure were conducted. The final decision for the voivodships of Szczecin and Poznań was taken based on the fulfilment of the above criteria and the willingness of actors to cooperate in the research process. Although the two regions share several characteristics, there are also significant differences. Both regions are centred on large cities. These cities, however, do not belong to the five largest cities in the country (OECD 1992). They also enjoy high levels of GDP (Gorzalak 1996) and have a high growth rate in the number of private enterprises (see also chapters 5 and 8). Furthermore, both regions are close to the German border and therefore to Western markets and are also well connected in terms of infrastructure. On the other hand, although the degree of industrial diversification in the two regions is similar according to branches, the largest industrial branch in Szczecin is dominated by one company, whereas in Poznań the most important industrial branches are spread more evenly. Moreover, the Poznań voivodship is historically relatively stable in demographic terms whereas Szczecin experienced major demographic changes in the aftermath of the Second World War.

These differences are interesting for comparative purposes. The development of inter-organisational cooperation in the Third Italy, for example, is sometimes attributed to deep historical roots. In this instance, but also in other cases of regional networks, a traditional diversity of the industrial structure and demographic stability are seen as prerequisites for the reproduction of cooperative behavioural patterns (e.g. Hadjimichalis and Papamichos 1991, see also Storper 1995). The embeddedness concept as developed by Granovetter (1985), on the other hand, while acknowledging the particularities of the above cases, also allows for situations in which inter-organisational cooperative patterns can develop within shorter periods.

This issue is central to the debate about the replicability of models of regional networks.

Within the two chosen regions, different methods of data collection were used. For the examination of formal institutions, no comprehensive overview over all initiatives in the regions was available. Thus, interviews with representatives of local and regional authorities were conducted in order to identify the most significant initiatives with public involvement. The result is not meant to constitute a complete account of public or public-private initiatives, since even the interviewees at the regional and local authorities had no complete overview. The fact that the voivodship of Poznań has no regional development agency for the entire region, for example, could only be established after a visit at a regional development agency in a neighbouring voivodship. Due to the limited number of initiatives, an interview approach with representatives of all institutions was chosen. This way, it was possible to take into account the different stages of development of individual institutions as well as particular issues which emerged only during the interview. The interviews were conducted following a loose structure with particular attention paid to the history of establishment and the objectives of the institution. Where possible, interviews were also conducted with companies that are affiliated to the institutions.

Since many analysts of the cooperative phenomena in the Third Italy stress the importance of entrepreneurial self-help organisations, such associations were also included in the research. At the outset of the fieldwork, regional chambers of commerce were active in both voivodships, thus facilitating a cross-regional comparison. Apart from interviews with responsible people at the chambers, a questionnaire survey was conducted among selected member firms, which in their structure resemble the firms examined in the case studies of informal networks. The purpose of this survey is two-fold. On the one hand, it should give an overview over the level of usage and satisfaction regarding the services of the local chamber. On the other hand, the survey should also gather information about the businesses in general, which gives some indications concerning particular characteristics of the firms affiliated to the local chambers of commerce. The same information could further be used in the comparison with firms in the examined informal networks. Thus, the survey gathers primarily descriptive data. It is designed to examine five

topic areas. The first issue is that of customer-supplier links. The key questions here are those about the spatial distribution of suppliers and customers, about the significance of individual suppliers/customers, and the extent of cross-border links. Secondly, it should be examined whether there is any kind of specialisation or diversification process among the selected firms. The third area should give an insight into existing or planned cooperation patterns as well as the nature of information flows. This section also covers the level of usage and satisfaction regarding the chambers' services. The last two sections are focusing on information about the founder of the enterprise and 'hard fact' data concerning the firm.

A pilot study was conducted as a mail survey, which was sent out to 32 members of the local Chamber of Commerce in Wrocław, a region, which is similar to Poznań and Szczecin regarding the regional characteristics described above. 12 Questionnaires were returned and the subsequent analysis led to the elimination of some questions, which received no or the same answer from all respondents. For the actual survey, the membership lists of the chambers in Poznań and Szczecin were taken to represent the basis population. From this were excluded all firms that were known to be active in services, trade, construction, or transport. Furthermore, all companies were taken from the sample, which employ clearly more than 500 people. This rather wide definition of SME was chosen due to the possible inaccuracy of the available information. Consequently, as few firms as possible were excluded from the survey on this account. As a result of the elimination process, 32 firms remained on the list in Szczecin and 92 in Poznań. The aim of the survey was to gather information about twice as many firms in Poznań as in Szczecin, thus reflecting the differences in the size of membership. Since only 21 of the 32 firms in Szczecin were available for the survey, in Poznań information was gathered about 42 firms, which were randomly chosen from the sample population. The actual data gathering was conducted by students at the sociology department of the University of Szczecin, who acted on detailed instructions concerning the intended meaning of the individual questionnaire items.

Regarding the examination of informal cooperative patterns in four case studies, an in-depth interview approach was chosen as opposed to data collection by standardised questionnaires. Johannisson in his discussion of methods in researching

entrepreneurial networks points out that “respondents may not be aware of the importance of some relationships for their venture” since “[m]any ties are taken for granted in their everyday lives” (Johannisson 1995, p. 224). Thus it is problematic to rely in the data collection process on information, which is solely based on subjective interpretations of the issues by the respondents. Furthermore, standardised surveys tend to deliver static views of a network and thus neglect the important dynamics in the web of inter-personal and inter-organisational relationships (Mønsted 1995).

Consequently, semi-structured interviews were conducted with owner-managers of small firms or appointed managers of larger firms. The entry contact into the individual networks was always established through existing social relations in the regions. Once the first interviews were completed, the interviewees were asked to refer the researcher to other similar firms known to them. Thus new contacts were established along existing personal or inter-organisational relations. The strength of these links, however, differed considerably from case to case.

The semi-structured interviews focused on eight main issues. The first two, and most important, parts were dedicated to the history of the company as well as to the personal background of the interviewee. The aim here was to leave the conversational initiative to the interviewees, thus allowing them to emphasise aspects that appeared important to them. However, for the sake of comparability, certain details were explicitly asked if omitted by the interviewee. For the remainder of the interview, the researcher took the initiative and directed the interviewee through the topics. The third and fourth sections were designed to find out about possible specialisation activities and the supplier/client structures, which potentially could give indications concerning materialised inter-firm cooperation. The fifth part of the interview aimed to explore the organisation of the work process, both internal and external to the firm, thus producing evidence concerning employee involvement and power relations between cooperating firms. The sixth section should explore the use of sources for business information and the potential acceptance of a more formalised inter-organisational cooperation. Following that, some questions concerning the person who introduced the researcher were asked. However, not in all instances it appeared appropriate to ask explicit questions about this issue. Finally,

the interviewee was asked for an assessment of the general situation for businesses, both in comparison with the socialist past and with regard to the potential for future improvement.

The aim in the selection of the four examined cases of informal inter-organisational networks was to produce evidence on structures that – taken at face value – resemble the three forms of networks as identified by Grabher (1993a). Since in Szczecin a shipyard dominates the most important industrial sector of the region, it was decided to explore whether a network of suppliers and subcontractors had developed around this dominant firm. Thus, the entry point into the network was the shipyard, which then provided a list of local subcontractors. Subsequently, one of the examined firms gave more details about its subcontractors, which were then also interviewed. The second network in Szczecin was identified after a preliminary interview with a company that had been established by a group of academics at the technical university in the city. Contacts provided by this firm led to further interviews with other similar companies, which then sometimes recommended each other as potential further interviewees.

In the Poznań voivodship, firms in a local cluster of furniture producers were interviewed. The entry point here was the local guild master who then referred to other entrepreneurs who he thought would be prepared to participate in the research. These entrepreneurs again referred to other entrepreneurs, some of which, however, were not willing to participate. The contact to the only large furniture firm in the town had to be established with the help of a researcher at the Adam-Mickiewicz University in Poznań, since no local interviewee seemed to be acquainted with top managers of that company. The second examined network in the region is a group of firms around the local technical university, similar to the one examined in Szczecin. The entry point here, however, was the department of computer science at that university, which was recommended by a local academic as the commercially most active department of the technical university. Many of the firms, which were contacted following information given by the interviewee at the department, declined to be interviewed. On the other hand, the manager of one firm, which eventually was prepared to participate, then actively established further contacts with other similar companies.

None of the above cases, however, represents a clearly delimited relational structure. All these networks are linked through further – frequently long-term – commercial and social links to other actors, which were not interviewed. In some cases, more actors could be identified in the respective network structures, which, however, could not be interviewed, either due to a lack of willingness to cooperate on the side of the actors or to a lack of resources on the side of the researcher.

Chapter 5: Szczecin

This chapter provides background information on the Szczecin voivodship and examines two public initiatives in the region which aim to promote economic growth. Furthermore, the chapter evaluates an entrepreneurial self-help organisation in the form of the local chamber of commerce. Following an overview over geography, population and history, the chapter moves on to describe the general economic situation of the voivodship. Subsequently, the basic concepts of the three bodies of the business environment – as developed in Western market economies – are introduced in turn. Each section concludes with a comparison between the ideal concept and the actual state of the respective initiative.

Geography and population structure¹

The voivodship of Szczecin is located in the extreme north-western part of Poland and covers an area of 9,982km². It borders Germany over a length of 162km and has a stretch of 82km of the Polish Baltic coastline (compare figure 5.1). The Odra, one of the main Polish rivers, flows through the voivodship and, in the town of Świnoujście, into the Baltic Sea. The Szczecin voivodship comprises three different types of landscape. The Baltic coast is characterised by small seaside resorts and fishing ports, whereas the eastern and southern parts of the region are agriculturally oriented with large-scale farms dominating the landscape. The city of Szczecin together with the communes of Police, Gryfino, Goleniów, and Stargard Szczeciński form the urban core of the voivodship.

The voivodship has a population of about 990,000, while the city of Szczecin accounts for roughly 420,000 inhabitants. About 755,000 people in the voivodship live in towns and the population density is 99.1 inhabitants/km². The rural population remained rather stable over the last 20 years, whereas the urban population between 1975 and 1994 increased by almost 23%.

¹ The statistical data in this section is based on Wojewódzki Urząd Statystyczny w Szczecinie (1995) and refers to 1994, unless stated otherwise.



Figure 5.1: The Szczecin voivodship in Poland

Historic Development²

The city of Szczecin is the historic capital of the Duchy of West Pomerania and was presumably founded in the 8th century as a Slavonic stronghold overlooking the Odra waterway. After being granted city rights in 1242, Szczecin flourished economically, also owing to its membership in the Hanseatic League. Its main asset was the seaport through which grain, meat, salt, and timber were exported and metal products, cloth, and herrings were imported. After the Thirty-Year's War, the city came to Sweden and eventually in 1713 was occupied by Prussia. At this time, however, the population, through centuries of German settlement, was already predominantly German speaking. The building of a railway line in 1843 between Berlin and Szczecin (then Stettin) contributed further to the already recovered and strongly developing urban economy. This was complemented by the extension of the Odra waterway between Szczecin and Swinoujście. In 1884, the construction of a city port started and in 1923, the three independent harbours of Szczecin were merged into

² This information in this section is based on Mieszkowska 1996, unless stated otherwise.

one large port. Although the inter-war period, due to intensified competition by Bremen and Hamburg, saw the port turnover reduced by half, the city retained its position as a major trading centre and continued to expand.

During the Second World War, Szczecin suffered from Allied bombing and particularly the harbour and the waterway to Świnoujście were destroyed. After the war, Szczecin, together with a part of its hinterland, was passed to Poland. Thus, in addition to the difficulties brought about by the destruction of the Second World War, the city subsequently also faced problems rooted in the new peripheral location near the German border. Furthermore, the former local German population was completely expelled and replaced by Poles who came from the eastern areas of pre-war Poland, which were annexed by the Soviet Union. Only at the end of the 1970s, Szczecin had regained its pre-war population size. One of the main problems Szczecin's in the socialist era was the continuous shortage of housing, despite considerable efforts in constructing new housing estates.

The re-integration of Poland into the Western European economic sphere opens new opportunities for the city and the region. The proximity to the Berlin agglomeration together with existing transport infrastructure links from the pre-war period are seen as one of the most important factors for the future economic development of the region. At present the harbour complex of Świnoujście and Szczecin accounts already for a growing amount of transit of German, Czech, and Slovak goods to the Baltic (Szczecin- Świnoujście Port Authorities 1996).

The economy

Compared with the Polish national economy, the Szczecin voivodship has a low level of agricultural employment. Only 11% of the total workforce are employed in agriculture, compared with 27% in Poland as a whole. However, the share of industry with 22% is also considerably lower than the 30% of the national labour force that works in industry. As evident from figure 5.2, particularly strong sectors in Szczecin are trade and repair, transport, storage, and telecommunication, as well as education. The strength of the transport and storage sector is related to the importance of the maritime economy in Szczecin, which employs almost 30,000

people, or more than 8% of the total workforce of the voivodship (compare table 5.1). If fishery and related industries are excluded, the maritime sector still accounts for a workforce of almost 24,000, or 6.5% of the total workforce. The single most important branch of the maritime economy is shipbuilding with more than 12,000 employees, followed by sea and coastal transport, and the handling of goods. Owing to the dominance of the Szczecin Shipyard (SSSA), the shipbuilding industry in Szczecin is highly concentrated. The shipyard, which is the largest industrial employer in Szczecin, employs almost 70% of the total workforce in that sector in Szczecin and also created a considerable number of jobs in subcontracting firms.

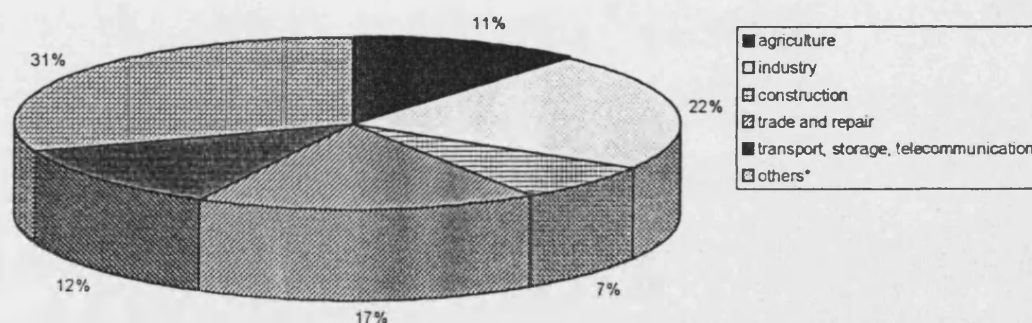


Figure 5.2: Employment according to sectors in the voivodship Szczecin, 1994

*real estate and business services (3.0), public administration (3.8), education (9.5), health and social services (10.4), communal services (2.5)

Source: Wojewódzki Urząd Statystyczny w Szczecinie (1995)

Table 5.1: Importance of the maritime economy for the voivodship, 1994 (in absolute numbers of employment and share of total employment in the voivodship)

Branch	Employment	%
Fishery	4,519	1.2
Fish processing	1,487	0.4
Shipbuilding and repair	12,154	3.3
Sea and coastal transport	4,911	1.4
Handling of goods	4,769	1.3
Other related activities	1,157	0.3
Total	29,717	8.2

Source: Wojewódzki Urząd Statystyczny w Szczecinie (1995)

The most important industrial sectors in terms of employment are the production of means of transport, i.e. ships, as well as the food and drinks industry, as shown in table 5.2. These are followed by the energy producing sector, the chemical industry, and machine construction.

Table 5.2: Employment in the most important industrial branches, 1994 (as percentage of total industrial employment)

Branch	Employment
Production of means of transport	16.5
Food and drinks industry	13.7
Energy, electricity, water	10.0
Chemical industry	9.9
Machine construction*	9.2

*including electrical and electronic appliances

Source: Wojewódzki Urząd Statystyczny w Szczecinie (1995)

There is no data readily available for the level of regional contribution to GDP. Gorzelak (1996), however, estimates that the Szczecin voivodship belongs to the top performers in the country after the start of the transition. This also seems to be confirmed by the development of unemployment in the region. Along with the development in the Polish national economy, the number of unemployed people in Szczecin rose after 1989. However, throughout the period between 1991 and 1994, the rate of unemployment for the region as a whole stayed below the national average (compare figure 5.3). The city of Szczecin again – according to a rough estimate – has about half the unemployment rate of the region³.

After 1989, there was also a steep rise in the number of registered firms in the region. Whereas in 1990, around 36,000 enterprises were registered in the voivodship, the number had risen by 1994 to more than 68,000. During the same period, the number of state-owned enterprises declined from 324 to 169. The highest growth rate was recorded for the number of sole proprietors and civil law partnerships (zakłady osób fizycznych, spółki cywilne).

³ The employment data at municipal level excludes self-employed and employment in companies with less than five employees. For the above estimate the regional ratio between total employment and employment according to the measure at municipal level was also applied to project the total employment in the city.

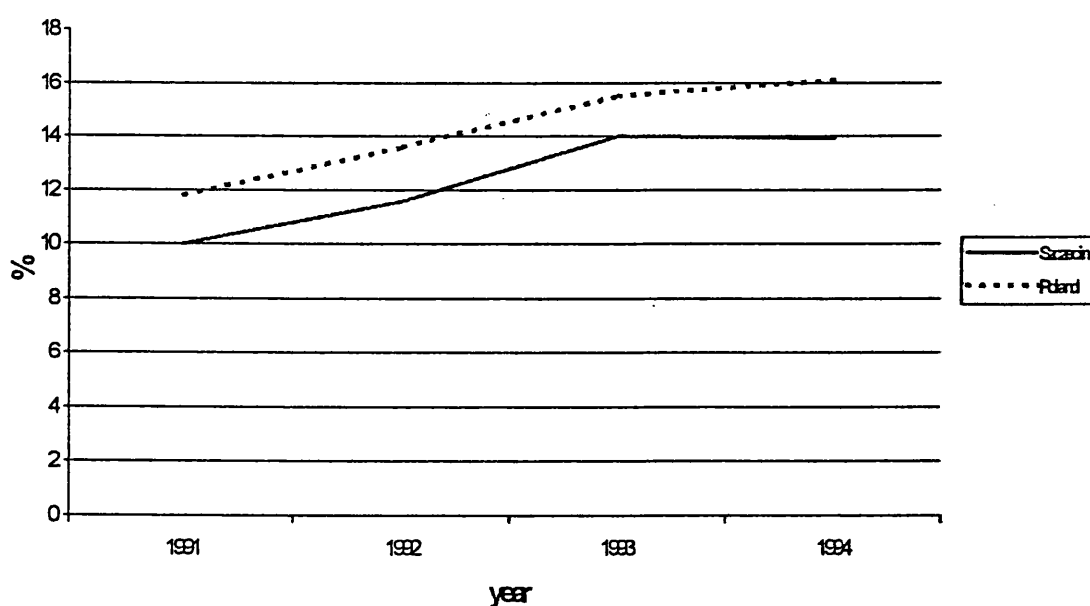


Figure 5.3: Unemployment trends in Poland and Szczecin, 1991-1994

Source: Wojewódzki Urząd Statystyczny w Szczecinie (1995)

In 1994, more than 44% of all companies were active in trade and repair, of which again more than 95% were sole proprietors or civil law partnerships. Industry accounted for just under 10% of all companies with 86% of them being civil law partnerships or sole proprietors⁴. The figures for 1994 are shown in table 5.3.

Table 5.3: Number of registered economic entities in the Szczecin voivodship, total and in selected sectors, 1994

	State-owned	Commercial code companies		Cooperatives	Sole proprietors and civil law partnerships
			Of which with limited liability		
Industry	71	790	764	60	5,725
Trade and repair	23	1,011	984	80	28,840
Construction	30	447	416	25	6,274
Total*	169	3,232	3,114	613	62,406

*number including all sectors

Source: Wojewódzki Urząd Statystyczny w Szczecinie (1995)

⁴ However, one has to bear in mind that the number of sole proprietors and civil law partnerships is probably exaggerated, since many of these firms appear to be dormant (personal communication from employees of the Statistical Office in Szczecin and Mr. Chitrow, former director of the local chamber of commerce).

Szczecin has five universities or comparable institutions with a total of almost 31,000 students. Furthermore, the regional workforce is highly educated with more than 40% of the economically active population having completed university or secondary school (Gorzelał 1996, p. 64)³. Some analysts see Szczecin in the group of Polish regions which, in terms of potential for development, is second only to the large agglomerations of Warsaw, Poznań, Kraków, and Wrocław (Gorzelał 1996), whereas others place it even higher (Węclawowicz 1996, OECD 1992). Moreover, according to a report by the Polish SME Foundation (1997), Szczecin is one of the eight 'privileged' voivodships⁴ in terms of development potential for small and medium-sized firms. This favourable assessment is also confirmed by the significant amount of foreign direct investment in the voivodship. According to Gorzelał, Szczecin in 1993 was ranked fifth in the country in terms of the number of companies with foreign capital involvement, accounting for 5.2% of the Polish total (Gorzelał 1996, p. 87). This overall positive picture, however, is somewhat qualified by the fact that one of the most important sectors of the economy is dominated by a single company, the Szczecin Shipyard. At present, its promising market position allows the company to expand and to create more jobs in subcontracting firms in the region. A crisis in the shipbuilding industry, on the other hand, could have a considerable negative impact on the regional economy.

In the following, two examples of economic policy measures will be considered. At the regional level, the Regional Development Agency is the main instrument to promote economic development in the region in general and the development of entrepreneurship in particular. At the local level, a business incubator centre could be identified as the most visible measure to foster the growth of new firms in Szczecin. These institutions will be dealt with in turn.

³ In 1988.

⁴ The other seven are: Katowice, Warsaw, Gdańsk, Wrocław, Poznań, Łódź and Kraków.

**The Westpomeranian Regional Development Agency in Szczecin –
Zachodniopomorska Agencja Rozwoju Regionalnego (ZARR)**

Background

Regional development agencies (RDA) exist in almost all countries of the European Union. The first agencies of this kind were set up in Ireland and Italy and primarily aimed to promote the industrialisation of backward areas in these countries. With the onset of industrial decline in certain sectors, other countries also established regional development agencies, in order to mitigate the problems associated with de-industrialisation. A further general trend was the increasing emphasis on regional planning and thus the recognition of the need for organisations dealing with the matter (Yuill and Allen 1982). Due to variations in structure and regional context, there are significant differences between the individual RDA across Europe. However, Yuill and Allen suggest a broad definition, which includes the main features of most agencies. According to that definition, a regional development agency is “any publicly-financed institution outside the mainstream of central and local government administration having powers designed for the specific purpose of promoting industrial development (including non-manufacturing activities) in regions that are generally designated as problem or priority areas” (Yuill and Allen 1982, p. 1). While most RDA state in their remits the objective of promoting economic development of the respective region, some agencies have very detailed sets of sub-objectives. These aims include variously the attraction of inward investment and the promotion of indigenous industry, environmental protection, the provision of information and advice, the award of financial aid, and the provision of industrial sites (Yuill and Allen 1982). Robert (1985) further identifies agencies for the promotion of vocational training and agencies specialising in the development of infrastructure. Among these different objectives, the development of indigenous industry and environmental issues are of increasing importance (Yuill and Allen 1982). The instruments and methods used to achieve these goals also differ considerably. Whereas some agencies provide substantial financial support and investment, other agencies offer mainly advice and consultancy services. The form of assistance very much depends on the funds available for the agency. The sources of these funds are mainly the various tiers of government in the individual countries,

but in some cases also local companies or financial institutions (Robert 1985). According to the structure of the group of sponsors, the RDA are also accountable to different bodies regarding their spending.

The overall record of regional development agencies seems to be fairly good, although in individual cases there are deficiencies in the provision of services to local firms (Robert 1985). Moreover, in their survey of local economic development initiatives in 33 localities in the EU, Bennett and Krebs (1994) found that the importance of RDA for local economic development is highest in areas with industries in decline and lowest in less developed and agro-industrial areas. Bennett and Krebs found also in the same study that usually local chambers of commerce play a more important role in business advice and support. However, they support Mawson and Miller's (1983) assertion that RDA can play a role in forming coalitions or networks of local actors with an interest in regional economic development.

The Agency in Szczecin⁷

The Regional Development Agency for West-Pomerania was established in 1994 as a non-profit organisation. The legal form of the ZARR is that of a joint-stock company with the voivodship holding 51% of the shares. The remaining 49% are held by the municipalities of the region, an agency for agriculture, and a governmental agency that is responsible for the sale of most of the land, which is owned by the voivodship. The equity in 1994 was 3,190,000 PLN, most of which was brought in as real estate property. The agency does not receive any further budget contribution from its shareholders and relies completely on the revenues generated by its own activities. The main source of income is the letting of office space, whereas income from the sale of services is rather modest.

The statutory objectives of the ZARR are:

- Promotion of private and state-owned companies with the main focus on the creation of jobs

⁷ The information in this section is based on personal communication by Mr. Krzysztof Michalski, director of the ZARR Business Support Centre.

- Development of solutions for environmental problems
- Advertising of the economic potential of the region, both abroad and within Poland
- Providing information for regional enterprises about legal and tax matters
- Assistance for agricultural businesses
- Providing general advice for firms of the region
- Providing entrepreneurial training
- Support for the restructuring and transformation of state-owned companies

To achieve some of these goals, the ZARR offers through its business support centre a range of services to companies in the region. It organises, for example, seminars for entrepreneurs that address issues of interest for the business community, such as changes in the tax system, sale of state property, marketing methods etc. Furthermore, it organises joint exhibitions at trade fairs for regional companies. In 1996, at the Szczecin Fair, 50 companies from the region participated in such a joint stand. The ZARR also tries to advertise the regional enterprise sector to foreign investors. One of its major efforts in this respect was the compilation of the 'Regional Top 100', a publication in which the 100 – according to sales – largest enterprises of the region are listed and described. According to the director of the business support centre, it was possible to cover the publishing costs of this publication through the sale of advertisement space in the brochure.

The ZARR has no dedicated budget for SME support. However, the management assumes that most of its service offers to companies in general will also appeal to SME. Moreover, in spring 1997 the agency planned to compile a catalogue of manufacturing companies in the region that employ less than 250 people. This catalogue should then be distributed to foreign investors and potential business partners. It already has a database with companies of the voivodship which look for cooperation partners.

The ZARR aims to establish links with local financial and training institutions in order to pool resources for business support. Furthermore, the regional development

agency is also involved in a development company that aims to extend and modernise the local airport.

In general, the management sees the main obstacles to more effective activities in the lack of financial resources. They aim to achieve a status that would be similar to comparable agencies in Germany, which receive an annual budget from the government to cover the running costs.

Assessment

The ZARR meets the formal requirements of the above definition of regional development agencies. The remit of the agency is in line with the normal tasks of Western organisations of the same kind, although the emphasis on the sale of state property obviously reflects the particular Polish circumstances.

The responses of the firms, which were interviewed in Szczecin, show that 12 of the 19 firms were aware of the existence of the ZARR and seven of these companies actually had some contact with the agency. However, the connection between the regional development agency and the regional government was generally not known to the interviewees. Of the seven enterprises that had some kind of contact, five were approached by the ZARR, since they belong to the 100 largest firms in the region and therefore were included in the 'Regional Top 100'. The other two companies are smaller, with less than 100 employees. The owner of one of these firms received from the ZARR a small loan for founding a second company, whereas the other firm used the consultancy service of the agency in an administrative matter. Generally, the local chamber of commerce – despite its poor record – was perceived as a more important source of business support and assistance.

The variety of objectives of the RDA together with its limited budget also led to the neglect of certain areas. Thus much effort was invested in the compilation of the 'Regional Top 100' ranking, which lists only the 100 largest firms in the region, many of which are state-owned. Although this might be a useful instrument in promoting the sale of SOE, its realisation left little scope for activities supporting the regional SME sector. It is also revealing in this respect that of the examined firms,

mainly the largest had some contact with the ZARR. The support measures for small and medium-sized enterprises were largely in the conceptual phase in early 1997. Considering the overall economic situation of large firms in Poland in comparison with the fast growing private sector, this neglect of new private companies appears to be counterproductive in achieving the aim of creating new jobs in the region.

In conclusion, the ZARR appears to be under-funded considering its range of objectives. Moreover, some of the existing or planned service offers compete with similar offers by other organisations such as the local chamber of commerce. Although there are tentative attempts to create a local development policy network, it seems that the plans of the ZARR do not take into account existing redundancies in the local business support environment.

Business Incubator Szczecin – Szczecińskie Centrum Przedsiębiorczości (SCP)

Background

The concept of business incubators was influenced by the changing conditions in Western mature market economies of the 1970s. Following the decline of traditional large-scale industries, local and regional authorities of affected areas were looking for policies to foster economic growth and employment (Prokopenko and Pavlin 1991). The basic idea behind an incubator is to promote innovative business start-ups that would otherwise encounter serious problems in the early phase of their existence (Small Business Council 1989).

Allen and Levine (1986) define business incubators as facilities that increase the efficiency of enterprise development by providing rental space, services, and assistance. The services provided can range from shared office and logistical services to product development, marketing, finance, and accounting (Small Business Council 1989). Frequently, services are offered at a discounted price, in order to mitigate the financial constraints that these necessary expenditures normally impose on new companies. Moreover, the spatial proximity of many similar firms should lead to synergy between the tenants. Ideally, a “constructive, interactive environment can lead to subcontracting between firms, to exchange of entrepreneurial ideas,

sharing of experiences and to a spread of enthusiasm” (Small Business Council 1989, p. 14). After a limited period of time, the tenant firms are expected to move out of the incubator and to be able to survive in a normal environment. Since the sheltered environment in a business incubator reduces the uncertainty faced by a new entrepreneur, it is often assumed that if such facilities exist, more would-be entrepreneurs will actually set up their own company. Thus the concept of incubators is seen by some experts as an effective means to instigate entrepreneurship in former socialist countries (Prokopenko and Pavlin 1991).

Allen and Levine (1986) distinguish between four different organisational types of incubators in Western economies. Public non-profit facilities are typically supported by local authorities and aim to create jobs and to diversify economic activity in the area. Educational institutions are often linked to research universities and follow the same objectives, but also should promote the image of the university and provide a practical learning environment for its students. Private corporate incubators have the purpose to generate profit through fee collection and investment opportunities. The hybrid form of public-private partnerships typically combines several of the above objectives. Regardless of the legal form, a successful incubator requires certain environmental conditions. In their analysis of the Southwestern Pennsylvania Economic Development District (SPEDD) incubator network, Prokopenko and Pavlin come to the conclusion that “a local coalition of various institutions concerned with local business and economic development must be formed“ to ensure the success of the incubator (Prokopenko and Pavlin 1991, p. 79). In the above case, this coalition included – apart from the local governments – also universities, real estate development agencies, and large corporations. In this context, Allen and Levine (1986) stress particularly the importance of collaboration between advanced technology incubators and research universities.

Furthermore, an incubator should be particularly suited for its target population of firms. Allen and Levine (1986) distinguish between three basic types of firms that all require specific facilities and conditions in the incubator. The first group consists of product development firms that need little space, but profit from the proximity and cooperation with universities. Enterprises active in manufacturing constitute the second type. Companies of this kind require infrastructure on the site which is

appropriate for the manufacturing as well as the transport of goods. Finally, service firms constitute also a possible target population. However, Allen and Levine recommend that personal services as well as retail and wholesale operations be excluded from business incubators, since they can easily locate in conventional commercial space. Other service firms with higher growth potential, such as software firms, are appropriate tenants and require in particular secretarial services such as word-processing and photocopying (Allen and Levine 1986).

Studies concerning the success of business incubators in the USA have shown that in these institutions about twice as many firms succeed as fail⁸. The comparable figure for start-up firms outside incubators is four times more failures than successes. However, Allen in his survey also found that 90% of all entrepreneurs in an incubator would have established their business also without the support such a facility (Allen 1985, cited in Small Business Council 1989). Consequently, the success of business incubators in promoting entrepreneurship is limited in the sense that only few people set up their businesses who otherwise would not have done so.

The incubator in Szczecin⁹

The incubator in Szczecin was founded in 1992 as one of the earliest initiatives of this kind in Poland. It is wholly owned by the Szczecin city council and has the legal form of a public enterprise. Before the establishment of the centre, the responsible people at the city council gathered information about the experiences of comparable initiatives in Western European countries.

One of the main objectives of the SCP was to give those persons, who are affected by the increasing unemployment after 1989, the opportunity to establish their own business. The wider aim of the initiative is to promote the development of entrepreneurship and the private sector in Szczecin. Firms, which apply to be considered for a place in the incubator should not be older than one year and be

⁸ A successful firm is a firm that moves out of the incubator and continues to operate, whereas a failed firm ceases to operate while still in the incubator.

⁹ The information in this section is based on personal communications by Mr. Zbigniew Cimek, SCP, and information leaflets published by the incubator.

active in manufacturing or services. However, preference is given to advanced technology manufacturing firms. Once established in the SCP, a firm has access to secretarial services such as word processors, a fax machine, and a photocopier. Legal advice is given on the basis of special contracts with local lawyers, which offer preferential rates. The rent rates in the incubator are about 50% cheaper than normal market rates. Moreover, the SCP organises promotional brochures, which advertise regionally as well as nationally the activities of the tenant firms. After a maximum period of three years, a firm is expected to move out of the incubator and to operate in a normal environment.

The SCP has two sites, both in previously defunct industrial buildings. In 1997, these buildings accommodated 47 companies, of which seven firms were active in manufacturing, nine in installation and repair, and three in construction. The other companies offer services, mainly in construction design and accounting, but also in publishing. Among the firms registered in the incubator are also the EuroInfo branch in Szczecin, a snack-bar, and a dentist. Two of the manufacturing firms work with electrical and electronic parts, whereas the other manufacturers produce furniture, textiles, and food products. The management of the incubator initiated talks with the local technical university in order to set up some formalised cooperation. However, these contacts bore little results. The SCP has had one outstanding success with a company that started from scratch, moved out of the incubator, and now employs 50 people. This company produces a special plaster for rendering walls, which is based on the firm's own patent.

The company in the incubator that probably comes closest to an advanced technology firm is an enterprise producing electronic precision clocks¹⁰. It was founded in 1992 by two engineers who lost their jobs in a state-owned company in the early 1990s. Through the personal friendship of one of the founders with the director of the SCP, the company was able to move to the incubator after about one year of its existence. The main product of the company are precision tower clocks, which are based on the firm's own design. Currently, the firm has four employees, which are all partners in the company. One of them, a programmer, is a full-time

¹⁰ This account is based on an interview with one of the founders of the company.

member of staff at the technical university of Szczecin. There are no secretarial staff employed in the firm. According to one of the owners of the company, the firm makes use of the secretarial services of the SCP, as well as of promotional offers such as joined catalogues, but has little contact with other firms in the incubator.

Due to the legal form of a civil law partnership without employees, the company circumvents the payment of social security contributions. This is also the reason why the owners do not plan any expansion of the company in the near future. It is envisaged to relocate outside the SCP by the end of 1998.

Assessment

The business incubator in Szczecin meets the initial targets only to a limited extent. Whereas the objectives of job creation and entrepreneurship development are appropriate for a public non-profit initiative, it is the selection of firms that causes the main problems. The formal requirements and preferences as developed by the SCP are too broad to allow a specialisation of the incubator. Contrary to the recommendation by Allen and Levine (1986), the incubator in Szczecin targets manufacturing and service companies, as well as having a preference for advanced technology enterprises, thus not allowing a focusing of resources on the needs of a homogeneous population. With regard to the latter type of companies, the absence of any formal cooperation with an institution of higher education is the most serious deficiency, whereas the basic conditions for the other two groups of firms appear to be provided. However, the existence of a mix of service and manufacturing businesses without any uniform branch specialisation is likely to minimise the potential synergy gains, which are an essential part of a growth-conducive incubator environment. A further problem results from the – according to Allen and Levine (1986) – inappropriate composition of the group of service companies. Since dentists, snack-bars and repair firms have typically short start-up periods and little growth potential, they should not normally be accommodated in an incubator. On the other hand, the snack-bar as well as the EuroInfo office can be counted among the infrastructure components of the SCP, although they also target markets outside the incubator. Considering the production technology and product portfolio of the

construction firms and some of the manufacturing companies, the growth potential of these firms also appears to be limited.

Since no detailed data was available about the firm turnover or the success rate of the SCP, no assessment of the effectiveness of the initiative – measured by its own objectives – can be made. The composition of the tenant population, however, suggests that the performance of the Szczecin incubator will be lower than that of more focused Western initiatives.

Self-help organisations – chambers of commerce and industry

Background

The history of chambers of commerce in Europe can be traced back to the end of the 16th century. Around that time, the first chambers were established in France and it took almost another century for the idea to spread to other European countries such as Britain and Germany. In the immediate aftermath of the French Revolution, the chambers were temporarily abolished, only to be reinstated by Napoleon, with a higher status than before the revolution. In 1832, they were legally recognised and received public law status in 1898; i.e. they became quasi-state bodies (Gilmour 1990). As a result of the Napoleonic influence, the chamber systems in most continental European countries differ from the system in Britain, which is based on private law and voluntary membership (OECD 1994; Gilmour 1990).

The difference in legal status has considerable consequences. Apart from the already mentioned contrast between compulsory and voluntary membership, there are also differences in coverage, size of membership, resources, and competition with other bodies. Bennett et al. (1993) summarise the main contrasts between the two types on the basis of a comparison between the German and the British system. Thus, the public law system covers the entire country through a national network in all areas, whereas the private law system has a self-selective coverage of business. Related to this issue is the difference in membership size. While under the voluntary British system, around 80,000 companies are associated to chambers of commerce, the

chamber membership in Germany accounts for more than 3,000,000¹¹ businesses (Bennett et al. 1993, p. 7). Since the – by far fewer – companies in Britain are at the same time organised in considerably more chambers, the average size of a British chamber is 817 members, whereas the German average is 37,221 (Bennett et al. 1993, p. 9). The public law chambers are financed through a levy or tax on all businesses and thus have a reliable source of income. This can be translated into a wider range of services and even quality throughout the country. Private law chambers, on the other hand, are financed through membership fees and income from the sale of services. Finally, the public law system ensures that there is only one or very few competing organisations in a given area, whereas private law chambers are not tied to a certain territory and there is no limit to the number of organisations in a given area.

In many European countries there is an ongoing debate about the advantages and disadvantages of the respective systems. The public law systems have the benefits of a more generous resource endowment and by definition represent the business sector vis-à-vis the government, whereas private law chambers frequently suffer from financial constraints and can speak only for their own membership. Moreover, achievements of private law chambers will frequently also be shared by non-members, thus creating a free-rider problem. Another serious problem of private law, non-mandatory chambers is the danger of fragmentation into small and ineffective bodies (OECD 1994).

On the other hand, the advantages of private law chambers lie mainly in the fact that they are closer to the market and therefore to the needs of businesses (Bennett et al. 1993). The competition for members will force associations to offer the highest standard of services possible (OECD 1994). Furthermore, some members of compulsory chambers “may feel resentment at being forced to belong to an organisation from which they feel they are deriving little benefit” (OECD 1994, p. 9), thus hindering the development of a trust relation between firms and representative body.

¹¹ German numbers apply only to Western Germany. Thus the size of the two economies is comparable.

The Polish Chamber of Commerce (Krajowa Izba Gospodarcza)¹²

The history of chambers of commerce in Poland can be traced back to the beginning of the 19th century and the time of the Napoleonic invasions. Although there is, due to partitions and wars, no long-standing tradition of individual institutions, the idea of self-governed bodies for the promotion of Polish businesses survived until the Second World War. Even after the war, for a short time, chambers of commerce resumed their activity in eleven cities, including Szczecin and Poznań. However, their role was very limited and they were restricted to a rather administrative function within the emerging state-socialist system. In 1950 these chambers were abolished altogether. Parallel to that development, the Polish Chamber of Foreign Trade (PIHZ) was established in late 1949. This institution was a public-law company and was supervised by the ministry of foreign trade. The constituting members were foreign trade enterprises, banks that dealt with foreign trade transactions, insurance companies, and Polish shipping firms. In fact, every firm that was involved in foreign trade in any form became a compulsory member. The role of the PIHZ, however, was very limited due to restrictions on foreign contacts. Even after these restrictions were relaxed in the period after 1956, the PIHZ was little more than an administrative body providing licenses and certifications. In any case, this chamber could not be considered as a body of self-governance of Polish businesses.

With the political changes in 1989, also the idea of independent chambers of commerce received increasing support. On 30.5.1989, the Act on Chambers of Commerce was passed, which says in Article 2: "The chamber of commerce is an organization of business self-governance representing the economic interests of its affiliate entities within the scope of manufacturing, commercial building or service activities, notably in their relation with the State authorities". However, the legislator decided to base the chamber system on private law and thus to abolish the principle of compulsory membership, which appeared to be discredited through the experience of the socialist era (OECD 1996b). Soon after this act was passed, many regional and sectoral chambers were established, followed by bilateral chambers that pursued the

¹² The information in this section is based on Polish Chamber of Commerce (1996) and personal communications by Mr. Igor Mitroczyk and Dr. Mieczysław Bąk, unless stated otherwise.

fostering of trade relations between Poland and individual foreign countries. In 1990, thirteen of these chambers joined together to set up an umbrella organisation, the Polish Chamber of Commerce (Krajowa Izba Gospodarcza – KIG) (Polish SME Foundation 1997). It now forms one of the four pillars of the Polish chamber system, which brings together agricultural, industrial, foreign trade, and crafts chambers (OECD 1996b). According to the statutes of the KIG, it allows regional chambers of commerce to become members if they associate at least 50 business entities in their voivodship, or at least 100 entities in an area larger than one voivodship. Furthermore, also bilateral chambers and “economic and social organizations which support economic development” can become members (Polish SME Foundation 1997, p. 175). In 1997, the Polish Chamber of Commerce associates about 500,000 businesses through its member organisations (Polish SME Foundation 1997, p. 175).

The objectives of the Polish Chamber of Commerce are to harmonise the self-governing rules throughout the country as well as lending a common voice to the different chambers vis-à-vis the central government. It also organises and undertakes activities that are beyond the scope of an individual chamber, such as certain trade missions and the establishment of the National System of Business Information, ‘InfoData’. Furthermore, the Polish Chamber of Commerce has its own publications and also maintains a specialised library for its members. The range of activities is divided into ten fields, for each of which a specialised committee is responsible (Polish SME Foundation 1997). The self-governing character of the organisation is underlined by the fact that the board of the KIG is responsible to the general assembly of members.

However, the Polish Chamber of Commerce and its member chambers face serious challenges. One problem lies in the private law status of Polish chamber system. The OECD argues that the multiplicity of small and unrepresentative organisations led to a fragmentation of efforts and resources (OECD 1994). As a result, sometimes several chambers exist in the same town, which target similar businesses and, at the same time, they frequently offer only a limited service (OECD 1996b). Furthermore, the financial constraints on the chambers’ budget lead to a high staff turnover, due to low wage rates (OECD 1996b). The resulting negative impact on continuity and quality of services exacerbates the problems of credibility, which stem from the

socialist heritage of institutions of the same name. The OECD points out that “entrepreneurs identify these institutions with practices prevailing in the planned economy, for example, low efficiency, bureaucracy and preferential treatment for state enterprises” (OECD 1996b, p. 86). The same author also reports that indeed “the services of many regional Chambers are aligned with the needs of state companies, which constitute the greatest part of the membership” (OECD 1996b, p. 86).

The issues of financial problems and large number of competing institutions on the one hand, and of a lack of credibility on the other hand, seem to point in different directions concerning a solution for the legal status of the Polish chamber system. The financial difficulties and the overlapping competencies could be solved by a comprehensive public law system, whereas the proponents of a private law system argue that the building of trust and credibility is only possible in voluntary associations (OECD 1996b).

*West-Pomeranian Chamber of Commerce and Industry in Szczecin – Izba Przemysłowo-Handlowa w Szczecinie (IPH)*¹³

In December 1990, the West-Pomeranian Economic Chamber was established as the first chamber of commerce in Szczecin. It was based on an initiative of some entrepreneurs of the region who saw the need to cooperate in order to pool their resources in representing their common interests. Only four months later, the West-Pomeranian Chamber of Commerce was founded, also with the goal of representing the local business community. Subsequently, the two chambers merged in November 1992 in order to avoid wasteful competition. In 1995, the chamber had a membership of approximately 200 firms. The sectors represented ranged from construction over the maritime sector, mechanical and electronic engineering, chemicals, paper, and textiles to all kinds of services and trade. All members were also represented at the general assembly, which constituted the highest decision-making body of the chamber. The permanent staff included the director as well as two specialists who were also in charge of all translation and interpreting tasks.

¹³ The information in this section is based on interviews with Mr. Bronislaw Chitrow and Ms. Dorota Iwanowska (both IPH), as well as on information leaflets published by the chamber.

The main purpose of the chamber was the establishment of contacts between companies of the region and foreign firms, possibly leading to future co-operation. The main focus here was Scandinavian and German partners. Thus the services of the chamber had two target groups: the own members as well as potential foreign partners. For both groups, the chamber provided legal and economic advice about investment conditions in Szczecin, often through a so-called committee of counsellors and the group of experts. Another measure to promote cross-border cooperation was the organisation of trade missions, both for foreign companies to Szczecin and for Polish companies to foreign countries. It was also planned to establish a database about co-operation offers from Polish as well as from foreign firms.

The membership fees were differentiated according to the size of the member firm. Accordingly, small firms paid about half the fees that a large firm would pay per month, although the overall level was very moderate. Banks, on the other hand, had to pay up to ten times as much. After an audit by a German chamber of commerce, it was recommended to introduce a flat rate for all firms. As a second source of income the chamber charged participants of trade missions and training seminars as well as the recipients of legal advice. Moreover, an arbitration court was incorporated into the chamber, which received fees from the parties going to court. All these services were also available to non-members, but member firms would be granted a 50% discount.

In February 1997, however, the Chamber was liquidated due to financial problems. In the months previous to the bankruptcy, the number of members had declined from a peak in early 1996 with more than 200 firms down to about 50 firms in early 1997. Only ten members participated in the final general assembly on 18.3.1997.

Membership profile

The basis for this profile is the list of members as in autumn 1996. The total number of associated companies at that time was 125, of which 112 were located in the city and the rest in the voivodship of Szczecin.

Sectoral and size distribution; distribution according to legal form

As evident from table 5.4, the trade sector as well as the construction sector was the strongest in terms of number of firms represented, closely followed by the group of companies active in electrical and mechanical engineering.

Table 5.4: Sector distribution of membership of IPH Szczecin, autumn 1996

Sector	Member firms	
	#	%
Services	36	28.8
Construction	28	22.4
Electrical and mechanical engineering	24	19.2
Wood and chemicals	12	9.6
Transport (sea & land)	10	8.0
Trade	9	7.2
Food	3	2.4
Shipbuilding	3	2.4
Total	125	100

The trade sector appears particularly under-represented among the members, considering that in 1994 in the Szczecin voivodship as a whole about 44% of all registered economic units were active in trade or repair (Wojewódzki Urząd Statystyczny w Szczecinie 1995, p. 214). The manufacturing sector, on the other hand, accounts in the voivodship for only roughly 10% of all economic units and thus, with more than a third of all members, is over-represented in the chamber. Also the construction sector has a larger share among the members of the IPH Szczecin than in the voivodship as a whole, where it accounts for about 10% of all economic units.

Of the 125 member firms, 85 could be identified regarding their legal form. Their distribution according to the main legal forms is shown in table 5.5. The majority of the firms were registered as limited liability companies (spółki z ograniczoną odpowiedzialnością) followed by the group of public limited corporations (spółki akcyjne).

Table 5.5: Firm distribution according to legal form, all members of IPH Szczecin (1996)

Legal form	Number
Limited liability	42
Public limited corporation	18
Sole proprietor	8
State-owned	6
Civil law partnership	6
Work cooperative	3
Other	2
N/A	40

Civil law partnerships (spółki cywilne) as well as state-owned enterprises (przedsiębiorstwa państwowe i komunalne) are equally represented, and also three work cooperatives (spółdzielnie) are among the members. Since most of the unidentified firms are active in trade and services, it is probable that these companies are rather small and thus likely to be registered as civil law partnerships, limited liability companies, or sole proprietors (zakłady osób fizycznych). Overall – compared to the structure of the whole business population of the region – limited liability and especially public limited companies were strongly over-represented among the members of the chamber (compare table 5.3). This suggests that the IPH Szczecin appeals rather to larger, well established firms than to start-ups, which is also supported by the fact that many of the larger firms are SOE or ex-SOE, which are now incorporated as public limited companies. Among the members were, for example, the Szczecin Shipyard, as well as the largest engineering company and the largest chemical firm in Szczecin (Elektromontaż and Police Chemical Works). Furthermore, the transport sector was represented by some of the largest shipping companies in Poland and other large firms.

Regarding the size distribution of the member firms, the available information was restricted to few well-known firms and the firms that participated in the questionnaire survey. The numerical predominance of firms active in trade, services, and construction, on the other hand, suggests that small and medium-sized firms account for the largest group of members. However, the experience of the selection process as well as the results of the questionnaire survey show that large firms prevail within the manufacturing sector. Consequently, firms with less than 200

employees account for little more than 70% of the membership, even if it is assumed that all firms active in trade, services and construction, are small or medium-sized companies.

The selection process for the questionnaire survey eliminated those firms, which were active in services, trade, construction, or transport. Furthermore, all firms were excluded that clearly employed more than 500 employees. Of the remaining 32 companies, 21 companies were eventually interviewed, of which 16 were actually active in manufacturing.

Table 5.6: Size distribution of surveyed firms in Szczecin according to number of employees

Size	≤ 10	$10 < x \leq 50$	$50 < x \leq 200$	$200 < x \leq 500$	> 500
Number of firms	3	5	3	9	1

Table 5.7: Firm distribution according to legal form, surveyed member of IPH Szczecin

Legal form	Number
Limited liability	6
Sole proprietors	5
Civil law partnerships	3
Public limited corporation	3
State-owned	3

Table 5.6 shows that of the surveyed firms, three companies employed less than ten people at the time of the survey, five firms employed between ten and fifty persons, three had between fifty and 200 employees, nine enterprises employed more than 200 but less than 500 people, and only one firm had more than 500 employees. The most common legal form is that of a limited liability company. The next largest number of firms is owned by sole proprietors, whereas state-owned enterprises, joint-stock companies, and private law partnerships are represented in equal numbers (compare table 5.7). One entrepreneur gave only the information 'private'. Concerning the founding date of the surveyed companies, there is a conspicuous gap between those firms that were founded before 1975 and those that were established before 1986. Nine of the 21 companies were established earlier than 1975 and seven of the firms that were founded in the 1990s are continuations of other companies.

This suggests that only five firms are genuine start-ups and are not somehow related to a – previously or presently existing – state-owned firm.

Geographical pattern of customer-supplier relations

From the analysis of the geographical distribution of customers, as shown in tables 5.8 and 5.9, it becomes clear that Western markets play an important role, being almost as important as the entire domestic market. This applies for manufacturers as well as for non-manufacturers. Within Poland, the city and the region of Szczecin as markets are together as important as the rest of the country with only few customers being in neighbouring, i.e. adjacent, voivodships. Eastern European countries and countries outside Western Europe appear to be markets of lesser significance, especially for manufacturers. However, in total numbers, two-thirds of all firms and three-quarters of all manufacturers surveyed have significant foreign markets (compare table 5.10). If compared to the general level of exports by Polish industrial SME, it is noteworthy that also an extraordinarily high proportion of those enterprises with less than 51 employees are exporters. With the exception of the smallest firms (less than eleven employees), three-quarters of this group find significant markets abroad.

Table 5.8: Answers to question 1.1 'Where do you mainly find your customers?', IPH Szczecin members

Markets	Number of answers*	%
In Szczecin	7	17.1
In the Szczecin voivodship	4	9.8
In neighbouring voivodships	1	2.4
In Poland	10	24.4
In Western Europe	14	34.1
In Central and Eastern Europe (including CIS)	3	7.3
All over the world	2	4.9
Total	41	100

*multiple answers possible

Table 5.9: Answers to question 1.1 'Where do you mainly find your customers?', manufacturers

Markets	Number of answers*	%
In Szczecin	4	12.9
In the Szczecin voivodship	3	9.7
In neighbouring voivodships	0	0.0
In Poland	9	29.0
In Western Europe	12	38.7
In Central and Eastern Europe (including CIS)	2	6.5
All over the world	1	3.2
Total	31	100

*multiple answers possible

Table 5.10: Companies with significant export markets¹⁴, firms surveyed

	<=10		10<x<=50		50<x<=200		200<x<=500		>500		Total of exporters	
	#	% of total	#	% of total	#	% of total	#	% of total	#	% of total	#	% of total
All firms	0	0%	4	80%	2	67%	8	89%	0	0%	14	66%
Manufacturers	0	0%	3	75%	1	50%	8	89%	0	0%	12	75%

number of firms

Table 5.11: Answers to question 1.5 'Where are your suppliers mainly located?', IPH Szczecin members

Supplier location	Number of answers*	%
In Szczecin	7	18.4
In the Szczecin voivodship	4	10.5
In neighbouring voivodships	3	7.9
In Poland	18	47.4
In Western Europe	6	15.8
In Central and Eastern Europe (including CIS)	0	0.0
All over the world	0	0.0
Total	38	100

*multiple answers possible

Regarding the geographical pattern of the supply side (table 5.11), the domestic markets represent by far the largest source. Although regional supplies account for more than a quarter of total supplies, the vast majority of suppliers are located in

¹⁴ Firms with significant exports who gave at least one of the answers 'Western Europe', 'Central and Eastern Europe', 'All over the world' regarding question 1.1.

other parts of Poland. Again, the voivodships neighbouring Szczecin have least significance, even less than Western suppliers. It is noteworthy that Eastern European sources and those in other parts of the world play no role at all. This pattern applies both for manufacturers and non-manufacturers.

Sources of business information

Most firms use a mix of methods to gather information about potential customers or suppliers (compare tables 5.12 and 5.13). However, the single most important way to obtain information is through personal contacts, accounting for more than 30% of all answers. The second most important method is gathering information at trade fairs. Of roughly equal importance are direct offers by customers or suppliers and information gathering by using business directories. Manufacturers show a pattern similar to that of the overall data with the use of business directories and the direct approach by suppliers swapping place.

The significance of personal contacts in gathering market information seems to be negatively related to the size of the firm, decreasing with increasing firm size. This is also in line with the finding of the Polish SME Foundation that small firms “seldom used active *professional* methods of collecting market information” (Polish SME Foundation 1997, p. 134; emphasis added). However, as shown in subsequent chapters, these personal contacts are not necessarily inferior to ‘professional’ marketing methods, since they often deliver information, which is richer than more ‘anonymously’ collected information.

Background of entrepreneurs

Regarding the issue of previous professional experience of entrepreneurs, the data suffers from a high proportion of non-responses (compare figure 5.4). However, the information available shows that the largest group of enterprise founders used to work in a state-owned company in the same or a similar branch before.

Table 5.12: Answers to question 3.1 'How do you get information about potential customers?'

size	<=10		10<x<=50		50<x<=200		200<x<=500		>500		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
trade fairs	0	0.0%	3	30.0%	1	20.0%	8	28.6%	1	50.0%	13	26.5%
personal contacts	2	50.0%	4	40.0%	2	40.0%	7	25.0%	0	0.0%	15	30.6%
business directories	1	25.0%	1	10.0%	1	20.0%	6	21.4%	0	0.0%	9	18.4%
approached by customers	1	25.0%	2	20.0%	0	0.0%	6	21.4%	1	50.0%	10	20.4%
other	0	0.0%	0	0.0%	1	20.0%	1	3.6%	0	0.0%	2	4.1%
Total	4	100.0%	10	100.0%	5	100.0%	28	100.0%	2	100.0%	49	100.0%

Table 5.13: Answers to question 3.2 'How do you get information about potential suppliers?'

size	<=10		10<x<=50		50<x<=200		200<x<=500		>500		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
trade fairs	0	0.0%	3	42.9%	1	25.0%	7	25.9%	1	25.0%	12	26.1%
personal contacts	3	75.0%	3	42.9%	2	50.0%	7	25.9%	1	25.0%	16	34.8%
business directories	1	25.0%	0	0.0%	1	25.0%	5	18.5%	1	25.0%	8	17.4%
approached by suppliers	0	0.0%	1	14.3%	0	0.0%	7	25.9%	1	25.0%	9	19.6%
other	0	0.0%	0	0.0%	0	0.0%	1	3.7%	0	0.0%	1	2.2%
Total	4	100.0%	7	100.0%	4	100.0%	27	100.0%	4	100.0%	46	100.0%

number of responses

It is worth noting, however, that almost a fifth of the entrepreneurs had no professional experience in the sector in which she or he is working now. A smaller number of people interviewed had already a private business in the same or similar sector before establishing the present company. The same pattern applies both for the general data and for the information about manufacturers. These findings – in particular the high proportion of entrepreneurs who previously worked in the public sector – seem to confirm the general picture, which was presented by several other studies (e.g. Webster 1993, Erutku and Vallée 1997).

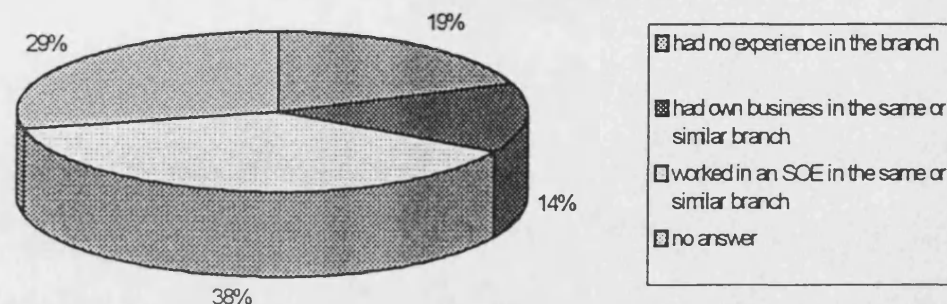


Figure 5.4: Background of surveyed entrepreneurs; members of IPH Szczecin

Use of services of IPH Szczecin and level of satisfaction

Only few of the surveyed firms made use of the services of the chamber. The use of services by the members surveyed and their level of satisfaction are presented in tables 5.14 and 5.15. Most striking here is that none of the companies with less than 50 employees and only one of the companies employing 50 to 200 people used any of the services of the chamber. The most frequently demanded service offer was that of information about foreign partners. This service also achieved a relatively high satisfaction rate. The next frequently used service – although only demanded twice – was the special training offered by IPH. Both customers of the training service were satisfied with the assistance by the chamber.

Table 5.14: Use of services and level of satisfaction according to firm size, IPH Szczecin

Size Service	<= 10				>10 and <=50				>50 and <=200				>200 and <=500				>500				Total			
	#	+	-	+/-	#	+	-	+/-	#	+	-	+/-	#	+	-	+/-	#	+	-	+/-	#	+	-	+/-
Information about foreign offers	0				0				2	1		1	3	3			0				5	4	0	1
Legal certification	0				0				0				1	1			0				1	1	0	0
Special training	0				0				0				2	2			0				2	2	0	0
Trade missions and trips to trade fairs	0				0				0				1	1			0				1	1	0	0
Others	0				0				0				1	1			0				1	1	0	0
None	3		3		5		4	1	1		1		4		4		1		1		14	0	13	1
Total	3	0	3	0	5	0	4	1	3	1	1	1	12	8	4	0	1	0	1	0	24	9	13	2

Table 5.15: Use of services and level of satisfaction among manufacturers, according to firm size, IPH Szczecin

Size Service	<= 10				>10 and <=50				>50 and <=200				>200 and <=500				Total			
	#	+	-	+/-	#	+	-	+/-	#	+	-	+/-	#	+	-	+/-	#	+	-	+/-
Information about foreign offers	0				0				2	1		1	3	3			5	4	0	1
Legal certification	0				0				0				1	1			1	1	0	0
Special training	0				0				0				2	2			2	2	0	0
Trade missions and trips to trade fairs	0				0				0				1	1			1	1	0	0
Others	0				0				0				1	1			1	1	0	0
None	1		1		4		3	1	0				4		4		9	0	8	1
Total	1	0	1	0	4	0	3	1	2	1	0	1	12	8	4	0	19	9	8	2

- # number of responses
- + satisfied
- dissatisfied
- +/- neither satisfied nor dissatisfied; no answer

Thirteen out of fourteen firms who never used the chamber's services reported that they were not satisfied with the quality standard of services. Overall, the picture is more favourable if only manufacturers are considered. Almost 62% of all surveyed members were dissatisfied with IPH, whereas 29% were satisfied. The respective figures for manufacturers are 50% dissatisfied members and 38% satisfied members. 18 out of the 21 surveyed firms were not prepared to pay higher membership fees for an improvement in the quality of services. When asked about the reasons for their dissatisfaction, only few entrepreneurs came up with answers. However, all four responses blame the low level of activity on the side of the chamber.

Assessment

The decreasing size of the membership and the eventual collapse of the chamber indicate that the IPH Szczecin was a largely unsuccessful initiative. The composition of the membership of the IPH differs markedly from the one of the British Chambers of Commerce¹⁵. As estimated above, a maximum of 70% of all IPH members were small and medium-sized enterprises. This compares to a SME share of 93% of all chamber members, which are associated to the BCC. Also, the share of manufacturing companies among the members of the BCC with 27% is lower than that of the IPH with at least 33%. Although the over-representation of the manufacturing sector does not conflict with the aims of the chamber, the under-representation of the SME sector, also with regard to the size distribution of the local business population, suggests that the IPH did not appeal sufficiently to the local SME community. Furthermore, only five out of the 21 surveyed firms appear to be genuine start-ups. Thus the chamber was also not able to attract the newly developing business community in a proportion that would reflect its importance in the region.

Compared to the market penetration of British chambers of commerce in "metropolitan cores" (Bennett and McCoshan 1993, p. 239), the record of the IPH is particularly poor. Whereas Bennett et al. estimate that British core chambers

¹⁵ The BCC is chosen as a reference point in the comparison with Polish chambers of commerce, since British chambers as private law organisations come closest to a Western equivalent of the Polish chambers. All figures for the BCC are based on British Chamber of Commerce (1996).

represent roughly 10% of the local business community, the comparable figure for Szczecin is 0.2%. In Britain, also some 58% of all manufacturing businesses in core areas are associated to a chamber of commerce (Bennett et al. 1993, p. 9). In Szczecin, on the other hand, roughly 0.5% of the manufacturing companies in the region were members of the IPH. The total coverage of businesses in the city of Szczecin was about 0.3%.

Regarding the services of the chamber, the survey as well as some in-depth interviews with entrepreneurs revealed a low level of attractiveness, although the focus on establishing links with foreign partners seems appropriate considering the fact that more than 40% of the surveyed members rely on exports. The most frequently demanded service offer – the provision of information on potential foreign partners – also meets considerable competition by other business support institutions, such as the regional development agency, the EuroInfo branch in Szczecin, or the Polish-German Agency for Economic Promotion. Generally, small and medium-sized business seemed to have profited least from the services of the IPH. The overall level of satisfaction with the chamber's activities is considerably lower than in the case of one of the largest British chambers¹⁶, for which comparable data was available. In the case of the British chamber the approval rate was 76% (Market Research UK Limited 1996), whereas in Szczecin only 29% of the surveyed members were satisfied. The respective levels of dissatisfaction are 5% in Britain and 62% in Szczecin. This evidence is also supported by the rapidly decreasing number of members from late 1996 onwards.

The main criticism of the members surveyed is that the chamber was not active enough. Interviews with some members showed that, while they saw a need for a common voice of the local business community, they were not always aware of the other services offered by the chamber. The director of the IPH attributes this to a lack of advertising due to the under-funding of the chamber. This in turn seemed to reinforce the problem the financial problems, since for many trade missions the

¹⁶ Data about satisfaction levels was available for only few British chambers. However, the size distribution of the membership as well as the share of manufacturing businesses of the total membership of this individual chamber do not differ significantly from the respective characteristics of the average of all members of the BCC.

minimum number of participants, which would have made the endeavour profitable, could not be attracted. However, the interviewed member firms also reported that the quality standard of the IPH services was frequently poor. This was commonly attributed to the fact that the staff of IPH was highly motivated but not sufficiently trained and qualified. A further point, which was frequently mentioned, was the fact that the director of the chamber had not sufficient command of Western languages, which inhibited fruitful negotiations and presentations with foreign partners. Furthermore, the office was permanently under-staffed i.e. the staff had too many different tasks and could not focus on one or few activities and develop specialised skills. So after few contacts between firms and IPH, some firms assumed a general lack of professionalism on the side of the chamber.

The most obvious reason for the under-funding of the chamber was the fact that most firms did not pay their membership fees. This, according to the director, might partly be due to the socialist legacy. Under the socialist system, membership in the central Chamber of Commerce was compulsory for exporting firms, however at a rather symbolic fee. At that time, many firms simply did not pay even this symbolic fee, an attitude that possibly survived into the post-socialist era.

Overall, the collapse of the IPH in Szczecin can be attributed to several factors. The main factor seems to be the failure of the chamber to convince the local business community that it is an organisation, which can offer valuable services and advice and is therefore worth investing in. On the other side, also attitudes of member firms, which seem to be legacies of the socialist past, contributed to the problems. Moreover, the competition generated by initiatives of the voivodship and the European Union decreased the number of potential customers for the core service of the chamber, especially since these competitors offered these services free of charge. In conclusion, the IPH seems to have suffered from many of the problems, which were identified by the OECD, such as fragmentation, limited range of services, financial constraints, and lack of credibility (OECD 1994, 1996b).

Conclusions

This chapter aimed to introduce the Szczecin voivodship in historical and economic terms and to describe and evaluate existing policy initiatives in the region, which were designed to promote private enterprises.

By and large, these initiatives achieve their goals only to a limited extent. Apart from conceptual flaws such as, for example, a range of objectives that is too broad for the resources available, all organisations examined seem to suffer from insufficient links to other business support bodies. Thus, the regional development agency and other publicly funded organisations compete in certain services with the local chamber of commerce, hence undermining the economic base of the chamber which did not receive any state subsidies. But also the problems of the business incubator in addressing its target group of technology-based start-ups can be traced back to a lack of links to other local organisations, particularly the technical university in Szczecin. As shown in chapter 7 of the thesis, links to this academic institution could well open up a host of contacts to firms that satisfy the target profile of the incubator.

A further problem appears to be the low level of acceptance of institutions that are perceived as public or quasi-public. The business incubator apparently struggled to fill its space by accepting firms which clearly do not meet the profile required by its objectives. The regional development agency was considered by the entrepreneurs interviewed as less important than the local chamber of commerce which also achieved only a very low market penetration. On the other hand, the entrepreneurs surveyed stressed the importance of personal contacts for their business. Overall, this pattern seems to fit Sztompka's observation that legacies from the socialist past are perpetuated in the transitional phase and lead to the rejection of institutions connected with the public sphere (Sztompka 1991).

Chapter 6: The shipbuilding production system around Stocznia Szczecińska SA (SSSA)

This chapter describes and evaluates the empirical evidence gathered about inter-firm cooperation in the shipbuilding sector in Szczecin. Since this sector is dominated by the Szczecin shipyard (compare chapter 5), the chapter starts with an overview over the history and the current situation of this firm. Subsequently, smaller firms will be examined, which are all tied into the production system around the Stocznia Szczecińska.

Stocznia Szczecińska SA – history and present situation

Shipbuilding in Szczecin has a long-standing tradition. About 150 years ago, three German shipyards were established in what was then Stettin. The largest of these, the Vulkan shipyard, built warships as well as passenger ships and achieved a “virtual monopoly...for fleet owners from Hamburg and Bremen” (Kotchen and Loveman 1993, p. 1) for the latter type of ship. The other two shipyards produced specialised ships for niche markets. This all, however, changed in the wake of the Second World War. Due to the armament policy of the Third Reich, the production of all Szczecin shipyards was converted to the production of navy submarines. This in turn led to massive bombardments of the sites by the allied airforces. Subsequently, about 80% of the production capacity of the shipyards had been destroyed by the end of the war (Kotchen and Loveman 1993, p. 1).

After 1945 Szczecin came under Polish administration according to the Yalta plans of the victorious powers. Although almost the entire former population had left, and therefore also most of the skilled workforce, the new administration decided to revive the shipyards and merge them into one large enterprise. In 1948, the Szczecin shipyard launched the first ship built in Poland after the war, the freighter “Oliva”. However, according to vice-president Goj, the Szczecin shipyard attracted much less governmental attention and support than other shipyards, as the status of the Szczecin area was still disputed between Germany and Poland until the early 1970s. Therefore, it became only the third largest shipyard in Poland, behind Gdańsk and Gdynia.

During the communist era, the shipyard was used by the central planning system to provide industrial goods for the exchange with other CMEA countries, mainly the Soviet Union. As a result, the government invested considerable amounts in cranes and new slipways. At the same time, wages and other cost factors were subsidised, often up to 50% of a project's total costs. The focus was primarily on size of the scale of operations and subsequently, almost any order would be accepted. This resulted in a broad range of products, from cargo ships and research vessels to tankers, altogether more than 30 different types of ships.

As for all large state-owned companies in the former Eastern bloc, the Szczecin shipyard provided a wide range of social services for its workers and their families. This included holiday homes and free housing as well as a hospital. In short, the management of the shipyard acted according to principles that were not compatible with the market economic basics. The main focus of managerial activity was on extracting governmental money instead of running a profitable operation.

These managerial skills, however, proved insufficient after the implementation of the Balcerowicz Plan in January 1990, which abolished all government subsidies to the shipyard. From one day to the other, the shipyard was left without sufficient means to cover the production costs of the three ships, which at that time were under construction. In that situation, the management was able to negotiate a bank loan for about 50% of the construction costs, the share that would otherwise have been paid by the government. The high interest rates, however, resulted in a massive loss of about \$116 million for the three projects (Kotchen and Loveman 1993, p. 3).

The second problem was the collapse of the Eastern European market. As mentioned above, the shipyard played an important role for Polish exports to other CMEA countries. Between 50 and 60% of all orders came from the Soviet Union in the years before the collapse of the communist sphere in Eastern Europe. This also changed overnight with the dissolution of the Soviet Union and the CMEA. All orders from the Soviet Union to the shipyard were cancelled and ships that were already built, but still in possession of the shipyard, were not paid for by the Soviet customers. Apart

from adding to the debts of the Szczecin shipyard, those events also made the future continuation of these long-standing business relations highly unlikely. Therefore the shipyard had to look for new markets.

In April 1991, the management of the shipyard changed and the last communist director was replaced by Mr. Piotrowski, a former shipyard employee who in the 1980s had lost his job due to his Solidarnosc activity. He abandoned the old managerial policies and realised that the shipyard had to be adjusted to market economic realities. The reforms implemented under his aegis ranged from financial restructuring and privatisation to all issues of industrial restructuring. The financial restructuring resulted in the largest creditor, Bank Gdański, being replaced to a significant extent by the Polish Development Bank, which offered better conditions. The remaining creditors, among them many suppliers, allowed the shipyard a debt reduction of 33% with the rest being payable over a longer period than initially negotiated (Stocznia Szczecińska 1995, p. 31).

The privatisation procedure started as early as September 1991. The first step was to convert the company into a joint stock company with all shares being held by the state treasury. The estimated value of the shipyard's assets were added to the debts of the company. This exacerbated the financial difficulties of the shipyard in a way that made further steps towards privatisation impossible for the next one and a half years. In January 1993, however, it was agreed to give the main part of the shares of the company for a symbolic price to four banks, the workforce, the ten largest suppliers, and the management. This way, the Szczecin shipyard stayed in Polish hands.

The industrial restructuring included reforms in many fields. The most obvious task was it to narrow the product range to achieve better learning effects as well as economies of scale. Based on a market research, the management decided to focus on mid-sized container ships for which global demand was high at the time of the survey and consequently prices were also above average. Within a short period, the Szczecin shipyard became one of the world leaders in the supply of this category of container vessels (Stocznia Szczecińska 1995). For the future, however, the management will also try to develop the shipyards skills towards the production of ferries and tankers,

due to the expected future saturation of the market for container ships (personal communication Mr. Goj).

The present success is also related to a radical change in the customer structure. The shipyard managed to shift its focus from Eastern to Western markets. In this context it proved to be favourable that connections to Western customers existed, even although only a few were inherited from the socialist era. Due to very competitive prices, Stocznia Szczecińska was able to extend the existing relations as well as attract new customers. Of the 21 ships delivered in 1995, 13 went to German ship-owners and only one ship went to a Russian customer (Stocznia Szczecińska 1995, p. 21). The order book for the next years shows the same pattern.

For achieving this goal, it was very important to reduce the production cycle times at the shipyard, i.e. the time from laying the keel for a new ship until delivery of the completed vessel. In 1995 it took 8 months to complete a ship of an existing series, down from 2 to 3 years. For a completely new type of ship it took 18 to 20 months to design and construct, still a very short time compared with many other shipyards (Stocznia Szczecińska 1995, p. 33). This is also made possible by a design and development department with about 500 staff who work with western standard CAD equipment. According to the Technical Director of the yard, SSSA probably has the “shortest production cycle in the world” in shipbuilding (Kotchen and Loveman 1993, p. 8). This not only improved the financial situation, due to an accelerated cash flow, but also the market situation as ship-owners pay much attention to quick deliveries.

Other measures included a reform of the compensation scheme for workers. The management negotiated with the four labour unions, which represent about 50% of workers at the shipyard and reached an agreement which reduced the labour costs significantly. The shipyard and its employees decided to opt out of the government prescribed scheme that required 2.6% pay rise every month (Stocznia Szczecińska 1995, p. 7). At the Szczecin shipyard, workers wages now rise by the same margin only every three months. This, however, was only possible because the average wage at the shipyard was 80% higher than the average Polish wage in 1993 (Kotchen and Loveman 1993, p. 9).

Furthermore, the organisation of work also changed radically. The focus on few, similar types of ships made it possible to define a production schedule which allocates a fixed amount of labour hours to each job that has to be performed by a team of workers. This time assignment is used as a basis for the remuneration of the individual workers. Within the group, the hourly pay rate is defined according to the qualification level of the individual worker. The ultimate responsibility of meeting the time target of the group, however, lies with the foreman of the group. If the group does not manage to complete the task in the time assigned for that, no overtime money is paid for the additional time. According to Kotchen and Loveman, this programme proved to be very successful in raising productivity (Kotchen and Loveman 1993).

Additionally, the shipyard undertook many efforts to further improve the quality of its products. To ensure that Western fleet-owners are confident about the standards of a newly built ship, SSSA as the first shipyard in Europe started to implement a quality documentation and monitoring system, which in November 1993 was approved by an outside auditor as meeting the requirements of the international standard ISO 9001. The shipyard trains its workforce through both internal and external training programmes, to maintain the achieved quality standard.

Concerning the number of employees, the shipyard reduced the workforce by some 8,000 people from its peak in socialist times to just under 5,000 employees in 1992. However, due to the improving business situation, the company had an intake of roughly 3,500 between 1992 and 1997, increasing the total employment at that time to around 8,200 employees (Stocznia Szczecińska 1995, p. 5; personal communication Mr. Goj). This has led to a virtual shortage of skilled workers in the Szczecin region, so that the shipyard now tries to tap the labour market in Gdańsk and Russia where shipbuilding is still in decline.

A similar problem arises concerning the supply side of production. In the first years of the restructuring process, the management was keen to reduce the number of departments and the amount of services performed by the shipyard itself. On the other

hand, many Polish suppliers could not meet the quality standards that were required in order to compete on the world market. This was also true for many local suppliers, which were subsequently dropped from the procurement list. Moreover, Szczecin was traditionally never a centre of shipbuilding suppliers as the central-planning directive concentrated these firms on and around Gdańsk. Many of the main suppliers nowadays are Polish branches of multi-national companies, with the exception of a maker of ships engines in Poznan, which has a long-standing relationship with the shipyard and delivers components of up to 25% of the total value of the ship (personal communication Mr. Goj).

However, some local firms were successful in maintaining or even newly establishing business relations with Stocznia Szczecińska. First of all, there are some companies in which the shipyard holds some capital shares and which therefore are closely linked to Stocznia Szczecińska. In 1995, SSSA held shares above 5% in eight companies in the Szczecin region and three of them are wholly owned by the shipyard. Secondly, there are independent firms, which, however, in most cases were established or are run by former employees of the shipyard. The technological standards as well as the degree of dependence on the shipyard differ significantly across both groups of firms. Some firms simply provide cheap and flexible labour whereas other firms operate at a relatively high technological level and are therefore also able to find customers other than the shipyard. On the other hand, some companies are direct suppliers to SSSA while other companies are suppliers of the second tier or third tier i.e. they act as subcontractors for suppliers. The first tier firms appear to be rather large established companies, whereas the death rate of second tier enterprises seems to be rather high. Of the list of six subcontracting firms received from company B, four had ceased to exist within one year. In the following, a selection of those firms will be discussed, including two firms of the second tier.

The subcontracting system

The subcontractors

The firms belonging to the production system around the Szczecin shipyard can roughly be grouped according to subcontracting tiers. Above these tiers is the shipyard that represents the core of the entire system, since it ultimately defines the final products that go to the customer. The first tier of subcontractors consists of those companies that have a direct business relation with the shipyard. Within this tier, however, firms differ significantly. Some firms are subsidiaries of foreign companies, whereas others are Polish owned; some firms specialise in labour-intensive work, others rely mainly on technological knowledge. The second tier again comprises firms that are normally not linked directly by contracts to the shipyard, but work for enterprises of the first tier.

Table 6.1: Key features of the examined firms of the SSSA subcontracting system (1997)

Firm	Year of establishment	Legal form	Main products	Staff
SSSA	1948	Public limited	Container ships	8,200
A	1989	Limited liability	Ship superstructures, ship sections, sea containers	450
B	1989	Limited liability	Coating of ships, ship sections	780
C	1988	Limited liability	Ship funnel systems, power plant equipment	165
D	1994	Limited liability	Ship sections	450
E	1991	Limited liability	Ship sections	50
F	1988	Limited liability	Maritime radio equipment	60
G	1990	Limited liability	Maritime radio equipment	17
H	1993	Limited liability	Coating of ships	35
J	1992	Limited liability	Coating of ships	80

History and present situation

All companies examined in this section were set up either shortly before or after the fundamental political changes in 1989 (compare table 6.1). None of the firms is the formal continuation of a formerly state-owned company. However, some firms

underwent significant changes in their ownership structure between their establishment and the time of the interviews. Three firms of the first subcontracting tier were established with corporate capital, whereas all other firms relied only on private savings.

Company A was established in 1989 as a 100% subsidiary of a German company that offers supplies and subcontracting work for shipyards. Firm A is specialised in the production of ship superstructures and ship segments, but is also in the process of diversification. Thus, it has recently added sea containers to its product portfolio. The idea to set up the company was developed by a former engineer of SSSA who is now A's managing director. The rest of the management as well as the initial workforce of 50 are also entirely Polish, drawing mainly on former employees of the shipyard. Thanks to the good development of the business situation over the last few years, firm A had increased its staff by 1997 to 450 people.

Firm B, on the other hand, was established in July 1989 by the Szczecin shipyard and the German company that is also owner of company A with SSSA holding 51% of the shares. The present director of B, a former employee of the shipyard for 32 years, was involved from the outset in setting up the company. The company is specialised in the coating of ship hulls and superstructures, but also participates in the production of ship segments. Diversification efforts were given up, since the shipyard was judged to be a stable and sufficient source of orders. In the beginning, B had 50 employees who to a large part were also former employees of SSSA. Due to the growing demand of the shipyard, firm D expanded rapidly and increasingly started to recruit workers from Russia, Belorussia, and Ukraine, since according to B's management there is not sufficient supply of qualified labour in Szczecin anymore. The director of B admits that in the early phase of their employment there are communication problems. The workforce in 1997 comprised 780 people.

The origins of company C go back to a private engineering consulting firm, which in 1988 was established by the former technical director of Stocznia Szczecińska. This company was shortly after transformed into a production company that was established with the help of Turkish capital. In 1994, however, that firm went

bankrupt and was formally liquidated, although staff, buildings, and order book were transferred to the newly established company C, which is a 100% subsidiary of an East-German firm that is engaged in the production of pipeline systems and apparatus. The speciality of firm C is the production of ship funnel systems, but thanks to technology transfer from the parent company, the product portfolio was expanded to include now also power plant equipment. As the managing director, the commercial director of the predecessor of firm C was chosen. He also used to be an employee of SSSA for 36 years, being the deputy head of its design office. Between 1994 and 1997, the number of staff increased from 120 to 164.

Of the firms that were set up with private savings only, company D is the largest. It was created in 1994 by the merger of four smaller private companies of roughly equal size that were all engaged in shipbuilding. The founders of these four firms are now also the only owners of company D. Three of them used to be employed at the Szczecin shipyard and one owner is a former employee of another shipyard. All staff continued to be employed by the newly established company, creating a workforce of about 400. This has increased since to about 450 people. The company until 1997 relied only on its activities in the production of ship sections, although cautious steps are being undertaken to diversify the product portfolio.

Company E was established in 1991 as a civil law partnership with 15 employees and in 1994 it was transformed into a limited liability company. The two founding partners, who still run the company together, were formerly employed by the Szczecin shipyard. Their decision to leave the shipyard and to become self-employed was based on the motive to work independently and at the same time to derive economic benefit from existing personal contacts to the shipyards management. Many of the initial workforce were also former employees of the shipyard. Company E is engaged in the production of ship segments and currently does not plan to diversify further, also because the management thinks that the shipyard would prevent them from developing any new products. By 1997, the workforce of the company had increased to a total of 50 employees.

The early phase of its existence was not as harmonious for company F as for the preceding firms. In 1988, nine employees of the Szczecin shipyard together with another Polish partner, who worked for a SOE in maritime electronics, decided to set up their own private company in the maritime electronics sector. In the early phase, the shipyard refused any kind of cooperation with the newly established firm and therefore the situation was very difficult. This attitude of the shipyard – according to F's management – was mainly based on the fact that the nine founders, who quit their jobs at Stocznia Szczecińska in June 1989, convinced seven more staff members to leave SSSA. Thus almost the entire department for the development of maritime radio communication equipment left the Szczecin shipyard. On the other hand, that very fact also led the shipyard to abandon its boycott-policy after about one and a half years, since it was not able to form its own department with the required skills and experience. Thus, the company was able to grow in staff to a size of about 60 employees by 1997. In recent years, firm F has diversified into the production of electronic equipment for customers outside the maritime sector.

Company G was founded in 1990 by six partners who all used to work for the same state-owned company before that date. This SOE was the Szczecin subsidiary of a company in Gdynia, which was specialised in maritime electronics. The partner who is now president of G used to be the technical director of the Szczecin subsidiary and left the SOE over conflicts with the trade unions. Subsequently, he and three colleagues decided to set up their own company, specialising in the production and installation of maritime radio equipment. Lately, however, the firm has taken on the production of other electronic equipment. For the first two years, the staff consisted only of the founders. However, by 1997, the workforce had increased to 17 people. In 1994, company G was transformed into a limited liability company.

The two firms examined on the second subcontracting tier differ not so much in ownership structure than in the persons who own them. Company J was founded in 1992 as an extension of an already existing private firm, which is active in ship-design. Two of the four Polish partners who own the ship-design company decided to set up J as an additional business. Both partners had also previously worked for SSSA, although only for a short time.

Company H, on the other hand, was founded in July 1993 by a German anti-corrosion expert who had worked together with Stocznia Szczecińska on previous contracts on behalf of a German company. At the time of establishment, H was intended to be a dormant firm while a second company performed the actual activities. The latter firm was based on a Polish-German partnership with 51% of the capital held by the Polish partners and 49% held by the German partner. Due to the bad pay morale of its main customer – a state-owned company – this firm went into serious financial difficulties and eventually in 1996, the German partner pulled out and activated company H which is fully owned by him. The firm relies on one service product – the coating of ships – and at present does not intend to diversify further. Due to the good business situation of the Szczecin shipyard, company H was able to expand its workforce to 35 workers in 1997.

In conclusion it can be said that in all cases – although sometimes to a lesser extent – the initiative to establish the companies came from individuals who had some previous connection to the shipbuilding sector in general and to their present field of activity in particular. All directors, apart from the owner of company H, are from Szczecin or at least have been residents in the city for a long time. The business situation of all firms appears to be favourable, which is partly or exclusively due to the good shape of the Szczecin shipyard.

Site

The choice of site by the companies examined seems to depend on the kind of products offered by the firms and also is constrained by problems to find appropriate sites in Szczecin.

Companies A and C are located in close spatial proximity to the sites of SSSA, as they produce heavy metal structures that have to be brought to the shipyard for final assembly. The site of A has a rail-track link to a quay on the Odra river which belongs to Stocznia Szczecińska, whereas C has direct access to a quay. The management of C plans to relocate in the near future as the lease contract for buildings and site

expires in 1999. It is, however, unlikely that the firm will move far away from its current location as it needs both access to the river to transport materials and products and proximity to the shipyard, due to interlinkages in the production process. Company B is spatially even more integrated with the shipyard, as it is located on the site of SSSA and leases buildings and site from the shipyard. Therefore there are few problems in transporting heavy components to the slip-ways.

Companies D, E, H and J work only on the site of the Szczecin shipyard and therefore have only administrative and some management tasks concentrated on their own sites. Whereas firms D and E are located further away from SSSA, firms H and E are located closer to the shipyard. For both firms, the vicinity to the shipyard is considered as convenient but not crucial to the firms operations.

The cases of companies F and G are again different. Both companies manufacture components of their products on the site, but these components are rather light and easy to transport. The final installation of the radio communication systems is undertaken on the ships at the customer's site. Thus, spatial proximity to the customer appears not to be as important as for companies A, B, and C. Consequently, both firms occupy space in industrial buildings further away from the site of the shipyard.

Technology

Five firms of the first tier are engaged in labour-intensive work for the production of ship hulls and superstructures. The machinery used in the production process consists typically of medium-technology, multipurpose machines. Three of those firms are – at least partly – foreign-owned and also are the most technologically advanced. They have a considerable stock of equipment and tools, which includes in some cases modern CNC-machines. The other two firms own less equipment and primarily rely on machinery and tools provided by the shipyard. This situation is also reflected in the product portfolio of the companies, as the enterprises with their own, modern equipment found it easier to switch to a new product line.

The other two firms of the first tier – company F and G – offer know-how intensive products that involve high-technology components. Both firms generate the largest share of their turnover in the production of maritime radio communication systems. F and G have only little production machinery, mainly relying on multi-purpose tools, whereas their design departments are equipped with up-to-date computer-aided tools.

The second tier of subcontracting firms is formed by companies that mainly offer manual work (companies H and J). The technology used by them, however, is not very different from that of the independent Polish firms of the first tier. Like these firms they rely in terms of production technology on their customers, using their equipment.

All firms either are certified according to ISO 9001/2 or are in the process of adapting their quality assurance system to those standards. This is mainly due to their cooperation with Stocznia Szczecińska, which seeks to integrate its subcontractors and suppliers into a system of total quality management. Most managers of the subcontracting firms examined gave, when asked about the particular strength of their company, the quality of the work as the most important selling point. With decreasing size, the flexibility of the firms becomes also important which is supported by the fact that these companies typically have little dedicated, capital-intensive equipment and therefore can actually be more flexible.

Workforce

Most of the staff recruited by the subcontractors comes from Szczecin and in many cases was previously employed at the shipyard.

The level of skills as well as the size of the workforce of the examined companies appears to reflect the technological level at which these firms are operating. Whereas the firms engaged in the construction of ship segments and superstructures have usually a large number of staff, the two firms involved in the production of electronic equipment are among the firms with the smallest workforce. At the same time, they also employ a high proportion of university-educated staff. The actual shipbuilding

companies have varying proportions of unskilled staff, and no pattern can be discerned according to the subcontracting tier. On the other hand, the differences are so striking that it seems possible that the perception of 'low-skilled' and 'high-skilled' differed among the interviewees. According to several managers interviewed, there are formal qualifications only for few professions in the shipbuilding trade, such as for professional welders. In any case is the share of university graduates of the total workforce employed by the group of shipbuilding firms significantly smaller than for the electronics firms.

Organisation of work

For the production of ship parts and components by the large first-tier subcontractors, firms B and C receive a documentation of the product by the shipyard giving all key data, whereas company D receives more detailed instructions. Company A is the only firm of this group that has its own design office, although firm C also plans to develop design skills. Consequently, the input of A into the production process is higher than that of company C and even that of company B which is involved in the product design process of the shipyard from an early stage onwards, however, without delivering any design input. In the completion of some projects, the three companies cooperate closely with the shipyard, working on the site and using special machinery of SSSA. Firm D again relies wholly on machinery provided by the shipyard. The work process within the companies is in all cases entirely organised by their own management.

All four firms also use subcontractors, although to varying degrees. B normally selects subcontractors from a group of 12 firms with which it has already well-established relations. Some of these firms are Russian, others are situated in other Polish regions and only few are from the Szczecin region. The director suggested that in B's field of activity there are only two or three firms in Szczecin that would be able to perform the required tasks up to the necessary standards. When subcontractors become involved in a project, they receive very detailed specifications of how to perform tasks as well as a list of set prices that they can charge after completion of his job. There is a constant monitoring process established which works through on-the-

site checks and daily meetings of all persons responsible. The relationship between firms A and C and their subcontractors appears to be similar, with most of the subcontracting firms coming from outside Szczecin. Firm D uses subcontractors occasionally to cope with demand peaks. These subcontractors, however, do not perform any independent jobs but rather provide additional workforce.

Firm E again appears to be more similar to the subcontractors of the second tier. The main difference between E on the one hand and H and J on the other, is that the former receives its instructions from the shipyard, whereas the latter act upon work specifications from B. However, in both cases, these instructions are very detailed and the production engineers of the leading firm require continuous feedback from the foremen of the subcontractors. The activity of the foremen is restricted to supervision, since the detailed instructions received by the customer allow no scope for independent work. Companies E and J employ subcontractors themselves, which supplement their workforce for larger orders.

Companies F and G form again a distinct group. Both firms start, when approached by a customer for a maritime radio communication system, with a check of the existing equipment of the ship and then compare that with the requirements for the new system. Subsequently, plans are developed whether a completely new system has to be installed or it will be possible to up-date the existing equipment. Based on that analysis, new components are purchased, if possible, or produced by the company. This is then supplemented by customised interfaces that are also produced within the firm. As a final step, the new customised system is installed on the vessel.

In conclusion, the technology-intensive firms differ clearly from those firms that are involved in labour-intensive steel construction work. Both in technology and in the size and structure of the workforce there are marked differences. Also, those companies with significant design capability, firms A, F and G, retain more control over the production process than those enterprises that rely entirely on detailed instructions from their customers, sometimes even prescribing the exact type of tools that have to be used for a specific task. Within the group of steel construction firms, on the other hand, again two different categories exist. The larger firms, especially

those with their own machinery, work largely independently from the customer, whereas the smaller firms of both subcontracting tiers are more integrated in the supervisory structure of the shipyard.

Inter-firm relations

The relational network of the shipbuilding production system in Szczecin is centred on the Stocznia Szczecińska as a hub. However, also individual subcontractors interact directly with each other (compare figure 6.1). Generally, relations between firms exist not only formally, but there are also informal ties which bind the organisations together.

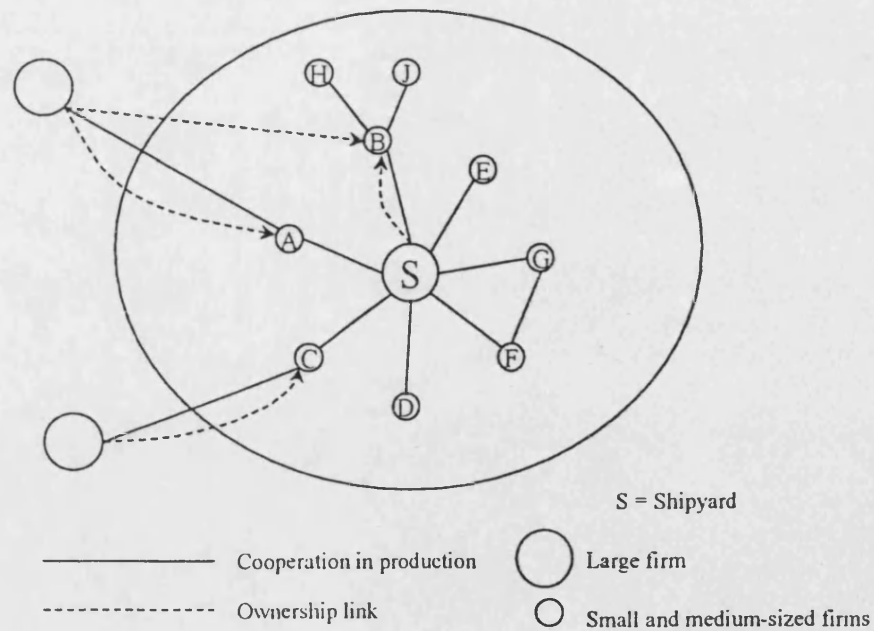


Figure 6.1: The Szczecin Shipyard production system

Relations between subcontractors and Stocznia Szczecińska

In the process of restructuring, SSSA closed some departments and transferred the tasks previously done by them to external firms. The reason behind that was mainly to increase the shipyard's flexibility and adaptability to fluctuations in demand – a strategy that can also be found among comparable Western companies. Whereas before all staff of the relevant departments constantly was on the shipyard's payroll, now the subcontracting companies are in charge of finding full employment for their staff. In selecting subcontractors, however, Stocznia Szczecińska applied strict criteria. Therefore, the number of local suppliers and subcontractors is limited with many of them finding their competitors in the area around Gdańsk.

Among the local subcontractors the kind and intensity of their links to the shipyard differ significantly. The most obvious and strongest link is that between SSSA and company B, as the shipyard has got the controlling interest in B. Of the five first-tier firms that are active in the production of ship-hulls and superstructures, the three companies B, D and E, make between 90 and 100% of their total turnover with SSSA. Therefore, the commercial success or failure of these enterprises is closely linked to the prospering of their business relation to the shipyard. On the other hand, the shipyard relies also on company B for about 90% of its coating and painting work, whereas firms D and E offer services that are similar to that of the core activities of SSSA. The two firms that have no ownership link with Stocznia Szczecińska, firms D and E, typically negotiate one-year basic agreements for subcontracting work without, however, specifying the exact amount and kind of work to be contracted. Then, on a quarterly basis, both parties agree on the amount of work required by the shipyard, specified in man-hours. Only on giving the specific orders, the sub-contractors receive a full documentation of the product, including a specification of the tools required. On the other hand, company B has a yearly contract that specifies already the amount of work and the exact type of ship to be produced. This makes it possible that the engineers of B are more closely involved in the production process at SSSA than staff of the other two subcontractors. Moreover, company B participates also in joint training programmes with the shipyard. The director of company E actually considers his company as a second-rank

subcontractor, as opposed to companies A, B, and D. He attributes that primarily to the smaller size of his firm and quotes in particular the interference of the shipyard in business matters of E, such as *de facto* prohibiting the search for new customers. The actual business relationship between E and the shipyard is outlined in an annually negotiated general agreement defining the basic terms of business.

On a more informal basis it is interesting to note that almost all managers and directors of the three firms are former employees of the shipyard, many of them in responsible positions. The director of company B, for example, was employed at the shipyard for 32 years and it was the shipyard that suggested him as the head of the new company. Another manager actually attributed the favourable market position of his company to his personal contacts to shipyard staff. Moreover, many of the initial staff of all three companies were also formerly employed at the shipyard, thus familiar with its work procedures as well as its formal and informal structure. Another interesting feature is linked to the relatively low mobility of people in Poland throughout the socialist period. Due to residential immobility, many people developed stable social relations in their local environment by sharing stages of their educational development with groups of people, which changed little. Many of the engineers, for example, took their degree at the local technical university before entering professional life. Although none of the managers mentioned explicitly the importance of this for the business relation with Stocznia Szczecińska, the fact that it is utilised for other purposes such as recruitment and inter-firm cooperation (compare also chapter 7) suggests that it might also play a role in the former context.

The formal relation of firms A and C to Stocznia Szczecińska is not as close as in the cases mentioned above. Although they also cooperate with SSSA in the frame of basic agreements, these companies also have significant customers outside shipbuilding and the SSSA production system. They are actively looking for other customers and only 20-30% of their turnover is generated by orders from the shipyard. On the other hand, the shipyard relies almost entirely on the funnel systems provided by C and to a large extent on the superstructures delivered by A. In order to make a bid for a specific order, both firms have to submit a detailed proposal including cost schedule and expected completion dates for the project. If successful, a

contract for manufacture is concluded between the shipyard and the subcontractor. In the actual manufacturing process, however, companies A and C frequently rely on close cooperation with Stocznia Szczecińska as they need specialised tools for certain tasks that are only available through the shipyard. In some cases this machinery can also be used – for a leasing fee – for projects that are not carried out for SSSA. Furthermore, both companies participate in training programmes for workers, which were initiated by the shipyard.

As for the informal links to SSSA, very much the same applies for companies A and C as for companies B, D, and E. Although foreign-owned, all staff is Polish and the management also used to work for the shipyard for the main part of their professional life with some of them in responsible positions. The core workforce of both companies had previous work experience at the shipyard as well. Again, the familiarity with processes and structures inside SSSA certainly helps creating a stable link between the subcontractors and the shipyard. Since both companies have graduates of the local technical university on the board as well as in the normal workforce, the personal contacts deriving from that background are likely to play a role similar to that proposed above for companies B, D, and E.

The two firms specialised in maritime communication equipment are not linked to the shipyard by formal long-term contracts but rather by – as one of their managers put it – ‘gentlemen’s agreement’. Their customer structure reveals a slightly higher degree of dependence on the shipyard than for companies A and C, as between 20 and 50% of their turnover are generated by orders from the SSSA. On the other hand, the shipyard still relies heavily on the knowledge and expertise especially of firm F, since its own department for telecommunications equipment has not been developed to the standard that it had before the founders of F left. Both firms are also independent from the shipyard in terms of equipment, since they own all necessary tools.

In terms of informal relations, both companies differ from the examples mentioned before. The management of one firm did not work for the shipyard at all, whereas the management of the other firm left the shipyard without the consent of their superiors. In the latter case, the people in charge at SSSA were enraged about the loss of

expertise, due to the fact that almost an entire department left the firm. As a reaction, the shipyard refused to give any orders to the newly established firm for the first one and a half years. After that period, however, SSSA was – as the vice-president of company F sees it – forced by need into cooperation. If this was the case, it certainly can be attributed also to the intimate knowledge of the internal structures and procedures at the shipyard by F's staff. On the other hand, university bonding did not seem to play an important role for the relation of firms F and G to the shipyard.

The two subcontracting firms of the second tier have no direct formal link to Stocznia Szczecińska. Although they are normally working on the site of the shipyard, the only contact with SSSA is that H's and J's employees before working on the site have to attend a safety and fire protection course provided by the shipyard. Moreover, their work is also subject to quality checks by the shipyard's staff.

Concerning informal relations to the shipyard itself, there are marked differences between the two firms. The founders of company J are originally from Szczecin, were educated at the local technical university and subsequently worked for the shipyard, although only for a short time. They also agree that personal contacts and intimate insights into the structures of the shipyard are an important asset. The founder of firm H, on the other hand, knew Stocznia Szczecińska only from few contacts when he was working at the shipyard on behalf of his former German employer. He is, also due to his insufficient command of the Polish language, an outsider to the local community and still finds it difficult to relate to the Polish business culture.

Relations among subcontractors

The most obvious and most formal relations among subcontractors are those between firm B and companies H and J which work exclusively for B. Although there are no ownership links, H and J can almost be seen as extensions of B within a strictly hierarchical structure. None of the two firms offers any expertise that B would not have. There is no scope for price negotiations, but the subcontractors receive a fixed price list for all kinds of materials and services that will be delivered by them. Once accepting an order, the second-tier firms are provided with detailed instructions

concerning the tasks to be accomplished. In the course of the actual work process, B's engineers frequently check the observance of these instructions. Both firms also rely almost completely on equipment and machinery provided by B.

Looking at the informal links between the second-tier subcontractors and B, the differences between firms H and J are more striking. As reported by other entrepreneurs, the vice-president of J is the son-in-law of the managing director of B. Interestingly, the level of satisfaction about the business relation was particularly high between these two firms. In contrast, firm H has, at least at management level, no significant informal links to B. The German owner of H, who is at the same time the managing director, is working with B on the basis of his previous experience with the shipyard. As mentioned earlier, he does not master the Polish language and therefore – according to his own perception – is an outsider within the shipyard production system as well as to the Polish business community in general. This is also one of the reasons why he does not see any chance of improving the situation of the second-tier subcontractors, as no cooperative patterns could be established among them in order to speak to B with one voice.

The activities of companies A, B, and C differ slightly so that there is limited direct competition between them. Firms A and B are in a special position, since they share, at least partly, the same owner. The managing director of company B referred to A even as the 'sister company', with B being strong in coating and painting and A often taking the lead in all kinds of metal work. A manager of firm A confirmed that cooperation between subcontractors exists, though without giving any names. However, he said that this is often based on personal contacts and is mainly used in order to pool resources for larger projects. Those personal contacts again are likely to origin both from the times that the managers of these firms were working at the shipyard for many years and from the common background as long-standing members of the local community. This for the same reason probably also includes firm D and E although the president of firm D did not comment on that issue whereas the director of E claimed that the shipyard is preventing his firm from any cooperation with other subcontractors. All firms consider their competitors to be local as well as national and international. Company C was actually named by A as one of the local competitors

whereas A is not so much seen as a competitor by C, due to firm C's specialisation. Companies A, D, and E seem to compete more directly, with E being in an inferior position due to its size.

Firms F and G again have a special relationship. Although they regard each other as competitors, they also cooperate on a formal basis in providing services and maintenance to the shipyard. According to the vice-president of F, these are the least profitable activities and therefore both firms are eager to keep their workforce in these areas to a minimum. The companies also support each other in sales. However, apart from those visible forms of cooperation, there are other, less visible forms. As one manager hinted, the management of both firms meets occasionally in order to discuss wage levels and the market situation. Together with other firms in the same sector, the two companies want to tackle the problem of micro-firms that are offering services for prices below the current market level. All in all, the informal link between these two subcontractors seems particularly strong which is also supported by the easy and friendly manner in which the researcher was introduced by one firm to the other.

Relations to the business environment and to local and regional authorities

In general, most interviewees did not attribute to the local or regional government any importance for their business. The only relevant role for the local government – as perceived by the managers of the firms examined – is that of a tax authority which sets the level of local taxes too high. This may also reflect the fact that the city municipalities have not formulated an economic policy towards small and medium-sized enterprises in Szczecin. Only one firm benefited from an order by the city authorities.

The only contact between some firms and the regional authorities was that to the Regional Development Agency (ZARR) which, however, was not perceived as being linked to the voivod. Three firms are mentioned in the 'Regional Top 100' catalogue of the ZARR (compare chapter 5) whereas the owner of another company received a

small loan for his second firm. Generally, the managers had no clear idea of the purpose and the services of the ZARR.

With regard to the local chamber of commerce and industry (IPH), the situation is slightly different. Whereas most firms were aware of its existence and its general purpose, only two firms were actually members of the IPH. Of these two members, however, only one firm made use of services provided by the IPH, resulting in a low level of satisfaction. Although the idea of a chamber of commerce and industry was generally welcomed, the majority of managers interviewed expressed little confidence that the chamber in the form as it existed in Szczecin would be able to deliver the expected results.

Furthermore, the local universities are institutions that potentially play an important role for the local business community. According to the managers of the firms examined, there are three relevant academic institutions in Szczecin: The West-Pomeranian Business School, the technical university, and the maritime academy. The business school was quoted by several companies as the provider of managerial training for employees whereas the technical university and the maritime academy stand for the educational background of many managers as well as for a labour pool for more demanding jobs. In one case, the responsible R&D engineer of a company still works at the technical university. However, the link of the shipyard production system to the local academic institutions can be characterised as a give-and-take relationship. Both the shipyard and company F, for example, provide training equipment and software for the technical university and the maritime academy respectively. Other companies undertook joint project with the technical university, either in R&D or for directly customer-related orders. Moreover, some companies offer also internships for students. It should be noted, however, that the formal link to these institutions appears to be stronger for the firms that operate at a fairly advanced technological level.

Among other links to the local community the Szczecin Business Club seems to play some role. Apart from the chairman of the board of the shipyard and the president of one company examined in this study also other representatives of the shipping and

shipbuilding sector belong to the club. Although the club according to its statutes is primarily oriented towards social purposes, it is fair to assume that business matters also play a significant role.

Generally, most firms accept the importance of organisations in the business support infrastructure. The links with the local university sector seem well established, whereas the contacts to newly set up bodies, such regional development agency or chamber of commerce are more tentative.

The embeddedness of inter-firm relations

All four features, which Grabher (1993a) identifies in inter-organisational networks, can also be discerned in the production system around the Szczecin shipyard (compare chapter 2). The expectation of reciprocity as one of the ordering principles of the system is recognisable in the way in which some of the subcontractors tie themselves to the shipyard. The three companies that rely to almost 100% on orders from the shipyard and the two second-tier subcontractors that rely entirely on orders by B apparently trust in the long-term profitability of these relationships. Otherwise, their complete dependence on one customer would not appear to make economic sense. The shipyard, on the other hand, gains the long-term benefit of a permanent flexible pool of appropriately skilled labour in its vicinity. Also with regard to the other subcontracting firms, the shipyard seems to expect a long-term continuation of the relationship, since, for example, it relies to some extent technologically on the two electronics firms. Although national and international competitors to G and F exist, they lack the proximity to and the familiarity with SSSA. The main long-term advantage on the side of the subcontractors is certainly a predictable source of orders, whereas the shipyard might also benefit from the diversity of experiences which the electronics subcontractors make with other customers. In all these relations, there is an obvious element of imbalance, since the shipyard is less vulnerable than the subcontractors. However, most of the interviewed managers expressed confidence that – provided they deliver good quality work – the shipyard will also in the future place enough orders with them to keep the subcontracting firms profitable. It is therefore possible that they feel that SSSA has some obligation to them in the sense

that it will reward the trust and commitment shown by the subcontractors with a sustained business relationship. This expectation is certainly reinforced by the existing social relations between some of the managers and the responsible staff at SSSA. One manager explicitly mentioned the existence of such contacts as one of the competitive advantages of his firm.

The second issue in the analysis of inter-organisational networks is that of interdependence between the firms within the production system. Since most of the managers and many of the core staff of the examined firms were previously employed by the shipyard, it can be expected that they are familiar with the internal procedures and structures. The subcontractors A, B, and C also cooperate with SSSA in the training of technical staff, which further enhances the shaping of common routines and practices. Moreover, company B's experience with staff recruited from other Eastern European countries and the subsequent communication problems emphasise the value of local staff at a time when the labour market for shipbuilders is virtually cleared. The engineers of B are actually passively participating in the design process at the shipyard, whereas A and C enjoy considerable freedom in the way they accomplish their tasks. In all three cases, it is most probably the long-term aspect of the business relationship that makes this mode of operation possible, since each partner knows what to expect from the other. Generally, as mentioned in the context of the reciprocity feature, long-term relations between the firms, as well as the pre-existing individual relationships lead to certain expectations about the quality standard of delivered products and the future continuation of the business relation. On the other hand, the interdependence of subcontractors and leading firm is not limited to common routines and expectations, but extends also to the sharing of equipment and site. This applies mainly to the firms that are – in one form or the other – involved in steel-construction, while the two electronics firms are independent from the shipyard in both site and equipment. Two of the first-tier and both of the second-tier subcontractors use for all their major production activity the site of the shipyard as well as tools owned by the shipyard, respectively their first-tier customer.

The shipyard, on the other hand, also depends on its subcontractors. First, some of the subcontracting firms have their competence in fields that are little or not at all

covered by the shipyard itself. Especially in those activities, that involve the moving of heavy parts, such as in the case of firms A, B, and C, the market for outside competitors is very limited, thus increasing the dependence of SSSA. Secondly, in the current situation of high demand and the shipyard working to full capacity, Stocznia Szczecińska depends on the pool of trained workforce provided by all the local subcontractors. Although this might change in times of recession, it is likely that the shipyard will still have an interest in the survival of the subcontractors in order to maintain this flexibility.

Loose coupling, as the third basic characteristic of networks, is to some extent opposed to the above-discussed interdependence. The evidence of the shipbuilding production system in Szczecin shows that the firms involved are linked to each other by ties of differing strength. On the one hand, the inter-personal links between managers – probably with the exception of the family relation between two of them – can be considered as rather weak, since they do not seem to prevent the establishment of contacts outside the system. On the other hand, the little diversified customer structure of some firms as well as the existing ownership link between the shipyard and firm B constitute rather strong links. In this respect, it appears particularly remarkable that the shipyard seems to actively prevent some subcontractors from seeking new customers. The firms affected by this policy are those that offer no knowledge or expertise, which adds to that of the shipyard. On the other hand, those companies, which in their activities are complementary to SSSA, also have other significant customers and frequently diversify in other related activities. Company B, in which SSSA has a 51% capital interest, is an exception to this, since it makes about 90% of its turnover in dealings with the shipyard. However, the few other customers are German shipyards, who might also require the latest technology and high quality standards. As a result of this product or customer diversification, technological developments in shipbuilding in other countries or in related branches will also be accessible to SSSA. Also regarding the contractual agreements between SSSA and the first-tier firms, there are marked differences between the various subcontracting firms. Companies B, D, and E are tied by one-year agreements to the shipyard, whereas the other firms have to bid for orders, emphasising the aforementioned division between substituting and complementary subcontractors. The relations

between the second-tier subcontractors and firm B are again characterised by strong ties. Both rely entirely on orders by B and also use B's equipment. However, the relation between companies B and J is even closer through the family bond between the two top managers, whereas company J with its foreign owner is only loosely tied by personal relations.

The fourth feature of an inter-organisational network is that of power relations. The most powerful actor in the shipbuilding production system in Szczecin is SSSA. As the company at the top of the hierarchical system, the shipyard determines the actual products of the system and also imposes certain standards on other firms. Apart from the adoption of certain safety regulations, the leading firm also forced its subcontractors to apply for the quality assurance certificate ISO 9001/9002, which in turn can be used as a marketing instrument by the shipyard. The use of power can also be discerned in the contractual agreements between the shipyard and the subcontractors. Of the firms, which have basic agreements with the shipyard, company B is in the best position, as it knows already at the beginning of the year the amount, the remuneration, and the kind of work that it will deliver. With the other two firms, there are no price negotiations and the subcontractors typically receive more specific orders on a quarterly basis. At the same time, the shipyard apparently tries to retain its power over these subcontractors by preventing them from finding new customers. Also in the supervision of the production process, the shipyard exercises its power, although to differing degrees. The larger subcontracting firms and the electronics firms are able to work rather independently and report to SSSA only for the entire project. The smaller first-tier subcontractor as well as the second-tier subcontractors, on the other hand, is subject to random checks by the shipyard's engineers. In E's case, the supervisors of the leading firm require continuous feedback. On the other hand, also some of the subcontractors have some power. In relation to SSSA, this is most obvious in the case of company F. At first the shipyard tried to retaliate for the defection of the founders of F, but later on was compelled to cooperate again. Generally, the more independent the subcontractors are from orders from the shipyard, the more power they retain in bargaining with the leading firm. Company B again, has a power position in relation with firms H and J, which is similar to the relation between SSSA and its most dependent subcontractors. This

situation, however, is somewhat mitigated in the case of firm J by the existence of strong social relations between the chief executives of both companies.

Based on the evaluation of these four features, it is possible to identify the production system around the Stocznia Szczecińska as a supplier network as described by Grabher (1993a). One of the most obvious characteristics is the existence of a leading firm and – in the examined case – two supplier tiers. This is also supported by the observation that the first tier companies appear to be rather well established enterprises, whereas second-tier firms experience high death rates. However, the power structure within the system is not clearly discernible according to the subcontracting tiers. The more independent subcontractors of the first tier appear to have significant bargaining power vis-à-vis the shipyard, whereas the firms of the same tier that rely almost entirely on orders by SSSA have sometimes not more power than firms of the second tier. Instead of applying the strict tier system for the analysis, it might be more useful here to use Smitka's observations from subcontracting in Japanese shipbuilding (Smitka 1991), where subcontractors either substitute or complement the original workforce of the leading firm. Hence, in the case of the SSSA subcontracting system, those firms, which have complementary skills, have more power than those that rather substitute workers of the leading firm. On the other hand, even the less powerful subcontractors have some expectation of reciprocity in their relation to the leading firm. The existence of basic agreements and the long-term familiarity with individuals and procedures within the shipyard seem to give them confidence about the future existence of the business relations. The same seems to apply also for firms of the second-tier in relation to company B. Concerning the issues of interdependence and loose coupling, the same pattern of differentiation seems to hold. Companies with complementary input in the production process enjoy more freedom and also have important customers outside the system. At the same time, however, these subcontractors are more interdependent with the shipyard than the substituting subcontractors. The relationship of the latter to their leading firm is characterised by dependence and little autonomy, thus resulting in a hierarchical structure, which is opposed to a structure of loose coupling.

Coping with SME specific problems

Of the examined firms in the subcontracting network, six companies are small or medium-sized according to the formal definition (compare chapter 4, footnote 2). Furthermore, the origin and the structure of firm D suggests that this company can be considered as similar to SME, although it employs more staff than demanded by the definition. Company D, like the examined small and medium-sized firms, is a new establishment and was entirely financed through private funds. Furthermore it has not recruited any external management staff, but is run by the owners. Finally, it has by no means a powerful – or even dominant – market position and, thus, resembles rather a firm smaller than its size would suggest.

The relative stability of as well as the specific relations within the subcontracting system around SSSA provide means to tackle at least three of the six problem areas for Polish SME (compare chapter 4). First, it shelters the firms to some extent from the difficult economic situation of the Polish national economy. The existence of a large company in good economic condition and the expectation of long-term cooperation provide a stable market environment. On the other hand, the reliance on one large customer also constitutes a possible future danger for the associated SME, since they will have little scope for finding new customers in case the large firm experiences economic problems. Secondly, the same feature of the network also eliminates the dangers for SME in dealings with state-owned companies. The experience of the owner of company H shows that this is a realistic problem in Poland, since his first company went into financial difficulties due to the bad pay-morale of a large state-owned firm awaiting privatisation. Finally, the cooperation with the Szczecin shipyard helps to overcome some problems regarding business skills and information, or at least renders them less significant. Probably the most important aspect of this is that SSSA, as a supplier of ships to the world market, has to keep up with the latest technological developments in shipbuilding. This technology necessarily will also be disseminated among the subcontractors of the shipyard. The introduction of quality assurance procedures according to ISO 9001/9002 might serve as an example for the spread of internationally accepted standards throughout the subcontracting network. Moreover, the possible lack of

marketing and foreign language skills does not constitute a major problem for those firms that work primarily for the shipyard, since they operate within a relatively fixed local framework. On the other hand, this most certainly also leads to a 'lock-in' of the relationship between those SME and the shipyard.

In conclusion, "the fragile balance...between reciprocity and power, between interdependence and loose coupling" (Grabher 1993a, p. 26), which ensures the superiority of networks to other forms of organisation, is kept only for some firms in the SSSA production system. Those companies, which use the stability of the subcontracting system as a base for expansion and diversification, are certainly in a better position than those firms that are locked into a relationship with the shipyard. In the case of the latter, an economic crisis of the leading firm will destroy the basis for their survival. The more independent firms, on the other hand, are well placed to use the relationship with the shipyard as a stable source of orders and technological information, which can be used in winning new customers.

Chapter 7: A network of firms around the technical university in Szczecin

This chapter produces evidence of informal inter-firm cooperation in the environment of the technical university in Szczecin. After a brief review of the general situation in Polish academia after the changes, this chapter goes on to discuss details of the firms examined as well as their relation to each other and to the technical university. Subsequently, the evidence will be evaluated with regard to the theoretical framework outlined in chapter 2.

The situation in Polish academia

The situation of the Polish R&D system, until the reforms starting in 1990, was characterised by strict centralisation of innovation activity. The central government was at the top of a hierarchical system of organisation in which decisions about investment and research funding were communicated through an imperative mechanism (Gługiewicz and Gruchman 1988). One of the main features of this innovation system was the separation of industrial R&D units from the enterprise sector. Thus, a two-pillar structure of research developed with the Polish Academy of Science and the institutions of higher education on the one hand, and industrial R&D units on the other. The institutes of higher education included not only the traditional 11 universities, which focus on humanities and natural sciences, but also specialised institutions such as technical universities, agricultural academies, nautical academies, etc. The total number of these institutions in 1990 was 112 (Statistisches Bundesamt 1995). Industrial research, however, was almost exclusively conducted by the industrial R&D units and funding for this activity was provided only by the central authorities with enterprises paying a compulsory contribution to the government (Jasiński 1994). Although this policy was relaxed in the 1980s, the continued geographical separation of applied research from industrial production led to little direct interaction between R&D units and enterprises. As a result, there were few "local synergies with respect to technological innovation" (Gługiewicz and Gruchman 1988, p. 229). Research activity in and for the private sector was practically non-existent. In particular, academics had neither the possibility nor an incentive to exploit any inventions or technology commercially, due to a lack of

managerial expertise and of institutions to protect intellectual property rights. However, in the last years of socialist rule, university researchers were able to gain some experience in applied industrial projects that were directly commissioned by individual enterprises. These limited ventures served mainly to solve specific problems that occurred at any stage of innovation or production. In some instances, even small batch manufacturing was subcontracted to universities or research institutes (Jones-Evans et al. 1996). The search for partners and the contract conditions were usually informal, frequently relying on personal contacts. Within the universities, these projects were planned and conducted by 'partnerships' of academics, which were established along the lines of the economic working groups (zespoły gospodarcze) in state-owned enterprises. These partnerships were permitted to make use of university equipment, although only outside the official work hours. For the use of the university facilities, a negotiable fee was charged.

In the course of the changes of the early 1990s, the centrally planned structure of the innovation system was increasingly broken up, leading to the shut-down of 15% of the industrial research units. This process led to a reduction of about 22% in the total number of academic staff employed in these units. In 1992, only 13.3% of all research staff in Poland was working in industrial R&D units, thus leaving the leading role in the innovation system to university research (Jasiński 1994, p. 118-119). The number of academic staff in institutions of higher education remained relatively stable with many of the staff, however, also engaging in work outside the university (Jasiński 1994). This is due to the fact that average wages in education and research since 1990 have been consistently below the Polish average and even fell from more than 87% in 1991 to less than 82% of the Polish average wage in 1994 (Statistisches Bundesamt 1995). One way for academics to earn extra income was to develop the early cooperative partnerships into corporate firms, thus combining commercial activity and academic work (Jones-Evans et al. 1996). Moreover, many of the staff that left both research institutes and universities established independent firms, frequently based on the knowledge and expertise that the founders had acquired during their time in academia. As Balazs (1994) has pointed out for the Hungarian case, many of these new start-up firms maintain a variety of informal contacts to the universities from which they spun off.

The technical university network in Szczecin

In the following five companies will be examined that, in ways similar to those described above, have links to the technical university in Szczecin. This institution was established in 1946 as a school of engineering with three faculties. In 1955, the school attained the status of a technical university. At present, about 6,000 students attend courses in five faculties, which cover the fields of civil engineering, mechanical engineering, electrical engineering, maritime technology, and chemical engineering. Four of the five examined firms have strong links to the department of automation in the faculty of electrical engineering and one firm is affiliated to a different institute in the same faculty.

The firms

The firms examined in the environment of the Technical University of Szczecin can roughly be grouped into three categories. These categories are defined according to the degree of visible association with the core of the system, namely the technical university. The closest association with the university has certainly company P with its founder professor A who considers himself as a “scientist-entrepreneur” and still fills a senior position at the technical university. The second closest firm will be company K where one of the owners works as a full-time lecturer (adjunkt) at the technical university.

Table 7.1: Key features of the firms examined around Politechnika Szczecińska (1997)

Firm	K	L	M	N	P
Year of establishment*	(1987/88) 1990	1987	(1965) 1991	(1969) 1991	1993
Legal form	Limited liability	Limited liability	Limited liability	Public limited	Work cooperative
Main product	Maritime electronics	Industrial information systems	Data processing	Maritime electronics	Corporate and educational software
Number of staff**	41	35	102	40	1 (~10)

*Year in parenthesis shows year of establishment of the predecessor of the present firm

**Number in parenthesis shows total workforce including part-time workers

Thirdly, there are those enterprises that are owned and run by former staff of the technical university. Within the last group, however, there will also be some degree

of variety, as the informal links between the academic institution and the enterprises might differ. Firm N, for example, is difficult to classify. At the interview with the board of that company also the deputy dean of a faculty as well as a lecturer of the technical university were present both whose roles in the company, however, were not specified.

History and present situation

Despite a certain resemblance in their legal form and their product portfolio (compare table 7.1), the firms examined differ in their origins. The predecessor of firm K, for example, was established in 1987/88 as an economic working group within the Technical University of Szczecin. The university held slightly more than 50% of the shares of this working group with several members of staff of the Technical University holding the rest. In 1990, Firm K was founded as an independent company by five partners who all at that time were employed by the Technical University Szczecin. One of the partners still has his main job as a lecturer at the Technical University. Not all of them had belonged to the initial group of shareholders of the university department nor did all members of that group join the company. Initially, the five partners formed the only staff of the company and the starting capital was entirely drawn from personal savings of the founders. The company's main product is hard- and software for the maritime sector. Lately, however, new products in the field of geographical information systems were developed and successfully marketed. Due to the favourable business development, firm K had increased its staff by 1997 to 41 people.

Similarly, Company L was established in 1987 as an economic working group by ten partners who at that time were all either studying or working at the Technical University of Szczecin. After the company as such had been established, four of the partners actually started working in the firm supported by two other employees. The initial product of the firm – automation software – encountered difficulties in sales and subsequently, the company broadened its focus and developed complete industrial information systems. Further diversification efforts led to the development of products in telecommunications equipment. By 1997, the number of owners had

been reduced to six with five of them working in the company. The overall number of staff was 35.

On the other hand, Company M was established in 1965 as an independent state-owned enterprise. In mid-1993 the company was privatised and the shares were divided between 75 people. By 1997, this number was reduced to 65 owners of which five people hold 51% of the shares. These five persons also form the board of the company with the president and two of the directors being former academic staff of the Technical University. In their case, the capital needed for purchasing the shares was entirely drawn from private savings. The main service of firm M is data processing for organisational clients. Further revenues come from training and software production. In the near future, however, the company intends to diversify into the production of smart-card systems and computer-based information systems for banks. The management assesses the business situation of the company as favourable, which is also supported by the fact that in the last few years the number of staff grew from 78 to 102 people.

Company N, again, was established in 1969 as part of a larger state-owned enterprise engaged in the production of electronic parts. In 1991, the enterprise was privatised and the Szczecin branch became independent on the basis of a management buy-out. The new owners are mainly members of the former technical management, but include also former academic staff of the Technical University of Szczecin. Company N produces hard- and software for the maritime sector, which largely corresponds with the product portfolio of its state-owned predecessor. The owners of N have also stakes in a variety of firms in other sectors that are sometimes as different from the core business as grocery wholesale. As one manager put it, this extreme diversification "helps spreading the risk". The number of employees has remained stable over the past six years, at about 40 people.

Finally, Professor A is head of the Institute of Computer Science at the Technical University of Szczecin. He has set up his own software firm, company P, which has the legal form of a work cooperative and is closely related to the technical university, although no capital links exist. The main product is software for businesses and other organisations.

Workforce

Depending on their history and their product portfolio, the workforces of the firms examined have different structures. The newest firms have a higher proportion of university graduates than those firms that originated in formerly state-owned companies. Due to its very different organisational structure as a work cooperative, company P is not comparable to the other companies. It employs only students or academic staff at a part-time basis. Apart from the owner, there is no other permanent staff.

The two companies that were newly established in the late 1980s or early 1990s (firms K and L), have the highest proportion of university graduates among the workforce. In both cases, between 70% and 80% of the employees have a degree in a relevant subject and those without a degree are usually only involved in administrative tasks. Thus, the technical university represents the main source of recruitment. Typically, the first form of employment is that of an internship during university breaks. If students prove to be suitable, they will be offered a permanent job with the companies and receive training on the job. Since it takes still about another two years to master the job satisfactorily, staff turnover so far has been rather low.

Companies M and N are continuations of formerly state-owned enterprises and consequently employ a significant number of staff from the time before their establishment as private enterprises. This results in a higher share of employees without university degree, accounting for about 80% in company M. Since both firms continue – at least partly – the product range of their predecessors, the long-standing members of staff are primarily involved in the production of those goods or services. New staff, on the other hand, is frequently recruited from the technical university and is mainly needed for the development and production of new products. The director of M confirmed that personal contacts play a major role in the recruitment of university graduates, since “there is no other way to ensure high quality”.

Customer-supplier structure

The customer structure of firms L, M, and P is rather diversified with the most important customers accounting for less than 20% of the total turnover. All three firms prefer to develop close, long-term relations with their clients and, thus, most of the customers are located within the boundaries of the Szczecin voivodship. Moreover, firms M and P serve the local technical university with their products, with company P also working for other academic institutions in the region.

Company N is a notable exception among the firms examined, since it relies heavily on its main customer, the Szczecin shipyard, which accounts for about 80% of the firm's turnover. Already N's state-owned predecessor had business dealings with the state-owned predecessor of the shipyard, although it is not clear which significance orders by the shipyard had for the firm before the political and systemic changes of 1989.

Company K again differs in so far as it is the only firm of the examined group that had business contacts with a foreign firm from the earliest phase of its establishment. K developed its first products with the help of a German firm that now also is a customer with a share of about 10% of total orders. Other foreign customers are located in Canada, although they account only for a small proportion of the total turnover. According to K's president, all foreign contacts originated in personal contacts to people of Polish descent who are working for the customer firms. In the case of the German firm, the general manager is a Polish expatriate from Szczecin who, after the systemic changes, utilised his personal acquaintance with some of firm K's owners for business purposes. Likewise, the business relations to the Canadian customers are also based on contacts to Polish expatriates. With the planned expansion of the product range, company K intends to address increasingly Western markets. At the moment, however, the by far largest share of K's turnover is generated in dealings with Polish customers. Among those, the Polish navy is the most significant, accounting for about 60% of all orders in terms of value. Other major customers are the local maritime academy as well as large Polish corporations that are operating at a national level.

On the supply side, a certain shift from international to national suppliers can be noted. As company P offers only software products, its inputs are mainly intellectual and therefore P has no suppliers in the strict sense. The computer equipment, which P uses for producing the software is to a large extent owned by Politechnika Szczecińska. Firms L and M in the early phases after their establishment received supplies of standardised electronic components and computers mainly from suppliers abroad. As the economic situation became more stable in the years after the systemic changes, the supply situation on the Polish market improved significantly. Both firms therefore now obtain their supplies from Polish firms. These suppliers are located in large economic centres of Poland, such as Warsaw and Wrocław and are partly subsidiaries of large multi-national corporations, partly indigenous Polish firms. Company K differs from firms L and M in so far, as it always was in close cooperation with the aforementioned German firm that serves both as a customer and supplier. Otherwise, K relies for supplies also on the Polish subsidiaries of Western, in this case American and German, companies. Firm N again appears to be different as it still operates much within the system of division of labour among the constituent parts of the formerly state-owned mother firm. Therefore a significant part of its supplies comes from those companies, which often produce under the same name as company N. On the other hand, N also developed links to local firms, such as company F (compare chapter 6), that are both cooperation partners in production for some projects as well as suppliers in other cases.

Generally, it seems that personal contacts are seen as crucial for both customer and supplier contacts. These contacts either pre-exist the business relationship or are being built up through established or intended long-term contacts between supplier and clients.

The production process

As a common feature, the companies examined divide their staff into groups that enjoy relative independence. An exception to this are the manufacturing units of firms M and N with typically low shares of graduate employees, which are subject to more rigid supervisory structures. There are differences among the individual firms, however, concerning the division of labour between those rather independent groups.

Company K organises its groups according to stages of production, i.e. several groups are involved in the completion of a project. Thus, for example, one group is responsible for hardware design and development, another one for production, and a third department is in charge of system integration. Within these groups, people work flexible and with a high degree of autonomy. They are, however, responsible to the team leader. In contrast to this, the other firms seem to prefer a horizontal division of labour between the groups, i.e. each group is responsible for all stages of production of individual projects. Normally, however, a mixture of both systems applies. For instance, firm L has one group which specialises mainly in the design of hardware components and therefore occupies only a part of the production chain; vice versa, company K has one group that exclusively deals with all stages of production of geographical information systems.

The products of the start-up firms, as well as some – mainly the newer – products of the longer-established companies, are highly customised and usually the result of an interactive process between the firm and its customer, with the originally little specified ideas of the customer and the actual product continually converging. One of the managers interviewed called this “a learning process for both sides”, producer and client. Due to the necessary flexibility of this kind of design and production, the companies examined rely mainly on multi-purpose equipment for manufacturing purposes and state-of-the-art computer equipment for product design, software development and data processing.

Relations between the firms and to the Technical University

Politechnika Szczecińska is the pivotal element around which many of the relations and activities of the examined firms are centred (compare figure 7.1). To begin with, all firms have the obvious characteristic in common that their owners, at least partly, were or are employed at the technical university. Firm K is actually the continuation of an economic working group established under the roof of the department of automation at technical university. At the time of the interview, one of the five partners was still working at Politechnika Szczecińska. The other partners meanwhile had concentrated on their work in the company. Company L was also established in close connection with the technical university before the systemic

changes. In 1987, L was founded by ten partners who at that time were all either studying or working at that university, also mainly at the department of automation. In the case of firm M, two members of the academic staff of the same department joined the group of new owners in the privatisation process. One of them at the time of the interview was chairman of the board of the company. Similarly, when the predecessor of company N was privatised on the basis of a management buy-out, some members of the new group of owners and therefore also of the new management came from Politechnika Szczecińska. At the interview with the board of the enterprise, the present dean of the faculty of electronics of that institution as well as a lecturer from a department in the same faculty were present, although it became not quite clear, which role they play in the company. The founder and director of company P is very active at the technical university as the head of the department of computer science and describes himself as a 'scientist-entrepreneur'.

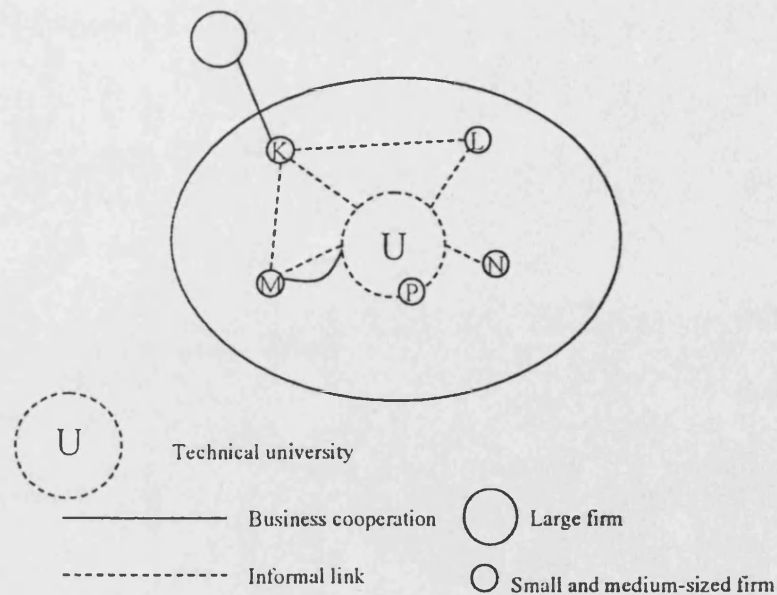


Figure 7.1: Firms in the environment of the technical university in Szczecin

Thus a considerable part of the technical knowledge of the new entrepreneurs seems to derive from Politechnika Szczecińska and, at the same time, this institution is a

place where personal relationships between them were formed. All firms are active in sectors that have close connection to the academic background of the university staff who entered the commercial sector. Therefore, it appears that the academics in the examined firms rely on their skills and knowledge acquired through their academic work. Moreover, the organisation of work within the companies, with high levels of autonomy for the highly skilled employees, resembles the work culture frequently found at research universities. In this context, however, it is also noteworthy that in the case of firm N the traditional collaboration between the units of the state-owned predecessor was preserved, thus indicating a strong imprint of the pre-reform structures. The second function of the technical university, as mentioned above, is that of a host for inter-colleague relationships. Especially firms K, L, and M are linked through bonds of that kind. Most of the senior managers and owners of these firms used to be colleagues at the same department and indeed referred to each other as further potential interview partners. Two of the interviewees also mentioned a fourth firm that was set up by academics who used to work at the same department. This firm is engaged in software development and thus seems to follow the same pattern as the other firms¹. According to the director of L, of the 20 people who worked at the aforementioned university department five people set up their own enterprises in related sectors. One owner stresses that naturally these new entrepreneurs and the present academic staff keep in touch as they consider themselves still as colleagues. He also said that they often considered “competition [between them] as a sport” and exchanged naturally information concerning business practices and problems. It has to be noted, however, that the companies appear not to compete directly with each other, thus the competition consists rather in comparing the success of the companies. The link between the three companies mentioned above and company N seems not as straightforward.

The significance of the technical university for the examined enterprises is further emphasised by the role the institution plays in recruiting new staff. All companies that commented on this issue stressed the importance of personal contacts in their recruitment procedures. As one manager put it: “There is no other way to ensure high quality” of new staff. For example, the co-owner of company K who is still

¹ However, nobody from this company was available for an interview.

working at the technical university tries to identify students who appear suitable for the company and establishes the first contact. He is supported in that task by the son of one of his co-owners who also works at Politechnika Szczecińska as an academic. Usually, the first form of employment is that of internships during university breaks. Firms L and M follow a similar pattern with all companies keeping a direct link with the technical university by employing members of the academic staff. M, for example, employs one active lecturer and five lecturers on sabbatical, whereas L employs a lecturer part-time. Company P has the most direct access to students as it is headed by a full-time professor at the department of computer science. Many students therefore work for P during their studies.

A third feature is that of the university as a potential customer of the firms. Three of the examined firms actually maintain business relations with academic institutions. Company M, for example, became recently the Internet provider for Politechnika Szczecińska, whereas company K delivered several radar simulation systems to the maritime academies in Szczecin and Świnoujście. For company P, on the other hand, software for teaching purposes is one of the main products and is delivered not only to local universities, but also to academic institutions in other parts of the country. It is difficult to assess, however, to which extent personal contacts played an important role or whether the intimate knowledge of the academic world on the side of the owners and parts of the workforce put the companies in a favourable position for these contracts.

Relation to the business environment and to local and regional authorities

Generally, the firms that commented on this issue did not attribute great importance to the relation between businesses and the local and regional authorities. The role of the local government was seen as that of a tax imposing body. However, personal contacts to individual senior officials exist. When being asked about further potential interview partners with experience in academic employment, one manager gave the name of the head of department of information systems at the local municipality who also is a former colleague of some of the owners of firms K, L, and M. At the interview with him, which was conducted without appointment, was also present one of the academics who participated in the interview with the board of company N and

who is also a member of the city council and a member of the council for the self-government of the Szczecin voivodship. He stressed, however, that he was not present in his official function and seemed to entertain a friendly relationship with the interviewee.

The Regional Development Agency was quoted only by one company as playing some role for advice in administrative matters. Otherwise, the managers interviewed did not attribute any importance to this institution.

The attitude towards the local chamber of commerce differs among the entrepreneurs. Two firms were members of the IPH and also see an important role to play for an institution like that, with an emphasis on lobbying tasks on behalf of the local business community. One company sought advice on customs matters by the chamber. In general, only one manager of a firm considered a chamber of commerce as not being useful. Other managers agreed that a chamber would be useful, however, they noted with regret the low profile of IPH. One firm would be prepared to pay fees higher than the previous level to get a better quality of services.

The interview partners at two companies referred to membership in clubs also as a means of communication with other business people. The director of company L is a member of the Szczecin Business Club and draws from there, among other things, contacts to officials in local and regional authorities. The director of company K belongs to a sports club that also has many other business people on its member list. Company M is the only firm that is a member in a specialised business association.

Generally, the companies examined seem to be well connected to the local institutional business environment. However, established individual personal contacts appear to play the most important role, although also the importance of new organisations of the business support infrastructure – such as a chamber of commerce – is being recognised by the managers.

The embeddedness of inter-organisational relations

The group of firms described above constitutes only a weak economic network, since few business links between firms exist and the organisation central to the network is non-commercial in its nature. The technical university as such does not figure as an actor in the network but can be rather seen as a catalyst through which many social links have been established. To some extent, the Politechnika Szczecińska is represented through academics that are in touch with the spin-off firms and thus constitute bridges between the businesses and the technical university as an institution. However, also these connections are rather informal in their nature. Therefore, much of the analysis will concentrate on the possible future use of existing social relations, in which potential business relations could be embedded. Nevertheless, elements of the four basic features of inter-organisational networks according to Grabher (1993a) can already be identified.

The expectation of reciprocity certainly lies at the basis of most interactions that take place between the examined firms. The relation between the responsible managers of at least three firms seems to be rather friendly and it seems fair to assume that in possible future dealings, considerations other than pure profit maximisation would play a role. This is also supported by the claim made by one entrepreneur that the former colleagues keep in touch and competition between them takes rather the form of a 'sport'. Since relatively strong social ties exist between the entrepreneurs from their common past as university staff, it is likely, that the expectations of reciprocity originates in the social sphere. Also the current relation to the technical university can be traced back to social contacts, although apparently it is kept alive not only for social reasons. At present, the companies mainly recruit staff from among the students of the Politechnika, whereas the academic institution serves also as a customer of the companies' products. It is hard to say, whether this relation is actually based on long-term reciprocity. However, the fact that some individuals of the management or staff of the firms examined remain active members of the academic staff at the technical university indicates a long-term perspective in the exchange between business and academic spheres. Furthermore, one of the managers reported that he considers the scientific profile of the technical university

“appropriate” and, although there are no joint research projects at the moment, there would be a possibility of cooperation in the future.

Concerning the issue of interdependence of actors, once again one has to refer to the potential inherent in the system. If interdependence of actors in networks results from the building of trust over a period in which a relationship is expanded, then it is fair to assume that this process is already fairly advanced between at least three of the examined firms. Generally, mutual orientation will be facilitated by a common language or common procedures. Thus in the examined case, a certain measure of mutual adaptation between the main actors already exists, due to the shared university background, as well as through personal acquaintance. This adaptation may range from the same stock of technical knowledge, over similar approaches to solve technical problems, to familiarity with each other’s individual attitudes. On the other hand, a certain acquaintance exists also between the managers of the firms and responsible people in academia in general and at the technical university in particular. At present, the largest degree of interdependence is between firm P and the technical university, since the owner of P is also a senior member of the academic staff and his firm uses university equipment for commercial purposes. Similarly, some members of the management or the staff of the other companies also hold simultaneously academic posts at the Politechnika. A further feature of interdependence exists between the technical university as an institution and most companies in the sense that the firms use the university as a pool of new skilled labour. Again, this feature is based on the familiarity of the managers with the academic environment in general and the educational standards of the technical university in particular. Other connections seem to consist primarily in the sale of some of the firms’ products to the academic sector. In the future, however, it seems also possible that the mutual familiarity between firms and university leads to expanding relationships, e.g. in joint research projects

The most discernible network feature in the examined case is the loose coupling of the actors. The evidence has shown clearly that all firms are tied into their specific, mutually exclusive economic networks, which again are frequently based on social contacts. As a result, all firms operate in related but separate business environments, since they are not linked by input-output relations and they also do not compete

directly with each other. On the other hand, the social relations between the actors examined constitute 'weak ties' (Granovetter 1973) by which these separate business environments are tied together. In particular the link between company K and a large German firm could serve as a possible channel for technological information flow into the network. Since all firms are active in related business fields, it is possible that experiences made by one firm could also benefit the other firms in the network. Furthermore, the link between firms and technical university can also be classified as rather weak. The existing formal links concern rather individuals who work simultaneously in a company and the Politechnika. Otherwise, although some kind of informal exchange takes place, there are no long-term agreements. The flow of technological information in the past as well as the recruitment of graduates in the present are not actively shaped by the technical university, but can have potentially positive effects for the academic institution. One of the main benefits could be to demonstrate to students the real-world application of their academic knowledge. Moreover, it is possible – especially in the Polish context – that companies work with technology, which is more up-to-date than that available at universities. Thus, the weak tie between the technical university and the spin-off firms links two separate spheres, which can complement each other.

The power relations between the examined actors are not very pronounced, due to the rather weak linkages. In the late phase of the socialist era the technical university as a state institution had some control over the activities of at least those two companies, which were established as economic working groups. After the transformation started, these partnerships became fully independent firms and thus the technical university had no power over them any more. An exception to this is firm P, which uses equipment of the technical university and therefore relies more on 'good will' on the side of the Politechnika. However, the power potential deriving from this relation is likely to be mitigated by the fact that the owner of P also works in a senior position at the technical university. Since Politechnika Szczecińska as an institution does not figure otherwise as an actor in the examined network, no other power relations between the technical university and the firms could be identified. Concerning the power situation between the former colleagues, no evidence could be produced, due to the absence of any formal exchanges. Although the power position of the owners could be determined by the size of their company, it is also possible

that the pre-existing structure of social relations has significant influence in that respect.

The evaluation regarding the four network characteristics of the above structures does not yield a clear indication as to what type of network these structures constitute. On the one hand, the application of advanced technology by the companies would suggest the existence of a high-tech network. However, no strategic alliance between the examined firms could be identified according to Jarillo's definition, since they had not entered any discernible "purposeful arrangement...to gain or sustain competitive advantage vis-à-vis their competitors" (Jarillo 1988, p. 32). Furthermore, also the size structure of the examined firms does not match Grabher's observation that high-tech networks include either only large firms at an international level or large and small firms at a national level (Grabher 1993a). The above network in its present form, consisting of rather small firms and serving predominantly the regional market, could at best hope to achieve a dominant position in the region. On the other hand, the fact that the companies have strong local roots and are all active in similar fields could be taken as an indication for a regional network, as described by Grabher (1993a). This is also supported by the absence of a large dominant firm within the network. However, the small number of actors and the fact that there is no vertical division of labour between the firms seems to conflict with the characteristics of an ideal-typical industrial district as, for example, in the Third Italy. Nevertheless, despite differences in size and resources involved, some parallels can be drawn to the emergence of Silicon Valley in California. In the latter case, academic staff and graduates from Stanford University set up high-technology firms that benefited from research and teaching that was conducted at the university. Furthermore, the firms in Szczecin organise their work in a way, which leaves much freedom for their employees who are often university graduates, thus showing patterns similar to those in Silicon Valley. With respect to the long-term prospects of the cooperative structures in Szczecin it is interesting to note that, in the Californian case, similar structures not only survived the early phase of the firms' establishments, but now are widely regarded as the key to success of the firms involved (Saxenian 1994). Apart from the obvious gap in technological standards, the main difference between the two cases seems to be that Stanford University instigated the establishment of high-technology firms, whereas the

technical university in Szczecin seems rather indifferent to the developments described above. Furthermore, contrary to the firms in Silicon Valley, instead of seeking customers on the world market, most of the firms examined confine themselves to end-customers in the local or regional market.

Coping with SME specific problems

The firms discussed above all satisfy the definition of small and medium-sized enterprises. All firms are independent from other, foreign or domestic, companies and raised the funds for their establishment entirely through private savings. Thus, they are likely to suffer from problems similar to those of Polish SME in general, which were outlined in chapter 4. However, the subjective assessment of the entrepreneurs interviewed shows that their business situation generally is perceived as favourable. The following section examines to what extent the network of relations among the companies, as well as between the companies and the Politechnika Szczecińska, can yield resources that potentially helped achieving this relative success.

The most important area, in which the examined companies utilise their university connection, is that of skill development and knowledge transfer. The managers not only acquired the knowledge relevant to their business field at Politechnika Szczecińska, but they are also able to tap the pool of appropriately skilled labour at the same institution. Furthermore, academia also plays a role as a market for three of the firms. It is difficult to decide to what extent these business connections can be attributed to personal relationships between managers and academics or to the insider knowledge of academia on the side of the managers. In any case, part of the necessary marketing skills for these dealings was acquired through the previous employment at the technical university. Moreover, company P benefits from its affiliation with the Politechnika in so far as it uses university equipment in its production process. Since the purchase of similar equipment would constitute a major capital investment, the cooperation with the technical university prevents this company from facing the problems of restricted access to capital, which many Polish SME experience.

Moreover, the social relations between the managers might facilitate the spread of best practice in many fields, including administrative issues. The flat organisational structures of the firms, with a high degree of autonomy for the individual employee, also encourage information exchange at lower levels. Again, since many of the staff were recruited from the same academic institution, a network of social relations might induce an easy flow of information. Another advantage in terms of technology transfer is the connection between company K and a large German electronics firm, which could well serve – to a higher or lesser extent – as an information channel for the entire network.

In conclusion, the relational network between firms around Politechnika Szczecińska is characterised by rather informal, loose relations. The fact that there are no commercial exchanges between firms and no contractual obligations ensures that the examined companies are not in danger of being locked into their relationships. However, there could be some potential benefit in a more formalised relationship between the technical university and the spin-off firms in the sense of common research projects, which would broaden the base for the technology transfer potential between academia and business sphere.

Chapter 8: Poznań

This chapter commences by introducing the Poznań voivodship in historical and economic terms. After a brief description of geography, population, and history, the chapter provides a general overview over the economic situation of the region. In subsequent sections, the chapter moves on to describe and evaluate two local business support initiatives; a science and technology park as well as the local chamber of commerce. Both initiatives are analysed by comparing the actual evidence with the original concept and Western experiences with similar organisations.

Geography and population structure¹

The voivodship of Poznań is situated in the west of the country, halfway between Berlin and Warsaw (compare figure 8.1). It covers an area of 8,151km². The river Warta, which is the third longest river in Poland, flows through the generally flat landscape of the province. The voivodship has no significant natural resources apart from its arable land. In 1995, 1,354,000 people lived in the Poznań voivodship, of which more than 70% lived in towns. The population density is 166 inhabitants/km². The city of Poznań is the capital of the voivodship and, with a population of more than 580,000 inhabitants, the by far biggest town in the region. The second biggest city is Gniezno with about 71,000 people. Generally, the share of the rural population increased slightly over the years between 1990 and 1995.

Historic Development

Poznań was founded in the tenth century and, together with Gniezno², was the main stronghold of the Polanians, a West Slavonic tribe (Davies 1981). These two fortresses formed the core of the developing Polish principality of Wielkopolska (Greater Poland), one of the two areas – the other being Małopolska (Small Poland) – of a developing Polish nation.

¹ The statistical data in this section is based on *Urząd Statystyczny w Poznaniu (1996)* and refer to 1995, unless stated otherwise.

² Gniezno was actually the first Polish capital, before Kraków.



Figure 8.1: The Poznań voivodship in Poland

In 1253, Poznań received the city charter and over time developed into a regional centre of crafts and commerce. In particular, the town was able to benefit from its function as a node of the Eastern European transport and communication network. The historical amber route from the Baltic Sea to Prague as well as one of the main communication routes between Germany and Eastern Europe led through Poznań (Rugg 1985, p. 41). Thus, already in medieval times, Poznań became one of the important European fair towns (Rugg 1985). At the end of the 16th century, the city had about 20,000 inhabitants.

After Swedish troops occupied the town in 1655, Poznań entered a period of economic decline. Shortly before and after the partitions of Poland, Poznań started to grow again, attracting mainly German settlers (Wandycz 1974). However, the indigenous industry in the region, particularly the hitherto strong textile industry, suffered considerably from the prohibition to export to other Prussian territories (Wandycz 1974). After a short period of regained independence following the

Napoleonic invasion, the Grand Duchy of Poznań returned under Prussian rule in 1815. A land reform resulted in an increasing share of agricultural land owned by Prussians and in a sizeable group of landless Polish peasants. At the same time “Polish craftsmen were losing ground to the growing German element” (Wandycz 1974, p. 71). German influence grew even stronger after Poznań became incorporated into the united German Empire. The region was assigned the role of a ‘granary’ for the German empire and thus preserved a predominantly agricultural character. In 1867, less than 13% of the population of the region was employed in industry or crafts compared with 30% in the neighbouring province of Brandenburg. In 1875, artisanal shops accounted for about 83% of all manufacturing establishments in the region, most of them operating in villages or small towns (Hagen 1980, p. 212). However, some industrial development took place – the first Polish factory that produced machinery was set up in Poznań – and by 1895, the share of people employed in industry or crafts surpassed 20%. In order to resist the German colonisation attempts, Poles in the region joined together in credit-savings organisations as well as industrial and artisanal associations. These associations aimed to pool the resources available to Poles in order to support their economic activity (Wandycz 1974, Pawlicki 1912).

After the First World War, the Polish population of Poznań rose up against the German authorities and in early 1919, the whole of the Wielkopolska region was liberated from German occupation. In the aftermath, the Polish educational infrastructure was reinstalled with the founding of a Polish university in Poznań being one of the first steps. Also the Poznań Fair was revived and since 1925 has assumed an international character. The Second World War brought renewed German occupation and resulted in the destruction of about 50% of the city. In the following socialist period, the region once again developed into an economic centre of Poland. Apart from the strong food industry, also the production of machinery, ship engines and railway carriages played important roles. In this period, Poznań was also repeatedly the scene of uprisings against the socialist government, most notably in 1956, when about 75 people were killed in clashes with the police.

The economy

Despite its fertile agricultural land, the voivodship of Poznań has a lower percentage of agricultural employment than the Polish average of 27%. Figure 8.2 shows the shares of employment of the most important sectors in the Poznań voivodship. Thus, the main sectors are industry with 28% and trade and repair with 16% of total employment. Other important sectors with employment shares above national average are business and financial services, which together account for 7.6% of the local labour force, as well as education with 6.9%. The industrial employment is fairly evenly distributed between the two main industrial branches. The four most important branches together account for almost 57% of the total industrial workforce of the region (compare table 8.1).

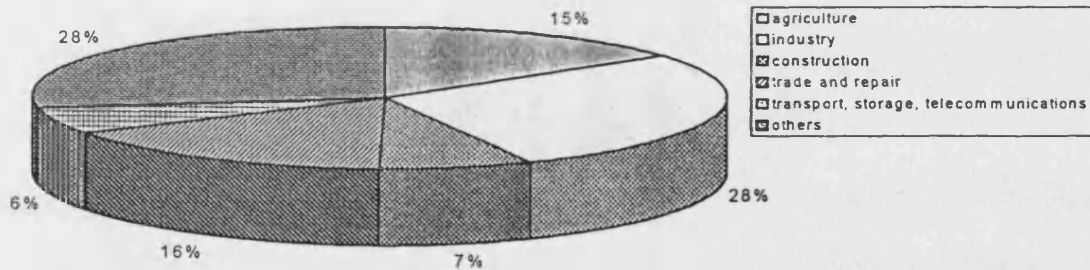


Figure 8.2: Share of employment in the voivodship of Poznań, according to sectors (1995)

Table 8.1: Employment in the most important industrial branches, 1995 (as percentage of total industrial employment)

Branch	Employment
Food and drinks industry	18.7
Machine construction*	17.1
Garment and fur industry	12.3
Furniture production	8.7

*including electrical and electronic appliances

Source: Urząd Statystyczny w Poznaniu (1996)

According to Węclawowicz's estimate, Poznań belongs to the four Polish regions with the highest level of GDP contribution per capita (Węclawowicz 1996, p. 160). Also the development of the unemployment rate – as shown in figure 8.3 – hints that the economic performance of the region was above the national average. Throughout the period of the reforms until 1995, the unemployment rate stays far below that of Poland as a whole. The unemployment rate in the city of Poznań again is less than half of that of the region as a whole³.

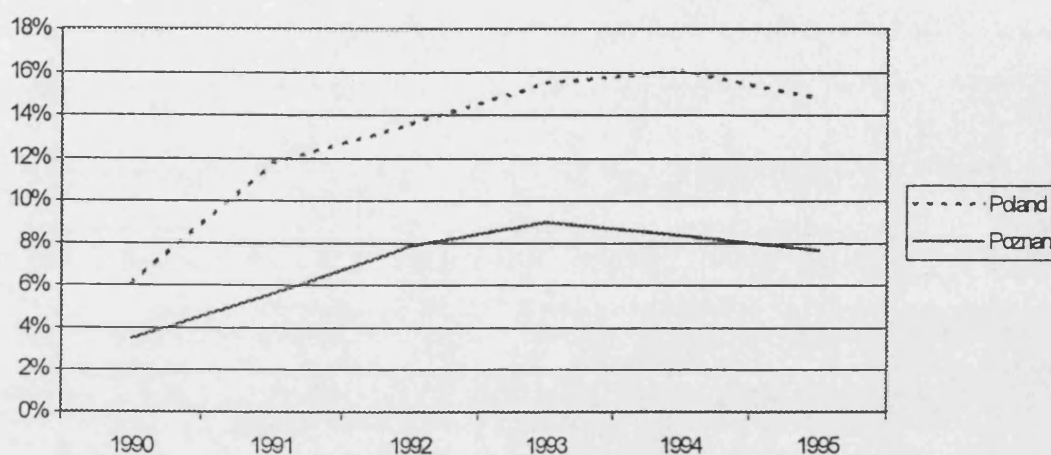


Figure 8.3: Development of unemployment rates in Poland and in the Poznań voivodship, 1990-1995

The rise in the number of registered firms in Poznań indicates the increasing economic activity in the private sector. Between 1991 and 1995, the number of all registered companies rose from slightly more than 25,000 to almost 102,500, whereas the number of state-owned enterprises decreased from 2,639 to 2,422. Table 8.2 shows the number of registered economic units in Poznań. By far the highest number of firms is registered as firms of sole proprietors (zakłady osób fizycznych), followed by the legal form of a civil law partnership (spółki cywilne). Almost 42% of all companies were involved in trade and repair and 94% of them were registered

³ The employment data at municipal level excludes self-employed and employment in companies with less than five employees. For the above estimate the regional ratio between total employment and employment according to the measure at municipal level was also applied to project the total employment in the city.

as firms of sole proprietors or civil law partnerships. The second strongest sector, in terms of number of firms registered, is the industrial sector. It accounts for more than 17% of all companies, of which 89% are civil law partnerships or sole proprietors. In Poznań, more firms are registered in the real estate and business service sector than in the construction sector⁴ thus underlining the importance of the service sector in the region.

Table 8.2: Number of registered economic entities in the Poznań voivodship, total and in selected sectors, 1995

	State-owned	Commercial code companies	Cooperatives	Civil law partnerships	Sole proprietors
Industry	216	1,487	105	1,996	13,753
Trade and repair	63	2,306	140	5,443	34,584
Construction	83	590	51	900	8,662
Real estate and business services	222	870	192	1,116	8,930
Total	2,422	5,909	748	1,0578	81,208

Source: Urząd Statystyczny w Poznaniu (1996)

The economy of the Poznań voivodship has also significant foreign trade links. Thus, the voivodship in 1995 accounted for roughly 5% of all Polish exports and 6.5% of all Polish imports⁵, compared to its share of the total Polish population of 3.5% (GUS 1996b, Urząd Statystyczny w Poznaniu 1996). The main destination of exports (85% of all exports) and the main source for imports (76.5% of all imports) is the EU. Within the EU, Germany is the dominant trade partner, possibly due to its proximity. Central and Eastern Europe accounts for only 12.4% of all exports from and 5.8% of all imports to the voivodship.

As in the case of Szczecin, the Polish SME Foundation (1997) included Poznań in the list of the eight 'privileged' voivodships, which offer a particularly favourable environment for the development of an indigenous small and medium-sized enterprise sector. According to Gorzelak, in 1988 Poznań was one of the four regions in Poland with the highest share of university and secondary school graduates in the

⁴ As in the case of Szczecin, it is very likely that a substantial number of the registered firms is actually not active.

⁵ By value

workforce (Gorzelał 1996). Poznań is one of the main academic centres of Poland with 14 universities or equivalent institutions and a total of almost 68,000 students. Apart from the location of the region, this high educational potential of the regional workforce makes the voivodship an attractive place for foreign investors. In 1993, Poznań was the fourth most attractive region, with 7% of all foreign investments in Poland effected in the voivodship (Gorzelał 1996, p. 87). Thus, the overall economic situation of Poznań seems to be very promising. Almost all studies on the regional pattern of transition in Poland conclude that Poznań has a 'locomotive' function for the rest of the country (e.g. Gorzelał 1996, Węclawowicz 1996, OECD 1992).

Probably due to this strong economic performance, Poznań is one of the few Polish regions without a regional development agency. Also at city level, there are no significant projects for the promotion of enterprise development. However, the regional authorities participated in the establishment of a science and technology park together with the Adam Mickiewicz University. This initiative, as well as the regional chamber of commerce will be discussed in the following.

The Science and Technology Park in Poznań – Poznański Park Naukowo-Technologiczny (PPNT)

The science park concept

The origins of science and technology parks go back to the early 1950s when Stanford University in California created an opportunity for its researchers to exploit commercially the results of their research. Starting with the use of university laboratories, the Stanford Park soon began spinning off small high-technology firms, some of which became large multi-national corporations (Dalton 1993). Monck et al. (1988) attribute the – at first slow, but then ever-increasing – growth of similar developments in the USA to the merging of two general trends. The first of these trends is the growth in new technologies that are commercially applicable, often even in small firms, whereas the second trend is the increasing importance of "leading-edge" research, much of which is initiated in universities and other institutions of higher education" (Monck et al. 1988, p. 3).

In the late 1960s, the science park concept was first adopted in Britain as well as in other European countries. Although the individual establishments took different forms, they all had in common the general characteristics of a science park, which Dalton describes as follows: A science park is “a property-based initiative which

- has formal and operational links with a University or other Higher Educational Institution or major centre of research,
- is designed to encourage the formation and growth of knowledge based-businesses and other organisations normally resident on the site,
- has a management function which is actively engaged in the transfer of technology and business skills to the organisations on the site” (Dalton 1993, p. 1).

The above objective to foster the creation and growth of advanced technology firms is seen by many analysts as a way to revive regional economies that are affected by industrial decline (e.g. Hilpert 1991). According to this group of researchers, a successful science park will create new businesses as well as it will induce growth in existing businesses through forward and backward linkages between firms inside and outside the park. Furthermore, the cluster of R&D intensive companies will encourage other advanced technology firms to locate nearby in order take advantage of specialised labour force and facilities, but also of the ‘milieu’ and the tacit knowledge that exists in those clusters (Luger and Goldstein 1991). However, authors like Massey et al. (1992) and Luger and Goldstein (1991) are sceptical about the impact of science parks on regional development. Massey et al. (1992) in their study of British science parks came to the conclusion that the number and quality of links between firms inside and outside a science park lag far behind the predictions. Luger and Goldstein (1991) point out further that R&D activity is heavily labour-intensive and thus does not create strong backward links to the regional business community. Nevertheless, the same authors also acknowledge that science parks can be an effective way of intra-regional technology transfer and diffusion.

The link between a university or other research institution and a science park is one of the crucial factors in achieving that aim (Allen 1993). Universities contribute in

five main ways to the development of firms in science parks. First, they allow students to experience the practical application of academic research. Thus they also support the advanced technology firms in student recruitment at the graduate level (Luger and Goldstein 1991). Secondly, universities provide research in high technology, which in turn generates new business opportunities through innovation by small firms. Thirdly, they should encourage staff to provide advice in the field of high technology to the affiliated firms. Fourthly, the relatively sheltered environment of a science park encourages academic staff to participate in the commercial exploitation of research, and finally, they can actively create companies that utilise the R&D activities of academic staff (Monck et al. 1988).

Among the most important management tasks for a science park is the selection of the site. Broadhurst and Parry suggest three different types of sites, which they call “Urban Park”, “Campus Park”, and “Greenfield Park” (Broadhurst and Parry 1993, p. 34). An urban park is located in the city centre and has typically a small size (between one and ten hectares), which limits the growth potential of firms. Thus, this kind of site should only be chosen if favoured by the close proximity of an academic institution. The second type – the campus park – can normally be found in the suburbs of cities and should have a size of 10-25ha. This size allows a larger number of tenants firms for which it is possible to grow within the park. The associated academic institution should not be further away than one kilometre to make interaction between tenants and academics possible. According to Broadhurst and Parry, this model is “the most favourable for rapid and smooth development” (Broadhurst and Parry 1993, p. 34). The greenfield park is the largest kind of development, with a minimum size of 25ha. Since this type of science park is usually in the open country, it also often far away from the associated university. However, potential agglomeration effects created through the presence of a large number of tenants can possibly off-set this disadvantage.

A further crucial management task is the selection of the tenant firms (Dalton 1993). Two basically different strategies exist in this respect: A science park could aim to attract R&D branches of larger companies or it could attempt to develop small and medium-sized advanced technology companies. Along the continuum between these two poles, any mixture could be possible (Luger and Goldstein 1991). Luger and

Goldstein (1991) suggest that parks of small and medium-sized enterprises will create more spin-offs than the former type and therefore will be more conducive to regional economic development. Furthermore, they assume that within a population of smaller firms and start-ups there is also a greater tendency towards interaction between firms. Possible fields of cooperation are specialised inputs, including technical and market information (Luger and Goldstein 1991). Monck et al. (1988) adopt a definition for these 'new technology-based firms' that was first elaborated in a cross-country study by Arthur D. Little (1977). This definition is very broad, to allow for differences in various countries. However, it postulates that a new technology-based firm must have been established by an individual or a group of individuals; thus branch plants are excluded. Furthermore, the company must be based on an invention or have "substantial technological risks over and above those of a normal business" and the purpose of the firm must be the exploitation of this technology (Monck et al. 1988, p. 45).

The actual characteristics of an individual science park differ, depending on the sponsors and the population of firms. If the sponsors endow the park with substantial funds, it will be easier to offer not only serviced land for the tenants, but also for buildings. The latter is particularly important for small start-ups, which ideally will be accommodated in a multi-unit building with open floor plans (Burr and Parry 1993). Consequently, the amount of funds available will also determine the target population of a newly set-up science park.

The science and technology park in Poznań

The concept of science parks is also seen as an effective instrument in the transition process in Central and Eastern Europe (Lazzeroni 1995). Several initiatives were started in Poland⁶ and in May 1995, the Science and Technology Park in Poznań was established.

⁶ The information in this section is based on personal communication by Ms. Książek and information material published by the Foundation of the Adam Mickiewicz University, unless stated otherwise.

⁷ Other initiatives include parks in Gdańsk, Gliwice, Mielic, Modlin, Katowice, Kraków, Łódź, Plock, Toruń, Warsaw, Wrocław.

The founding body of the park is the Foundation of the Adam Mickiewicz University in Poznań, which dates back from 1991 and brings together representatives of the regional government authorities, the university, and the local business community. The objective of the foundation is to establish a link in the fields of science, education, and innovation between the region's leading institute of higher education and the community. The particular strength of the Adam Mickiewicz University (UAM) lies in the humanities, but it also covers the natural sciences biology, chemistry, and physics.

The objective of the Science and Technology Park Poznań is to foster the cooperation between the Adam Mickiewicz University and the business community in the fields of chemistry, environmental protection, biotechnology, and horticulture. Moreover, it should promote the establishment and growth of small and medium-sized technology-based enterprises. The management of PPNT is supervised by the Foundation of the Adam Mickiewicz University, the programme commission of the park, and the council of the faculty of chemistry of UAM. There is no link between the PPNT and other local institutes of higher education.

The park occupies 3.2ha land at the northern edge of the town, which formerly belonged to the local gasworks. The existing buildings on the site offer about 700m² of potential production space and roughly 2,000m² storage space. Furthermore, there are infrastructure support facilities and one residential building. Soon after the establishment a new purpose-built building was erected, which serves as a teaching facility for the Institute for Experimental Chemical Synthesis of the Adam Mickiewicz University. Since the main campus of the university is roughly 3.5km away from the site of the science park, these teaching rooms represents the only easily accessible contact point to the academic institution. Currently, the park hosts the technology centre of the faculty of chemistry of the UAM, the above teaching facility, a centre for archaeological research, a plastic processing company, and a firm active in the development of heating systems. The latter, however, according to a researcher familiar with the situation, is in fact a plumbing firm. Both commercial companies are mere tenants of production space and are not tied into the administrative structure of the park. Furthermore, an Innovation Relay Centre of the European Union, a gardening centre, and a horticultural research facility, which

specialises in flower and bush growing technology, are associated with the park, but do not reside in the compound. The Innovation Relay Centre is a member of a nation-wide network of consulting points that provide information on EU R&D assistance, facilitate the participation of Polish organisations in EU R&D programmes, and generally promote technology transfer. It has a staff of two, including the director who also is director of the PPNT.

In the future, the science and technology park aims to offer more consulting services covering issues such as patent reviews and intellectual property rights protection. Furthermore, it is planned to improve the business incubator facilities and create more production, storage, and exhibition space. Negotiations concerning the financial involvement of the Poznań city authorities are under way, which could secure the necessary funds for the further development of the park.

Assessment

Even according to the founders of the PPNT, the initiative lags far behind the original objectives. Although the science park in Poznań formally meets the definition as laid out by Dalton (1993), it lacks the appropriate business population that would make the created structures meaningful.

However, there are also other problems: Whereas the affiliation with the Adam Mickiewicz University ensures a formal and operational link with a university, it also seems to exclude cooperation with other local institutes of higher education. In this context, especially the technical university in Poznań with six engineering faculties and a high potential for applied research would appear to be candidate for fruitful cooperation. The site of the park constitutes a further problem, since the location relatively far away from the university campus would call – following Broadhurst and Parry's typology (Broadhurst and Parry 1993) – for a much larger physical size.

Regarding the population of the park, it seems that none of the traditional objectives of a science park are fulfilled. The number of affiliated organisations is small compared to the size of the site and the built-up infrastructure. Furthermore, three of

the eight affiliated organisations are not residing on the site, thus making the emergence of any kind of informal cooperation between them and the other park tenants difficult. Also the specialisation of the eight organisations appears to be very diverse and therefore not prone to generate synergy gains. Moreover, none of the commercial enterprises that are associated with the science park – with the possible exception of the gardening centre – are active in the originally set out fields of specialisation of the PPNT.

In conclusion, the park is not comparable to established Western initiatives. However, one has to bear in mind the relatively short period of time since the establishment of the park. On the other hand, the conceptual problems of the park, such as affiliation to a university that is strong in humanities or the inappropriate composition of the group of hosted organisations, will hinder the development of the PPNT also in the future.

The Chamber of Commerce and Industry in Poznań – Wielkopolska Izba Przemysłowo-Handlowa (WIPH)⁸

Soon after the Chambers of Commerce Act had been passed in May 1989 (compare chapters 4 and 5), the WIPH was founded by 119 economic entities, both private and state-owned, with the goal of supporting the transformation of the regional economy according to market-economic principles. To achieve this goal, the chamber pursues four objectives. The first, and principal, objective is to represent the members of the chamber vis-à-vis the regional and local government. In this context, the second objective is to participate in the design of laws and to give an assessment of existing laws. The third and fourth objectives are targeted directly at the competitive situation of the members. The specific needs of member companies in the field of general business skills should be addressed by offering seminars and courses, whereas export promotion and trade missions should enhance the export chances of the members.

The main emphasis of the work of the chamber seems to lie on the establishment on international contacts. WIPH cooperates with 26 cities in several European countries

⁸ The information in this section is based on personal communication by Ms Wasilowska, WIPH, and on information material published by the chamber.

and makes use of the International Fair in Poznań to attract the attention of potential foreign investors. The chamber also participates in the 'INTERPRISE' initiative of the European Union, which aims to bring together enterprises in the same branch in different European regions. Moreover, it cooperates with a company of the Berlin Chamber of Commerce in compiling a list of regional firms that are interested in contacts with German companies. The destination of foreign trade missions so far included the Netherlands, France, Belgium, Germany, Russia, China, South Africa, and Israel, as well as visits to trade fairs in Luxembourg, Italy, and Hungary. Also other services offered by the WIPH focus on the international perspective of regional economic activity. Thus, member firms are given a discount on services such as the translation of documents and advice in customs affairs, and among the courses for managers of small and medium-sized enterprises are some, which include a work placement in France.

Among the rather locally oriented activities of the chamber can be counted the arbitration court, which settles minor disputes among firms, as well as the initiatives of the chamber to improve the local educational infrastructure with regard to the needs of the business community. Thus, the chamber participated in the establishment of a local business school and a training school for secretarial staff. Furthermore, the chamber was also instrumental in founding the first private banking academy in Poznań.

The budget of the WIPH is financed through membership fees as well as through the sale of services to members and foreign potential investors and other interested individuals or organisations. There are five members of staff, several of who speak foreign languages. The office of the chamber is located in an office building near the Poznań fair ground.

Membership profile

In April 1997, the chamber had 231 members, of which 175 were located in the city of Poznań and the rest in the Poznań voivodship. The chamber has no detailed information about the branch of activity of their members and only incomplete information about their legal form of establishment. Of the 149 companies, of which

the legal form could be identified, 71 firms or 48% chose the form of a limited liability company. A further 36 firms are registered as public limited corporations, 21 enterprises could be identified as civil law partnerships, 12 as sole proprietors, six as foreign firms and at least three members are state-owned companies. The names of almost half of the member firms suggest that these firms are active in trade or services. Among the members are large companies like the only Polish producer of ship engines – Cegielski – a multi-branch engineering and construction company, and the leading steel construction firm of the region.

The survey collected data about 42 companies out of 92 that were chosen on the basis of an elimination process that excluded all firms that clearly are active in trade or services, as well as those that were known to employ more than 500 employees. Of these 42 firms, nine companies employ less than ten persons, 20 firms have between 11 and 50 employees and 12 companies have a workforce of more than 50 and less than 200 people. Only one firm has more than 500 employees (compare table 8.3). 26 companies are involved in manufacturing, whereas 16 enterprises are non-manufacturers.

Table 8.3: Size distribution of firms surveyed in Poznań according to number of employees

Size	≤ 10	$10 < x \leq 50$	$50 < x \leq 200$	> 500
Number of firms	9	20	12	1

Seven out of the 42 surveyed firms were established in or before 1982, one company was founded in 1985, and the remainder of the sample in or after 1987. Five of the enterprises with a date of establishment after 1987 are continuations of companies that ceased to exist in their previous form. Since two of the enterprises that were founded after 1987 are state-owned, the number of genuine start-ups among the members surveyed is 28. As shown in table 8.4, the majority of firms were established in the form of limited liability companies, with civil law partnerships following in second place. One enterprise is owned by a sole proprietor whereas five entrepreneurs gave only the information that they run a private business. On the basis of previous experiences with the use of that term, it can be assumed that these establishments are also registered as sole proprietor firms. Furthermore, there are two enterprises each registered as state-owned and public limited companies. One

enterprise appears to be a 'special' enterprise, which, however, was not further specified.

Table 8.4: Firm distribution according to legal form, sample firms

Legal form	Number
Limited liability	21
Civil law partnerships	9
Public limited corporation	2
State-owned	2
Sole proprietors	1(6)*
Special	1

*number in parenthesis includes firms that answered "private business" to question 5.2

Although no information was available about the size distribution of the firms that were not surveyed, it is likely that most of the firms active in trade or services are small or medium-sized enterprises according to the definition introduced in chapter 4. Furthermore, if the ratio between large and small firms in the survey sample is taken as a rough indicator for all 92 firms that could not be identified as large or active in trade or services, about 89 of these firms might be small or medium-sized. This results in a share of almost 90% of SME in the membership of the WIPH.

Geographical pattern of customer-supplier relations

As evident from table 8.5, Poland is the main market for the enterprises surveyed. The city of Poznań and the voivodship as well as the neighbouring, i.e. adjacent, voivodships account for roughly equal parts of the total market. However, a significant proportion of customers is located in other parts of Poland. Customers in Western Europe were mentioned in roughly 10% of the answers, whereas exports to Eastern Europe appear to be significantly less important. Overall, about 26% of all firms and 31% of the manufacturers surveyed have significant exports markets. However, none of the manufacturers with less than eleven employees has important foreign markets, whereas about a fifth of the manufacturers with more than ten but less than 51 employees export some of their products.

The share of exporters among the firms surveyed in Poznań seems low compared to the results from Szczecin. However, whereas the share of exporting SME with more than 50 employees appears to be relatively low in relation to the figure reported by Piasecki et al. (1997) for the whole of Poland (compare chapter 4), the share of exporters among those enterprises with less than 51 but more than ten employees is more significant than suggested by the same study. Thus, it is difficult to decide whether the firms examined in the Poznań voivodship have fewer connections to foreign markets than the average Polish SME. The high proportion of exporting SME in Szczecin, on the other hand, could be explained by the extreme proximity of the German border to the city of Szczecin, thus facilitating cross-border trade.

Table 8.5: Answers to question 1.1 'Where do you mainly find your customers?', WIPH members (multiple answers possible)

	<=10		10<x<=50		50<x<=200		>500		Total	
	#	%	#	%	#	%	#	%	#	%
Poznań	2	12.5%	10	21.7%	4	13.3%	0	0.0%	16	17.2%
Poznań voivodship	3	18.8%	8	17.4%	5	16.7%	0	0.0%	16	17.2%
Neighbouring regions	2	12.5%	7	15.2%	5	16.7%	0	0.0%	14	15.1%
Poland	7	43.8%	17	37.0%	8	26.7%	1	100.0%	33	35.5%
Western Europe	1	6.3%	3	6.5%	5	16.7%	0	0.0%	9	9.7%
Central and Eastern Europe	1	6.3%	1	2.2%	1	3.3%	0	0.0%	3	3.2%
All over the world	0	0.0%	0	0.0%	2	6.7%	0	0.0%	2	2.2%
Total	16	100.0%	46	100.0%	30	100.0%	1	100.0%	93	100.0%

number of firms

Table 8.6: Companies with significant export markets', firms surveyed

	<=10		10<x<=50		50<x<=200		>500		Total of exporters	
	#	% of total	#	% of total	#	% of total	#	% of total	#	% of total
All firms	2	22%	3	15%	6	50%	0	0%	11	26%
Manufacturers	0	0%	2	20%	6	55%	0	0%	8	31%

number of firms

On the supply side, the regional market, i.e. the market in the city and the voivodship of Poznań as well as in the neighbouring voivodships, plays the most important role, as shown in table 8.7. The importance of suppliers in other places of Poland is also comparatively high, accounting for almost 28% of the total. Sources from Western

⁹ Firms with significant exports who gave at least one of the answers 'Western Europe', 'Central and Eastern Europe', 'All over the world' concerning question 1.1.

Europe are represented at around 14% of all supply markets, whereas suppliers from Eastern Europe play no role at all. Few suppliers are located outside Europe.

Table 8.7: Answers to question 1.5 'Where are your suppliers mainly located?', WIPH members (multiple answers possible)

	<=10		10<x<=50		50<x<=200		>500		Total	
	#	%	#	%	#	%	#	%	#	%
Poznań	2	20.0%	8	25.0%	1	4.8%	0	0.0%	11	16.9%
Poznań voivodship	3	30.0%	6	18.8%	5	23.8%	0	0.0%	14	21.5%
Neighbouring regions	1	10.0%	5	15.6%	3	14.3%	0	0.0%	9	13.8%
Poland	4	40.0%	9	28.1%	4	19.0%	1	50.0%	18	27.7%
Western Europe	0	0.0%	2	6.3%	6	28.6%	1	50.0%	9	13.8%
Central and Eastern Europe	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
All over the world	0	0.0%	2	6.3%	2	9.5%	0	0.0%	4	6.2%
Total	10	100.0%	32	100.0%	21	100.0%	2	100.0%	65	100.0%

number of firms

Sources of business information

As shown in tables 8.8 and 8.9, most of the firms surveyed rely on several sources of information to find out about potential customers or suppliers. The most significant source of information across all size classes, with the exception of the largest firm, appear to be personal contacts of the responsible people, similar to the findings in Szczecin. The next important method of information gathering is to visit trade fairs, accounting for more than a quarter of all responses. This certainly reflects the presence of the largest Polish international fair as well as a variety of specialised fairs in Poznań. Moreover, the direct approach by customers or suppliers has some significance. As a method for finding out about customers this is even slightly more important than as a source for information about suppliers. Business directories are the least used method, and they are more important for supplier information than for finding customers. Remarkably, a relatively high proportion of responses mentioned sources of information other than the ones listed on the questionnaire. Among those, seminars organised by either customers or suppliers accounted for the largest share, again stressing the importance of face-to-face contacts for the establishment of business relations.

Table 8.8: Answers to question 3.1 'How do you get information about potential customers?', WIPH members

Size	<=10		10<x<=50		50<x<=200		>500		Total	
	#	%	#	%	#	%	#	%	#	%
trade fairs	5	21.7%	9	24.3%	9	29.0%	1	50.0%	24	25.8%
personal contacts	8	34.8%	13	35.1%	10	32.3%	0	0.0%	31	33.3%
business directories	2	8.7%	5	13.5%	2	6.5%	0	0.0%	9	9.7%
approached by customer	5	21.7%	4	10.8%	8	25.8%	1	50.0%	18	19.4%
other	3	13.0%	6	16.2%	2	6.5%	0	0.0%	11	11.8%
Total	23	100.0%	37	100.0%	31	100.0%	2	100.0%	93	100.0%

Table 8.9: Answers to question 3.2 'How do you get information about potential suppliers?', WIPH members

size	<=10		10<x<=50		50<x<=200		>500		Total	
	#	%	#	%	#	%	#	%	#	%
trade fairs	4	25.0%	10	26.3%	9	29.0%	1	50.0%	24	27.6%
personal contacts	6	37.5%	10	26.3%	9	29.0%	1	50.0%	26	29.9%
business directories	1	6.3%	8	21.1%	5	16.1%	0	0.0%	14	16.1%
approached by suppliers	3	18.8%	6	15.8%	6	19.4%	0	0.0%	15	17.2%
other	2	12.5%	4	10.5%	2	6.5%	0	0.0%	8	9.2%
Total	16	100.0%	38	100.0%	31	100.0%	2	100.0%	87	100.0%

number of responses (multiple answers possible)

If only manufacturers are considered, the importance of trade fairs and personal contacts appears to be equal, with the notable exception of the smallest firms (less than eleven employees) for which the personal acquaintance with both customers and suppliers is most crucial factor in gathering information. This seems to confirm the finding of the Polish SME Foundation (1997) that especially small firms do not make use of 'active professional methods of gathering market information, such as systematic market research.

Background of entrepreneurs

In contrast to the survey results from Szczecin, the response rate in Poznań on this score was almost 100%. The most remarkable finding regarding the professional background of enterprise founders – as shown in figure 8.4 – is that more than 40% of the entrepreneurs had no previous experience in a sector similar to the one they are presently active in. Another third of the founders has been working for a state-owned enterprise in the same or a similar branch.

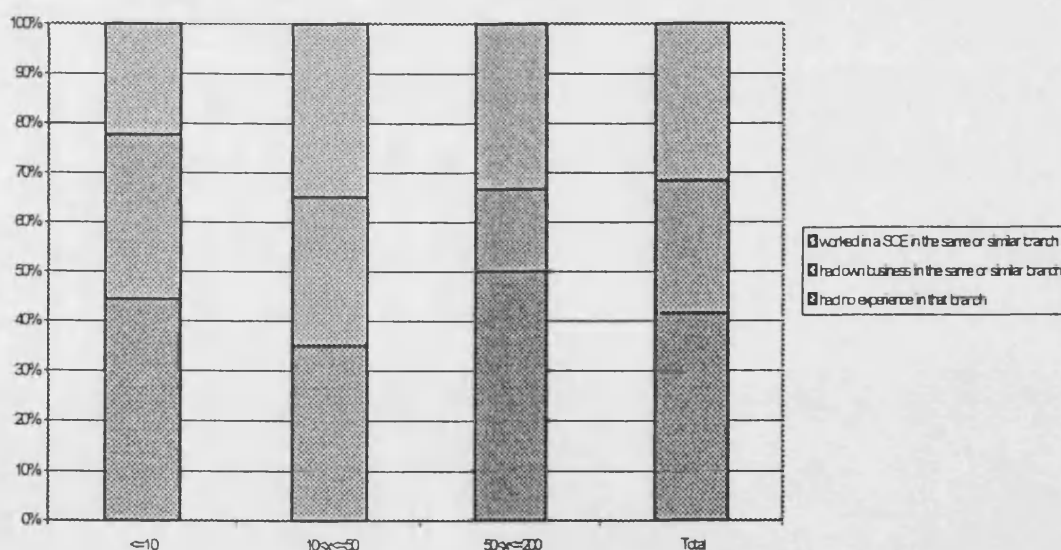


Figure 8.4: Professional background of entrepreneurs surveyed, according to firm size (members of WIPH)

However, more than a quarter of all respondents had previously their own business in a related field. If only the manufacturers are considered, the percentage of those

founders that had no experience in the field at all increases to more than 50% (compare figure 8.5). This is mainly due to the fact that among the smallest manufacturers (less than eleven employees) no founder, and among the group of eleven to fifty employees only half of the founders had previous experience in her or his current branch. Overall, these findings are not very different from the results of the survey in Szczecin, since around half of the entrepreneurs in both voivodships had previous experience in the branch of their firms.

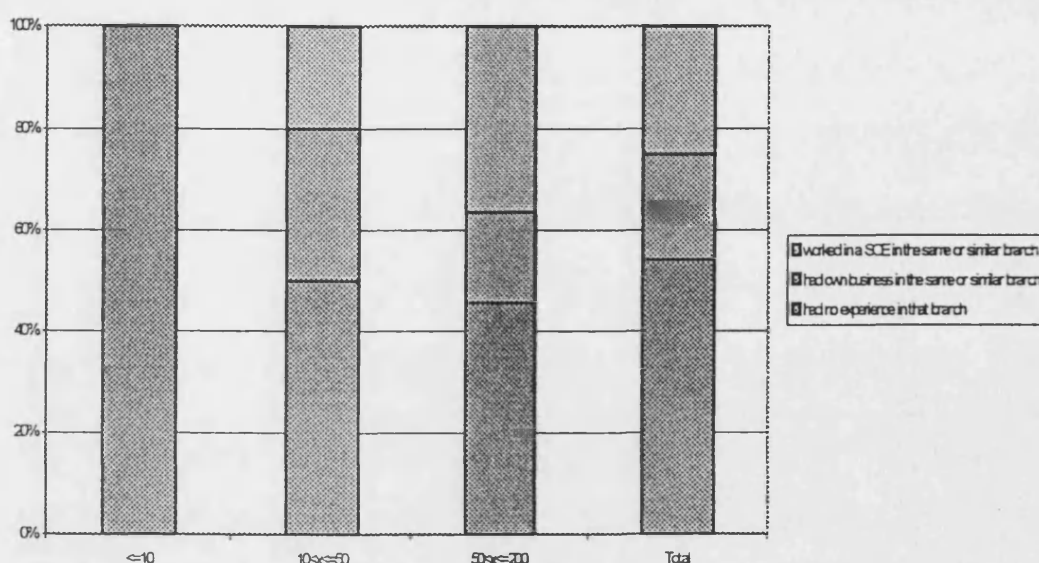


Figure 8.5: Professional background of entrepreneurs surveyed, according to firm size (manufacturing members of WIPH)

Use of services of WIPH and level of satisfaction

Tables 8.10 and 8.11 show the level of usage and satisfaction among the members surveyed at the WIPH. Thus, the group of firms between 51 and 200 employees is the most active when it comes to using the chamber's services. Nine out of the 12 firms in this category received assistance from the WIPH, with trade missions and organised trips to trade fairs being the most demanded service. The level of satisfaction in this group is also high, since seven of the 12 firms were satisfied with the services and the remaining five enterprises were neither satisfied nor dissatisfied. Of the companies with less than 51 employees, slightly less than half got actively

involved with the chamber. Among these firms, again trade missions were used most frequently, with the information service about foreign offers being almost on a par. Only two companies in this category were dissatisfied with the chamber and none of these firms had actually made use of any service. Of the companies that received assistance from the chamber, only three were indecisive; all others were satisfied. The largest firm again used none of the chamber's services.

Overall, less than half of the surveyed member firms have used any of the chamber's services. The most frequently demanded service was the organisation of trade missions and trips to trade fairs, which was used by 16 companies. This service has an approval rate of 69%. The overall level of satisfaction is almost 43% and less than 5% of the members were dissatisfied. Looking at manufacturers only, the picture seems even more positive: 15 out of 26 firms have used services provided by WIPH, and none of the firms was dissatisfied. The level of satisfaction among manufacturers is 46%. When asked whether they would be prepared to pay higher fees for better services, 29 members answered 'no' and only three companies answered 'yes'.

Assessment

By and large, the WIPH seems to be a rather successful initiative. Among the member firms, small and medium-sized enterprises prevail, resulting in a membership structure that is similar to that of the members of the British Chambers of Commerce (BCC)¹⁰. Furthermore, the WIPH does not seem to fall into the category of Polish chambers that were identified by the OECD as being "aligned with the needs of state companies, which constitute the greatest part of the membership" (OECD 1996b, p. 86). In fact, the vast majority of member firms are privately owned and two-thirds of the surveyed firms appear to be genuine start-ups originating from either the transitional period or the last phase of the socialist era. Thus the chamber also and above all attracts members from the newly developing local business community.

¹⁰ The figures for the BCC are based on British Chambers of Commerce (1996).

Table 8.10: Use of services and level of satisfaction according to firm size, members of WIPH surveyed (multiple answers possible)

Size Service	<= 10				>10 and <=50				>50 and <=200				>500				Total			
	#	+	-	+/-	#	+	-	+/-	#	+	-	+/-	#	+	-	+/-	#	+	-	+/-
Information about foreign offers	3	2		1	4	3		1	2	2		1	0				9	7	0	3
Legal certification	1	1			2	1		1	1			1	0				4	2	0	2
Special training	1	1			2	2			3	3			0				6	6	0	0
Trade missions and trips to trade fairs	3	2		1	5	3		2	8	6		2	0				16	11	0	5
Others	0				3	3			0				0				3	3	0	0
None	5	1	2	2	11			11	3			3	1			1	20	2	2	17
Total	13	7	2	4	27	12	0	15	17	11	0	7	1	0	0	1	58	31	2	27

Table 8.11: Use of services and level of satisfaction according to firm size, manufacturing members of WIPH surveyed (multiple answers possible)

Size Service	<= 10				>10 and <=50				>50 and <=200				>500				Total			
	#	+	-	+/-	#	+	-	+/-	#	+	-	+/-	#	+	-	+/-	#	+	-	+/-
Information about foreign offers	1			1	3	2		1	2	2			0				6	4	0	2
Legal certification	0				1			1	1			1	0				2	0	0	2
Special training	0				1	1			3	3			0				4	4	0	0
Trade missions and trips to trade fairs	1			1	4	3		1	8	6		2	0				13	9	0	4
Others	0				1	1			0				0				1	1	0	0
None	3			3	5			5	2			2	1			1	11	0	0	11
Total	5	0	0	5	15	7	0	8	16	11	0	5	1	0	0	1	37	18	0	19

number of responses
 + satisfied
 - dissatisfied
 +/- neither satisfied nor dissatisfied; no answer

On the other hand, the market penetration achieved by the WIPH seems to be well below that of comparable British chambers. Bennett et al. (1993) estimate that in core areas, British chambers are able to recruit 100% of large companies, over half of all companies employing 20 to 200 people and 58% of all manufacturing businesses. In total, British core chambers represent more than 10% of all businesses in their areas (Bennett et al. 1993, p. 9). Following Bennett and McCoshan's definition of core areas as "important centres, in their own right, of economic, political and administrative power", with their influence stretching "over an area much wider than their immediate context", the city of Poznań can be considered a core area in the Polish context (Bennett and McCoshan 1993, p. 239). However, measured against the total business population of more than 100,000 companies in the voivodship, the membership level of 231 firms results in a regional coverage of roughly 0.2%. Although no relevant data for the city of Poznań alone are available, it is unlikely that the market penetration in the city will be much higher. This is due to the fact that 25% of the members of WIPH are located outside the city, but – if the number of inhabitants is taken as a rough indicator – the city accounts for more than 40% of all businesses in the region. A similar picture emerges if only the manufacturing sector is considered. In 1995, more than 17,000 manufacturing businesses were active in the Poznań voivodship (Urząd Statystyczny w Poznaniu 1996). Although no detailed information about all members is available, the experience of the selection process for the questionnaire survey suggests that at least 120 members are active in trade or services, resulting in a maximum market penetration of roughly 0.6%.

Among the activities of the chamber especially those were well received that are directly targeted at the members. Although the overall satisfaction rate of 43% is lower than that of one of the large British chambers, which achieved 76% approval rate, the level of dissatisfaction with 5% is similar, if not lower than in the British case (Market Research 1996). Also the orientation of the chamber towards foreign contacts appears to match the needs of member firms, since trade missions and trips to trade fairs are the most successful service offers of the WIPH and are also regarded by many members as a crucial instrument of information gathering. It is likely that many members assume that the export potential of firms in the Poznań voivodship is higher than reflected in the actual results of the questionnaire survey,

due to the geographical location and the infrastructural situation of the region. On the other hand, it is difficult to assess whether the chamber also meets its aims in the field of lobbying. However, the WIPH's involvement in the improvement of the local educational infrastructure gives some indication that the chamber is playing an active role in the local community.

Overall, the WIPH managed to attract an appropriate mix of firms and offered services that to a large extent both matched the needs of the members and satisfied their expectations. However, the chamber has by far not achieved the market penetration that comparable chambers in Britain can achieve. Since WIPH is the only significant general business association in the voivodship and there is also no competition from public local or regional business support institutions, it is possible that the low level of membership reflects the general lack of credibility of chamber organisations in Poland, as identified by the OECD (1996b).

Conclusions

Similar to chapter 5, this chapter commenced with an outline of the history and the current economic situation of the Poznań voivodship. It then went on to describe and evaluate two business support initiatives in the region which aim to promote in particular private enterprises.

The voivodship of Poznań is among the front-runners in the transformation process in Poland. Despite that – or maybe because of that – there are only few formal initiatives to promote the new private economic sector in the town or the region. One of the existing initiatives is the recently established science and technology park which aims to support particularly technology-based new enterprises. Due to the small and inappropriately structured tenant population, this initiative so far did not achieve its original objectives. As in the case of the business incubator in Szczecin, it seems that a link to the local technical university could provide access to a larger group of firms that would be appropriate tenants of a science and technology park.

The chamber of commerce, on the other hand, seems to fit relatively well into institutional business environment. It does not face significant competition from

subsidised business support agencies in the region, like the chamber in Szczecin, and appears to establish actively new links to other agents of regional economic development. However, the chamber was not able to appeal to a proportion of the local business community large enough to be comparable to that reached by British chambers. The fact that most members surveyed are satisfied with the chamber shows that the reason for this low level of acceptance does not lie in a poor quality standard of services. This evidence together with the preference for personal contacts in acquiring business information, which was evident from the questionnaire survey, seems to corroborate the observation of Sztompka (1991) outlined in chapter 1 of this thesis. The perpetuation of socialist legacies in the attitudes of people leads to a certain reluctance to deal with institutions that are perceived to represent the state or the public sphere.

Chapter 9: The cluster of furniture producers in Swarzędz

This chapter describes and evaluates empirical evidence from a small town near Poznan, in which a large number of artisanal firms is active in the production of furniture. After a brief description of the town and its business population, the chapter goes on to review the situation of the only large furniture company in the town and its relation to the local small firms. Following that, the small firm production system is portrayed on the basis of evidence from five selected firms and the local guild. The chapter concludes by evaluating the evidence produced in the light of the embeddedness concept outlined in chapter 2.

Swarzędz – The furniture town¹

The roots of Swarzędz – a town of about 26,000 inhabitants – can be traced back to the 12th century when the settlement was first mentioned in official documents. Its location on the main route between Berlin and Warsaw proved beneficial for the development of the town and in 1638, Swarzędz received its town charter. Under the rule of Zygmunt Grudziński, the town attracted many Protestants and Jews who were expelled from other regions, including the city of Poznan. These new citizens had a significant impact on the economic development of Swarzędz, as many of them were trained craftsmen who contributed to the rise of the town to one of the main textile producing centres of the Wielkopolska region. In the late 17th century, a joint guild for merchants and craftsmen was established. However, the partition of Poland in 1792 between Prussia, Russia and Austria deprived the Swarzędz textile manufacturers of its original markets in the eastern part of Poland and therefore the industry entered a period of steady decline. Moreover, the difficult situation was exacerbated by growing competition from the Prussian, and later German, textile industry, which had a generally higher productivity due to a higher degree of mechanisation.

¹ The information in this section is based on an interview with the Sekretarz Gminy and an information booklet published by the city authorities.

At the same time, the importance of the carpenters in the town grew steadily and by the late 19th century, Swarzędz had become the largest centre of furniture production on the territory of modern Poland. According to the town clerk (Sekretarz Gminy), this development was helped by the good connection to transport infrastructure, the close proximity of a large city market, Poznan, and by the affluent existence of raw material in the surrounding forests. After the First World War, the province of Poznan returned to the re-established Polish state and therefore, new market opportunities emerged. The population increased from 3,000 people in 1919 to more than 6,500 in 1939. At that time, 85% of all economically active persons found employment in furniture manufacturing. In this period falls also the erection of the exhibition centre of the carpenters' guild and the establishment of the purchasing and sales cooperative 'Jedność' in which the local carpenters joined together to achieve a stronger bargaining position with both customers and suppliers. Alongside the carpenters trade also other professions flourished which are related to furniture production. The most significant of these was the craft of upholstery in which also many small workshops were established. The Second World War again was a decisive event. The deportation of the Jewish inhabitants of the town and their subsequent murder by the German occupiers left many workshops without their rightful owners and others without a large part of their workforce. However, the furniture industry recovered in the years immediately after the war and even the beginning of the socialist rule did not eliminate the private trade. Due to the shortage in the supply of furniture products by the state-owned industry, small crafts workshops were allowed to operate throughout the socialist period.

Table 9.1: Number of private firms in carpentry and upholstery between 1988 and 1994

Year		1988	1989	1990	1991	1992	1993	1994
Carpentry	entries	N/A.	84	118	101	192	83	71
	#	350	396	463	520	651	688	717
	exits	N/A.	38	51	44	61	46	42
Upholstery	entries	N/A.	133	92	105	69	82	64
	#	250	341	395	458	496	556	609
	exits	N/A.	42	38	42	31	22	11

number of firms

Data compiled by T. Strykiewicz, UAM Poznan

By 1988, as many as 350 private carpenters workshops still existed in Swarzędz, apart from the large, then state-owned furniture factory. These were complemented by some 250 upholstery workshops. Since then, the number of establishments has increased significantly, with a peak of new entries in 1992. By 1994 there were 717 carpentry workshops and 609 upholstery workshops in Swarzędz.

The data in table 9.1 does not yet indicate the crisis that these branches are experiencing recently. Only the decreasing number of new establishments may hint of the fact that the economic situation for furniture producers in 1994 is not as promising as it was only two years earlier. However, the city authorities and the guild as well as the Polish press (compare "Agonia Stolarza", *Wprost*, No. 7, 1997, p. 40-41) agree that the traditional workshops are under threat. Another indicator might be the bankruptcy of the purchasing and sales cooperative 'Jedność' in 1996, due to sales problems. The city authorities at the time of the interview had no plan developed that would specifically support the local furniture producers and there was little contact with institutions like the crafts-chamber or the chamber of commerce in Poznan. On the other hand, the authorities try to create a favourable business climate by keeping the taxes low that are levied by the city. The town clerk emphasised in particular that the tax rate per square meter of commercially-used space is more than 20% lower in Swarzędz than the national average. Moreover, the city intends to develop sites suitable for commercial use along the Berlin-Warsaw motorway, which leads through the town. In general, the authorities prefer to diversify the economic structure of the city by attracting industries that are not related to furniture production.

Swarzędzkie Fabryki Mebli S.A. (SFM)

Swarzędzkie Fabryki Mebli S.A. is the by far largest producer of furniture in Swarzędz. The origins of this firm date back to the 1920s when it was founded as one small private enterprise among others in the same town. However, in 1946 it was nationalised and followed a path of rapid expansion with the erection of a second factory, situated also in Swarzędz. A third plant was built in the 1960s in Kostrzyn, located about 20km away. In the 1970s, the company also acquired another multiple

plant furniture producer in Poznan increasing the number of plants to six. Already in the 1980s, SFM undertook a joint-venture with a large Swedish furniture producer and retailer, which resulted in the establishment of a new plant in the eastern part of Poland. In 1992, the hitherto state-owned company was transformed into a joint-stock company and sold to private and public investors.

SFM is situated near the town centre of Swarzędz right opposite the train station. The site contains modern administration and production buildings as well as an exhibition centre. In 1997, SFM employed 2,250 people in eight factories and 350 people in its retail operations. 120 employees are working in administration. Most of the production workers at the Swarzędz factories come from the town or the surrounding towns whereas the management is recruited nationally, with many of the top managers coming from Warsaw. According to one of the directors of SFM, local workers usually have a high level of qualification and therefore are the preferred workforce. Nevertheless, the company introduced a whole range of training measures to improve the expertise of individuals as well as the production process as a whole. At the time of the interview, SFM had continuing problems to find workers with appropriate skills on the foreman and master craftsman level.

In 1997, SFM was engaged in the production of furniture for living rooms, bedrooms, and dining rooms. These are grouped into model ranges with matching style and design. The most important and successful products are the bedroom series which contribute about 30% to the total revenues. For the domestic market, SFM produces fifteen of such series whereas another 20 to 40 series are produced for foreign markets. The batch size differs between 80 for products that involve significant amounts of manual work and up to 3,500 for veneered furniture. About 60% of the total production are exported, mainly to corporate customers in Germany. The remainder of 40% is up to 90% marketed in Poland through a chain of retail shops that are also owned by SFM. The largest customer is a German furniture group that accounts for roughly a third of the total turnover. SFM aims at establishing long-term relations with most of its customers which is also supported by a history of long standing clients. At the time of the interview, SFM had more than 100 suppliers for the basic materials needed in the production, such as wood, glue, veneer, paint, and

fittings. Wood, glue and veneer usually come from Polish suppliers, whereas fittings and paint are normally purchased in Germany. As for the customers, SFM also prefers long-term relations with its suppliers, which often take the form of six-year contracts.

The degree of control that SFM has over the production process differs significantly according to the customer. In the case of the German corporate clients, the customer delivers the design and a detailed product specification, whereas SFM uses its own design for the domestic market. A group of eight designers, among them foreign experts, is responsible for developing new products in response to changing demands on the side of the Polish customers. Concerning the supply side, SFM draws on information about suppliers that it has gathered over longer periods of cooperation. Once a product is designed and the production tasks defined, suitable supplier firms are approached and invited to make an offer. Subsequently, SFM chooses on the basis of these offers. The production jobs are then allocated to the production units along hierarchical command and control structures. Within the production units, there are three control layers with the head of production at the top, heads of departments at the intermediate level, and master craftsmen and foremen as the bottom layer of supervision. In few cases, the production of small batches of components is subcontracted to local furniture producers.

The small firm production system in Swarzędz

This section starts by introducing the carpenters' guild, which plays an important role in many aspects of the local business community. Subsequently, the examination of five small firms and their relations to each other as well as to the local business environment, provide the basis for a wider assessment of the local production system.

The carpenters' guild in Swarzędz – Cech stolarzy²

The carpenters' guild in Swarzędz was set up in the 19th century when about 15 workshops joined together. The membership of the guild grew constantly and

² The information in this section is based on an interview with the guild master, unless stated otherwise.

between the World Wars, more than 100 workshops and furniture factories with between three and 100 employees belonged to the Cech.

Between 1950 and 1990, membership in the guild became mandatory for all private firms engaged in either carpentry or upholstery and it acted as the lowest tier of intermediary institutions between the state and the private business community. All crafts guilds of the region were compulsory members of the crafts chamber in Poznan which consequently comprised about 50 different guilds. It also regulated the standards of apprentice training and awarded the formal qualification upon completion of the apprenticeship. The Cech is headed by a local master carpenter who acts as the guild master in an honorary capacity and is elected by the general assembly of the guild. Although until recently both upholsterers and carpenters were represented in the guild, the emphasis of its work, according to the guild master, was clearly on the interests of the carpenters. Consequently, the upholsterers in Swarzędz formed their own guild in 1994.

After 1990, the system of mandatory membership was abolished and the number of member firms dropped from a peak of 450 firms in 1990 to half that number in 1997. However, not all of these exits were the consequence of a deliberate decision of the entrepreneurs, but many firms simply ceased to exist due to a difficult business situation. On the other hand, the range of activities of the guild increased considerably as a reaction to the changing conditions in the market. As the guild master puts it: "Under the socialist system it was a problem to get the materials, now it is a problem to get customers". Therefore, a significant part of the guild's activities are now focused on finding new customers for its member firms. As early as 1936, the guild built its own exhibition centre, which is situated not far from the town centre. In that pavilion, individual firms have their own stands where they display some of the furniture they produce. From the exhibition centre, potential customers are then directed to the relevant firms. For this purpose, there is also a telephone installed in the lobby from which customers can directly contact the manufacturers and make appointments. In recent years, this centre was extended and the guild also started to organise exhibitions in other towns of the region. It also invests increasingly in other ways of promoting its members such as placing advertisements in newspapers and

broadcasting commercials via three different radio stations. The focus of all these activities is regional, since, according to the guild master, the means of the guild are too limited for any effective promotional efforts throughout Poland or abroad. Thus, international marketing activities are left to the crafts chamber in Poznan, which occasionally organises exhibitions in and promotional trips to Western countries, mainly Germany.

Apart from a focus on marketing, the guild also still fulfils its traditional tasks such as supervising the training of apprentices and the observance of safety standards. Additionally, it offers services such as organising training courses and providing legal advice. According to the guild master, the Cech also played a critical role in the recent 30%-reduction of the taxes levied by the municipality.

The guild master sees neither the scope for improving the existing services nor for extending the range of activities. He even sees the effective operation of the guild under threat as it is entirely financed by membership fees and therefore suffered considerable losses in recent years. Thus he demands on behalf of the guild either a return to the system of compulsory membership or direct state subsidies.

The artisanal firms

The examined small companies in Swarzędz fall broadly into two different categories. Looking at the economic situation of the firms as perceived by the owners, companies S and U seem to cope best with the situation after the systemic changes in 1989/90 whereas companies T and R struggle to adjust themselves to the new market conditions. Firm Q seems to belong to the first group, although its success is based on a different marketing strategy. In the following, the five enterprises will be examined according to different criteria that describe the character of the firms as well as their links to each other and to the particular socio-economic environment represented by the 'furniture town' Swarzędz.

Table 9.2: Key features of the firms examined in Swarzędz (1997)

Firm	Year of establishment*	Legal Form	Main product	Number of staff
SFM	(1920) 1946	Public limited corporation	Furniture	2,600
Q	1976	Sole proprietor	Upholstery	13
R	1956	Sole proprietor	Furniture parts, wooden containers	5
S	1926	Sole proprietor	Period furniture	14
T	1929	Sole proprietor	Furniture, wooden furniture frames	8
U	1936	Sole proprietor	Period furniture	20

*Year in parenthesis shows year of establishment of the predecessor of the present firm

History and present situation

All small firms are registered as sole proprietor companies (compare table 9.2). The history of these firms is closely linked to family tradition and therefore also to the tradition of the furniture trade in Swarzędz. In almost all cases, the owner is also the manager of the company.

Company S exists since 1926. It was established by the grandfather of Mr. S, the present owner, and stayed in the family's possession throughout the socialist era. Mr. S trained as a carpenter in the company as well as at a technical college. Following the death of his grandfather in 1988, Mr. S took over as head of the company. In its entire history, the firm relied only on family funds and no bank loans were taken out. At the time when the present owner took over, the company employed three people. By 1997, the workforce of the firm had increased to 14 workers, from three employees at the time when the present owner took over. The main product of the company is period furniture.

Company U was founded in 1936 by the father of the present owner. After his death, his daughter inherited the firm and took over the management. Her husband, a former army officer who learnt the carpentry trade in the 1970s, joined her in management and supervision tasks. In some instances, they are supported by their daughter who

helps, for example, in the translation from Polish into English and vice versa. Apart from these family members, the company employed 20 workers. Firm U concentrates entirely on the production of period furniture. The company relied only on the private savings of the family for set-up and investments.

The owner of company Q set up his own upholstery business in 1976 after having worked in his father's firm in the same trade for several years. Mr. Q is the sole owner of the enterprise and relied only on family funds for the initial as well as for all expansion investments. In the beginning, Mr. Q was the only person working for his company. However, by 1997, the firm employed 13 people.

The present owner of company R is a carpenter who started the business in 1956, after going through an apprenticeship and working some years as a journeyman carpenter in Swarzędz. In establishing the company the founder relied mainly on his own savings but also obtained a small loan from the agricultural cooperative bank in the town. Firm R produces furniture parts and small wooden containers. The original workforce in 1956 consisted of the owner and one apprentice and had, after an expansionary phase in the 1980s and early 1990s, contracted again to three carpenters and two apprentices in 1997. The idle production space resulting from the contraction of the operation, is now occupied by a new carpentry firm set up by the son of the owner.

The origins of company T go back to 1929 when the father of the present owner set up his own carpentry shop. When the present owner, Mr. T, became a master carpenter himself, he started his own business, although this was closely linked in production with his father's firm. The reason for establishing two smaller firms instead of one larger was the maximum limit on turnover by private firms. In the 1970s, the present owner inherited the company of his father and merged the two workshops. At that time, the new company employed 15 people. By 1997, however, the number of workers had decreased again to eight people, including the owner. Although the company still produces furniture for the end market, the largest share of turnover is generated by the production of wooden frames for a local upholsterer. Apart from a small loan by the local cooperative bank in the 1980s, the funds for

establishing the workshop and any further investment were entirely drawn from the private savings of the family.

Site

All of the examined workshops are located within the built-up area of the town. Also, none of the firms is more than ten minutes' walk away from the exhibition centre of the guild. In most cases, the site combines residential and production rooms, albeit usually in different buildings. The more successful firms apparently had invested recently in the expansion or refurbishment of their production space, whereas the two firms, which had contracted in recent years, have idle production space. In one of these cases, a newly established carpentry firm now occupies part of the production rooms, while in the other case, some space was used by the wife of the owner to set up a small fashion shop.

Product portfolio

Three of the examined companies offer only finished products, whereas the other two shift their product focus more towards the manufacturing of furniture parts and other wooden parts and components.

Two of the more successful firms have specialised in the production of high-quality period furniture, which is usually produced in small series of at most ten units. Frequently, however, the furniture is customised to suit the individual taste of the client. Both firms continually strive to expand the product range that they are able to offer. The third relatively successful firm produces several series of upholstered sofas and armchairs with an average batch size of 60 pieces. The firm does only rarely offer customised products.

The two less successful firms now concentrate on the production of furniture parts, although they both retain the capability to produce also finished furniture. Company R narrowed down its product range to wooden parts and components delivered to other carpentry shops, after it experienced problems with its main product of the 1990s,

customised home bars. Occasionally, the company produces also whole bedroom suites to end-market customers. Company T still generates a third of its turnover through the production of finished furniture. However, the largest share of its production are wooden frames for a local upholsterer.

In conclusion, it seems that the product portfolio of the private firms reflects the economic situation of the firm as seen by its owner. The companies that according to their owner do best offer finished products, whereas the economically weaker firms shift their production towards parts and components.

Workforce and production process

The significance of Swarzędz as a pool of skilled labour becomes clear if the origin and structure of the firms' workforce is analysed. Both work force and the production process emphasise the workshop character of the companies.

All manufacturing staff of the firms examined comes from Swarzędz or the surrounding municipalities and is trained in the carpentry or upholstery trade according to the traditional system of apprenticeship. Also currently, all firms train new apprentices who are expected to join the fully qualified workforce upon completion of their training. In few cases, a nearby technical college for wood technology seems to have played a role in the education of entrepreneurs or members of their family. However, some entrepreneurs reported that it is increasingly difficult to recruit either qualified artisans or apprentices, since after the changes other occupations seem to be financially more rewarding. Thus many young people currently prefer jobs in trade or services. The administrative tasks of the companies examined are mainly done by members of the family of the entrepreneur, but in few cases also by private business service firms in the town.

The product design process differs between the firms. The firms that produce predominantly high-quality period furniture put much emphasis on individually customised products and, thus, put considerable effort in the design. The owner of firm S was trained at a technical college and acquired there advanced design skills.

Consequently, he designs most of the products of the firm, although particular requirements of the customers are taken into account. Firm U, on the other hand, relies on the services of interior designers or on design delivered by the customer. In contrast to that, the other three firms rely on ideas drawn from Western journals or promotional brochures or, in the case of the two firms that undertake subcontracting work, receive detailed designs from their customers.

In the actual production process, manual work with multi-purpose machinery prevails. Due to the high skill-level of the artisanal staff, many workers enjoy relative work autonomy and they are usually able to take over various tasks along the production chain. Some tasks, however, such as carving, are reserved for particularly skilled artisans. Generally, the three more successful firms aim to integrate as many stages of production as possible within their company and make only occasionally use of subcontractors, whereas the two weaker firms practice continuous division of labour with other firms.

Customer-supplier structure and competitors

The suppliers of all firms are wholesalers in, or rather close to, Swarzędz whereas the customers are spread over a significantly larger area. However, there are major differences concerning the importance and the destination of exports. Moreover, also the kind of customers that the firms serve differs from case to case. Whereas some companies cooperate mainly with corporate clients, other firms sell mainly to individual customers.

Generally speaking, the two firms with the highest claim to quality – firms U and S – have significant markets in Western Europe and sell predominantly to individual customers. However, firm S exports almost all of its products, whereas company U sells half of its production to Polish customers. Company Q, on the other hand – as the other firm that offers only finished products – concentrates mainly on the Polish and Eastern European markets but sells also mainly to individual customers. All three firms report that informal propaganda and the exhibition centre of the guild play a crucial role in establishing contacts with potential customers. Also the foreign

contacts are frequently based on personal recommendations. The case of company S is remarkable in so far as the firm exports also to North America and the Middle East. In both cases, the business relations are based on personal contacts as former fellow-students of Mr. S went back to their home countries after completion of their courses at the technical college.

Firms R and T – as the economically weaker firms – again differ in their markets. Company T has exclusively Polish customers, often from the Wielkopolska region, whereas firm R exports 95% of its production to Germany. This might largely be due to the fact that exporting to Germany is easier for Mr. R who is a native German. However, both firms sell mainly to corporate customers, with which they usually have long-term relations. The few individual customers that these two firms have, hear about the firm in most cases through the exhibition centre of the guild. One entrepreneur reported that both firms – like most other local firms – previously had two kinds of customers. The first category consisted of individual customers, usually Silesian miners who used to enjoy relatively high wages, while the second category included the local sales and purchasing cooperative, which again sold the furniture to state-owned shops all over Poland.

Most entrepreneurs interviewed agreed that the relatively recent entry of foreign firms into the Polish market generates direct competition to the local companies. Moreover, the downturn of the Polish economy in the early 1990s as well as a halt of public housing programmes led to a deterioration of the domestic market situation and thus increased the competition also between local firms.

Relations between firms

There are only few input-output relations between the examined firms, but from all interviews it emerged that there are some important links in the productive chain between firms in Swarzędz. However, all entrepreneurs reported that they prefer to have immediate control over the entire production process. Thus firms Q, S and U usually undertake all stages of production from the raw material to the finished

product within the company, whereas companies R and T now focus, although reluctantly, on the production of furniture parts (compare also figure 9.1).

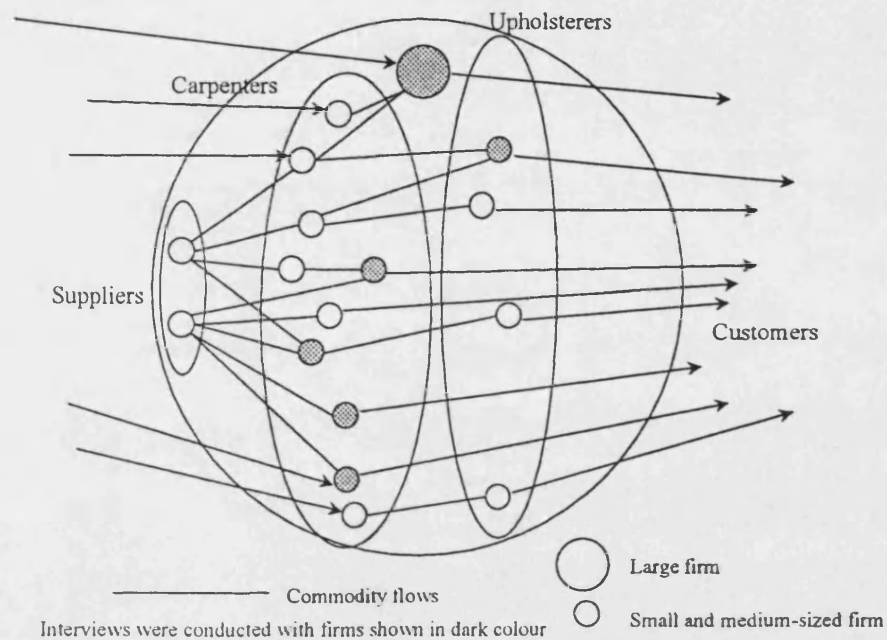


Figure 9.1: The furniture production system in Swarzędz

On the other hand, the regional orientation of R and T is different: R delivers his products to German companies, whereas T cooperates with an upholstery workshop in Swarzędz that manufactures finished furniture. Although the owner of T claims that he has equal rights in this partnership, it is his partner who largely decides on the final design of the products. The two companies differ again in terms of cooperation with other firms in the town, in the case of orders that go beyond the firms' capacity. Thus T advocates and sometimes practises cooperation with other workshops, whereas R expressed his mistrust of other firms in Swarzędz, as he is not convinced of their quality standards. Firms Q and S both cooperate occasionally with other firms in Swarzędz in times of strain on their productive capacity, a practice that according to one entrepreneur is very common among carpenters in the town. However, this applies only for parts of the production chain and the finish is always done by Q and S. In any case, both entrepreneurs are very selective about their partners. S has decided to choose from only two workshops whose quality of work he trusts

completely and Q uses his extensive family relations for finding appropriate partners. Mr. Q quotes as one example his brother who also runs an upholstery workshop and another family member who supplies him occasionally with wooden frames. He describes his cooperation partners as “one big family”. Company U does not cooperate with other firms in production, as this, according to Mr. U, would endanger the quality standards of his products.

Swarzędzkie Fabryki Mebli also plays some role regarding the input-output links within Swarzędz, although this role is not as significant as the size of the company might probably suggest. According to a member of the board of SFM, no workshop in the town has the capacity to supply parts at a scale large enough to satisfy the needs of mass production as performed at SFM. However, for small series, sometimes local carpentry firms are recruited as suppliers. These orders, on the other hand, are by no means continuous and thus there are no workshops in Swarzędz, which rely mainly on the business relation with SFM. Yet there is still a further dimension to the relationship between SFM and the local furniture business community. According to a member of the board of SFM, one of the main assets of the company is the brand name ‘Swarzędz’, which has a high level of recognition in Poland and is widely associated with the production of high quality furniture³. As the manager interviewed acknowledges, this is not only the result of the performance of SFM but is also due to the multitude of furniture workshops in the town.

Relations between companies and guild (Cech Stolarzy)

As SFM is by all standards a large industrial company, it is not a member of the Cech, which is primarily a crafts guild. All other firms examined, however, are long-standing members of the guild and also make use of its services. Thus, the Cech plays a critical role in finding new customers for all firms, regardless of their geographical and structural customer orientation. Most entrepreneurs confirmed that the permanent exhibition in the Cech pavilion is the single most important contact point between producers and customers. Furthermore, all firms are training apprentices and

³ Compare also Wilson 1993, p. 20

therefore have to be members of the Cech, which undertakes the examinations and awards the certificates.

However, there seems to be some disagreement regarding the appropriateness of the general strategy pursued by the guild. Whereas the guild master and some entrepreneurs advocate a marketing strategy focused on the region, other members – the majority of those interviewed – see the urgent need to advertise and show presence on foreign markets. Some entrepreneurs go as far as to doubt whether the long-standing guild master is the suitable person to lead the guild and the local business community through the present, difficult situation. Consequently, two interviewees dismissed the Cech as an ineffective means to pool resources in order to tackle the problems that apparently affect most firms. One entrepreneur in particular was very critical about the general attitude displayed by leading members of the Cech: “These people don’t understand that things have changed”. In his opinion, the representatives of the guild try to resort to state help and cannot adjust to the conditions of a market economy. Another entrepreneur said that arguments among the guild members are not a recent phenomenon but always existed between the independent-minded craftsmen. He says: “The name Swarzędz comes from ‘swar’ – and that means ‘quarrel’”⁴.

Assessment of the general situation

The interviewed entrepreneurs differ significantly in their assessments of the general economic situation and of the role that the state plays regarding that situation. The owners of company T and R agree that the situation before 1990 was better than the present situation as the markets were secure and the entrepreneurs had established informal ways of acquiring enough inputs to sustain their production at a constant level. Both entrepreneurs also emphasise that the new circumstances require substantial investment, which is extremely difficult to finance, due to very high interest charged by banks on loans to small firms. The owner of company Q sees the

⁴ It is noteworthy, however, that some of the examined entrepreneurs frequently referred to each other and, when they learnt that a particular person was also among the interviewees, displayed some detailed knowledge about the respective person’s business situation.

situation as overall balanced. He acknowledges that the changes towards a market economy made it more difficult to secure demand for his products but reckons that this is off-set by easier access to input material and general freedom in business affairs. Entrepreneurs S and U again think that the positive side of the changes outweighed all difficulties by far through the opening-up of opportunities that were inconceivable before 1990. Entrepreneur S sees the main problems for small private firms as related to the mentality of the owners. According to his experience, those firms suffered most that were not actively looking for markets outside the region but instead became mere subcontractors for other local firms. One example for such business behaviour – according to Mr. S – are those carpenters that specialised entirely in the production of wooden frames for local upholsterers. However, all entrepreneurs interviewed agree that the relations to banks are difficult and that credit for small firms should be cheaper and more easily available.

In relation with the central government, most entrepreneurs complain about the high burdens of social security and tax payments. Moreover, they do not feel any concrete support for their firms. As one example, one entrepreneur mentioned the access to EU funds, which appears to him as impossible for small firms. On the other hand, one entrepreneur showed satisfaction concerning the recent control of inflation by the central government, which improved much the situation of his business, whereas another firm owner said that the “situation is now more predictable”.

The attitudes towards the local authorities ranged from “they don’t help, but they don’t disturb us either” to complaints about the tax levels and the general inactivity concerning the economic crisis that many of the local firms experience. The tax system in particular attracted much criticism as the local tax is levied according to commercially used space, regardless of the business situation of the respective enterprise. In general, relations to the local authorities did not seem to be a matter of high importance.

The embeddedness of inter-organisational relations

The firms examined in Swarzędz represent a much more complex system of interrelationships between actors in the town. However, it is justified to draw conclusions concerning the entire system from these cases, since they exemplify different situations that can result from the impact of the socio-economic transformations in Poland. In the following analysis, the four basic features of inter-organisational networks will be dealt with in turn.

The fact that all owners are literally neighbours and also are tied together in the Cech, constitutes the framework for a generalised expectation of reciprocity. The relative immobility of the physical assets of the carpentry workshops generates a long-term perspective of all interactions between the local economic actors. Any major malfeasance by an economic actor would lead to the destruction of his reputation and would possibly exclude him from the business community. However, this situation does not resemble Axelrod's scenario of previously unacquainted actors who are cooperating on the basis of economic behaviour (Axelrod 1984). The principle of reciprocity in the town is likely to be rooted in the social sphere and from there also penetrates the business sphere. Many contacts between individual artisans in Swarzędz are primarily based on kinship and neighbourhood relations rather than on concrete business connections. Another contact point is the local guild, in which most of the carpenters are compulsory members because of the training of apprentices. Again, social and business sphere cannot be separated in this institution, so that any misconduct in one sphere could also lead to negative consequences in the other.

Secondly, the long-established tradition of artisanal furniture production in Swarzędz has also led to wide-ranging mutual adaptation. The fact that most of the carpenters were trained according to the same standards, and maybe sometimes in the same workshop, creates an extraordinary standard of mutual professional acquaintance. In the socialist period there seemed to be little concrete business cooperation between the firms, since virtually all firms were end market suppliers, although occasionally firms cooperated for larger orders. Generally, it can be assumed that the quality standards of an individual firm were known across the town. The exhibition centre of

the guild also contributed to this transparency of product range and product quality of the associated firms. Furthermore, the guild created some common interests of the local furniture firms in representation vis-à-vis the state. Especially the older artisans also share the experience of the socialist era and the accompanying problems for small private firms. Apart from the guild, the purchasing cooperative 'Jedność' generated interdependencies in the period between 1939 and 1996. On the other hand, the bankruptcy of the latter might indicate some change in the pattern of interdependence. The improvements in the supply situation after the systemic changes in Poland rendered the purchasing cooperative redundant. At the same time, new patterns of cooperation emerged, as fewer firms are able to find end-market customers. In the examined cases, the economically weaker companies have now specialised in the production of components, whereas the more successful firms sporadically subcontract production tasks to other local firms. However, not all subcontractors produce for local firms, but, for example, firm R subcontracts from a German carpentry shop. Yet, the cluster of more than 1,300 furniture manufacturers in the town generates further interdependencies. The most important factor here seems to be the pool of skilled labour in the town and its immediate surroundings. Also, after the changes of 1989, wholesalers for carpentry requirements were established in Swarzędz, extending the local system of production further up the value adding chain. Recently, however, the specialisation of the local labour force seems to be eroding. More profitable commercial activities, mainly in trade, attract a significant part of the younger people in the town who previously might have taken up an apprenticeship in carpentry or upholstery.

Although the furniture manufacturers in Swarzędz are linked through a common tradition, and a cooperative body, their relationship could still be considered as 'loose coupling'. The bankruptcy and subsequent abolishment of the purchasing cooperative 'Jedność', after changes external to the local system, is one example for changing patterns of interaction in the town. Furthermore, the debate in the guild about an appropriate strategy for the future indicates that the business community as a whole has not become locked into the same way of thinking. Also the newly emerging patterns of cooperation, such as increasing subcontracting, do not seem to lead to a general lock-in. All of the examined firms maintained a variety of products and

therefore did not become dependent on a single customer or product. Company R even dissociated itself from the local productive system and cooperates only with foreign firms. Furthermore, although the locally cooperating firms have preferences concerning their partners, there appear to be no written contracts between them. On the other hand, some carpenters in the town apparently experienced a lock-in of a subcontracting relationship by tying themselves entirely to local upholsterers. Many of these firms subsequently ceased to exist. Some of the more successful firms, however, have started to establish links with foreign markets and thus might disseminate design and market information through the existing 'weak ties' into the local productive system.

The power structures among the furniture producers in Swarzędz are not easily discernible. Although SFM is the only large firm in the town, it is only marginally tied into the local productive system and therefore is not a dominant force in the business community. The local guild, on the other hand, represents a more important power factor in the local productive system. Although membership is not generally compulsory anymore, the carpenters of the town might feel compelled to enter the guild, since it is the official body that conducts the examinations for apprentices and also constitutes an effective marketing instrument. However, the formal authority of the guild master does not seem to translate into a real power position, since he faces strong opposition in the guild as well as from former members that quit after 1990. The probably best indication of real power is the economic situation of the companies. The stronger firms have started to subcontract tasks to other local firms and clearly determine design and quality standards in this kind of cooperation. On the other hand, even the owner of one of the examined economically weaker firms, which cooperates within the local system, is at pains to stress the independence from his cooperation partner. It is difficult to assess to what extent this claim is based on the subjective perception of the owner or it actually reflects reality. In any case, the fact that the same company also produces furniture directly for the end-market indicates that it is not powerless in the relationship with its partner in production. Generally, all interviewed entrepreneurs gave the impression of rather independent-minded artisans who place great emphasis on their economic autonomy. Since cooperation in production is frequently based on family or friendship ties, the emerging coalitions of

firms are likely to form distinct entities in the local productive system. Thus, the formation of alliances based on social ties might alter the power structure in the network in the sense that not the influence of individual carpenters is decisive but the number and the performance of firms in a coalition as well as the strength of the ties between them.

The evaluation of the four above criteria generates a picture that bears strong resemblance with the industrial districts of the Third Italy. The fact that more than 1,300 furniture firms are clustered in a small to medium-sized town constitutes a strong localised specialisation, which in turn generates agglomeration effects. Among the externalities are a specialised local labour force, a multiplicity of potential business partners, as well as bodies of formal cooperation such as the guild. At the same time, the absence of strong contractual links between the local firms ensures a large degree of flexibility of the productive system as a whole. Dissatisfied cooperation partners can easily switch to other firms in the town and expanding firms face little difficulties in adding new partners to their base of subcontractors. Again, this flexibility is enhanced by the existence of a common culture, which generates trust and a common standard of expectations.

Also the recent changes in the furniture production system in Swarzędz have their parallels in the Italian case. Dei Ottati (1996) describes the Tuscan furniture district of Poggibonsi and how firms within the district reacted to changes in demand. The firms in Poggibonsi used to produce whole bedroom suites and aimed to integrate as many stages of production as possible within the company. However, a shift in customer tastes and attitudes in the 1980s drastically reduced the demand for the products of the district. As a result, some local firms changed their products from entire suites to modules that could flexibly be rearranged to suit the customers' tastes. This product strategy proved successful and subsequently those companies started to specialise in the finishing and marketing of the furniture, while most stages of production were subcontracted to other local firms, but also increasingly to producers outside the district. Thus, a new pattern of a local vertical division of labour emerged, with some firms becoming mere subcontractors. Parallel to this trend, "enterprise groups" developed, consisting of several firms that are typically tied together by ownership or

kinship links (Dei Ottati 1996, p. 52). Each of the above developments – to some extent – can also be identified in Swarzędz. The external shock of the socio-economic changes in Poland rendered the traditional product strategy of the local firms obsolete. Some of the firms, however, have discovered niche markets, within which they can compete internationally. Other, less successful firms now undertake subcontracting tasks, although in many cases they do not turn into mere subcontractors. There are also some indications for the emergence of ‘enterprise groups’, since those firms, that cooperate with other local firms, expressed their preference for few partners with who a tradition of cooperation exists. In one case, the cooperative links were explicitly limited to the wider family of the entrepreneur. On the other hand, Dei Ottati (1996) stresses the importance of formal institutional support for the adjustment process in Italy, especially in the diffusion of knowledge external to the district. In Swarzędz, this role could be played, for example, by the guild. The guild seems to have maintained some credibility as a cooperative institution also after the systemic changes, despite the criticism of some members concerning the strategy. This dispute, on the contrary, underlines the fact that most members prefer the ‘voice’ option to the ‘exit’ option (Hirschman 1970) in conflict situations. Thus, the Cech would be well placed to take over an active role in the restructuring of the local productive system.

Coping with SME specific problems

The example of the restructuring of the industrial district in Poggibonsi shows, that a local cluster of specialised firms similar to those in Swarzędz – thanks to its particular characteristics – can successfully cope with challenges posed by drastic market changes. But even in the present situation, the situation of the local small furniture producers differs from that of other SME in Poland.

The fact that none of the examined firms is a start-up already eliminates many problems that other small firms in Poland frequently face. They all have a suitable site as well as a reasonable stock of machinery and an appropriately skilled work force. On the other hand, also the furniture firms in Swarzędz suffered from the change in market conditions, due to recession and foreign competition. However, in this

situation, some firms benefited from the existence of the local cluster in that they received orders from local firms that were more successful in the changing market. Although this established some measure of dependence on the pay-morale of the leading firm, the existing social fabric in Swarzędz made the dependent firms less vulnerable than in relation to a large SOE. The main problem of many local firms seems to consist in a lack of marketing skills. The marketing instruments of the guild, such as the exhibition centre or touring exhibition, might help to overcome some of these deficiencies. Also the influx of foreign market information through the firms, which operate successfully on international markets, might help to facilitate the restructuring of the local firms regarding their product portfolio. The main problem area, which cannot be tackled from within the system, seems to be the lack of affordable bank credit, while other deficiencies, for example in accounting and other support activities, appear to be offset by an existing infrastructure of local business service providers.

In conclusion, there are clear advantages of the specialised local cluster of furniture producers in Swarzędz, such as specialised local labour and facilitated information flow. The current weakening of the ties between local actors can indicate either the erosion of the local system or a constructive reconfiguration, maybe along the lines of the Italian industrial districts. On the other hand, some of the local firms had become locked into specific exchange relations and frequently ceased to exist. The outcome of the process will largely depend on the speed with which the local producers adjust to the changes in market demand, which in turn could be enhanced by institutional support by the guild or other bodies.

Chapter 10: A network of commercial activity around the technical university in Poznań

This chapter again presents evidence of informal business cooperation in the environment of a technical university. Since the current general situation of Polish academia was already introduced in chapter 7, this chapter starts immediately with the description of the evidence gathered in Poznań. Subsequently, this evidence will be evaluated both with regard to the analytical categories developed in chapter 2 and to the beneficial potential role that the observed structures of inter-firm cooperation can play.

The units of commercial activity examined in Poznań, which are linked to the technical university, can be grouped in categories similar to those developed in the Szczecin case. The degree of association with the university ranges from those staff members of the technical university who undertake spontaneous commercial projects over a firm that is run by two active academics to those companies that have no formal association with the academic sphere any more. Among the firms interviewed, company X represents the second category whereas companies V, W, and Y belong to the third group. However, as shown in the following, the technical university constitutes not the only hub in the relationships among the examined companies. Companies X, V, and W are also connected to each other in some kind of cooperation, with V playing a dominant role.

The technical university of Poznań (Politechnika Poznańska)

The tradition of the Politechnika Poznańska goes back to an academy for machine construction, founded in August 1919. This academy was merged in 1940 with a similar institution specialised in electrical engineering and subsequently formed the technical university in Poznań. In 1997, the Politechnika Poznańska had 9,800 students in six faculties. These faculties include civil engineering, mechanical engineering, electrical engineering, technical physics, chemical technology, and machine and vehicle construction.

Commercial relations between the technical university and firms in the region exist since 1990. In the search for additional financial resources, several departments at that time started to accept orders from companies for applied research or training. Among these departments, the institute for computer science at the faculty for electrical engineering proved to be the commercially most successful one.

The regulations concerning commercial activities at the university were subject to frequent change. The arrangement in mid-1997 required that projects with business partners have to be initiated by individual members of staff. These academics in return would then receive a percentage share of the revenues. Other members of staff can join the project and will receive a payment that is negotiated between them and the initiators. All work for the project is done as over-time work and the university receives a share of about 20% of the revenues for the use of rooms and equipment. This share is subsequently redistributed among the departments according to a certain scheme that, however, does not take into account the differing levels of commercial activity among the departments.

In the past, the institute for computer science had three different groups of clients. The first group consists of government agencies that asked the institute to link their separate administrative units into one computer network. A second group of clients, also from the public sector, were hospitals that ordered information and cost-monitoring computer systems. Trade companies, finally, account for the third group. They also approached the university with computer networking problems. According to the member of staff interviewed, these activities are rather demand-led in so far as the clients typically approach the institute and also define the concrete product.

Companies in the Politechnika environment

This section will look at several features of the individual firms, such as ownership structure, structure and origin of the workforce, as well as their customer-supplier relations and the organisation of work within the firm and with subcontractors. The next step will be to look at the relations between the firms and the relation of each company to the technical university. Subsequently, attention will be paid to the links

between the companies on the one hand, and the local authorities and the business support structure on the other. Finally, the relational structures linking firms and technical university will be analysed according to the embeddedness concept, paying also attention to ways in which embeddedness improves the business situation of the individual firms.

Table 10.1: Key features of the firms examined around Politechnika Poznańska (1997)

Firm	V	W	X	Y
Year of establishment	1989	1992	1992	1991
Legal form	Limited liability	Limited liability	Limited liability	Limited liability
Main product	Integrated computer systems	Corporate software	Engineering software	Network software
Number of staff*	50	7 (14)	5 (8)	15

*Number in parenthesis shows total workforce including part-time workers

History and present situation

The examined firms are all active in related fields and differ only little in terms of legal form (compare table 10.1) and origin of the financial funds needed for founding the companies. Also the history of their establishment is very similar, due to the common background of the owners. However, they differ in the time of the establishment and in the current position of the founders.

The origins of company X go back to 1992, when two lecturers at the Politechnika Poznańska decided to set up their own company to utilise their knowledge of an advanced – but in Eastern Europe rare – software package for the analysis of engineering structures and processes. The company is the exclusive Polish representative for the American producer of the software package. Apart from consultancy and training on that package, the company also offers small software developments, which serve to adapt the programme to the individual user. Both partners of X were at the time of the interview still employed at the technical

university and made extensive use for their commercial purposes of both university space and facilities. By 1997, the size of total workforce had reached five people.

The company with the earliest date of establishment, firm V, was set up in 1989 by three scientists at the technical university who decided to utilise their knowledge of a computer operating system. The start-up capital was accumulated, partly after the formal foundation date, by selling individually imported computer hardware. Banks played no role in financing either the establishment or any further investment by the company. The company moved gradually away from trading into the production of integrated computer systems, which now form its main product. Firm V occupies and owns a modern, purpose-built office building in the eastern outskirts of the city. In 1996, the company helped a former employee to establish a software company by contributing 50% of the required capital. This new firm, however, bears the same name as V. At the same time, a further company was established that deals with the on-site installation of V's products. This firm is fully-owned by V. Without these two new companies, the workforce of V in 1997 comprised 50 employees.

Company W was founded in 1992 by an assistant programmer of the technical university who had developed application software for institutions of higher education. In addition, W also started producing corporate software, which by 1997 had become the main product of the company. In the beginning, the founder relied only on his own savings which, however, were subsequently supplemented by the personal financial contribution of four new partners who joined the company in the years between 1992 and 1996. Three of the new partners are former lecturers at the technical university and one partner was previously employed at the Adam Mickiewicz University in Poznań. By 1997, apart from the five owners, two more full-time employees as well as seven part-time staff were working for the company.

Also company Y was set up in 1991 by academic staff of the technical university, although its founders are not working for the technical university any more. The firm produces customised computer software that supports network applications. As for the other companies, the founders of firm Y did not receive any bank loan for the establishment for the start-up, but relied entirely on private savings. The size of the

workforce of the company increased in the first six years of its existence from two to 15 people.

In essence, all firms are owned by private individuals with a professional background in academia. Whereas in most cases the owners concentrate on the work in their companies and have no other occupations, one firm is different in so far as the owners are still full-time employed at the technical university. All managers interviewed judged the business situation of their respective firms as 'satisfactory' or 'good', despite the frequently stated strong competition in their markets. It worth noting that the financial resources needed for starting the companies and for providing investment stem entirely from private savings and no financial institutions were involved.

Technology and products

The product portfolio of all firms appears to be closely related with the academic background of the owners of the firms, as all firms are active in computer-related fields. The main product of V is the production of integrated computer systems. However, after the spin-off of the software firm, some products were created that are not directly related to system integration. Furthermore, the company also set up a training centre that offers courses on UNIX and related systems. All these recent extensions of the product range, however, are closely related to the core activity. From the start, the owners intended to shift the firm's product focus away from hardware sales and production towards software development, as this, according to the marketing manager, requires more specialised knowledge and therefore places the firm in a better competitive position. There are also differences in the time that the development and production of hardware, respectively software systems require. As a result of that, V manages to complete more hardware than software projects per year. For the development of software as well as for the design of systems and training purposes, state-of-the-art computer equipment is used. The actual assembly of hardware components and the installation of systems, however, is done manually. The company aims to achieve the certification according to ISO 9000 in the near future.

Company W develops new software products, but also offers modifications of existing programmes that are structured on a module-basis. The product with the highest original input remains software for institutions of higher education. However, the most important products in terms of share of turnover are software developments for corporate clients. All products are highly customised and in their specific form produced only once. The company owns several workstations and PCs for the in-house software development but also works on the mainframe computers of some customers.

The product range of company X is centred on a software package for the analysis of engineering structures and processes. Apart from consultancy and training on this programme, X also offers small software developments that tailor the software to meet exactly the requirements of the client. Due to the complexity of the software application, X has to operate advanced workstation computers. However, in many cases the company uses computer equipment of the technical university, especially for the development of new software components.

Company Y offers computer software that supports network applications. Although the management regards the firm as a single-product enterprise, it agrees that the actual version of the software which is installed on the customer's computers is very much tailor-made to suit the specific needs of the client. For the future, the management intends to expand its product and service portfolio considerably in order to suit a broader range of demands of their existing customers. Y operates modern desk-top computers on which it develops its products.

In conclusion it can be said that with regard to the examined companies, the border between production and service companies becomes blurred. All companies produce software products, which, however, are often only modifications of existing products. There is in all cases a strong, though to varying degrees, emphasis on services that accompany the product. This also underlines the high degree of customisation of the products.

Workforce

The examined companies all exhibit a similar structure of their workforce, although they differ considerably in size. This difference seems also to influence increasingly the recruitment strategies of the firms. Thus, the by far largest company, firm V, undertakes first steps to move away from the hitherto informal recruitment process. The contacts to most employees of the present staff, which consists to about 90% of university graduates, were established through personal contacts between the owners and people at the technical university. However, for the future, the management plans also to make use of 'head-hunters' to get staff with both technical and managerial expertise. This step was made necessary by the growing size of the firm, which requires more professional managerial skills. Up until now, the management put more emphasis on the general compatibility of a new employee with the character of the firm than on specific expertise. As the marketing manager of V puts it: "The character of the employees is most important". He also reports that the only motivational problems relating staff had been experienced with administrative staff.

The other three companies – firms W, Y, and X – also employ mainly graduates, who, however, are entirely recruited through personal contacts at the technical university. The advantage of this practice becomes especially clear in the case of firm X, since the Politechnika uses for teaching and research purposes the software package on which business of the firm is based. Thus, new staff at the company is already acquainted with the main product and does not need lengthy initial training periods. On the other hand, although personal contacts at the technical university are the medium for recruitment, not all new staff comes directly from academia. In the case of firm W, for example, the part-time staff works mainly for other companies in the sector, but the original contact between the owners of W and the part-time employees were established at the Politechnika.

In general, all companies employ mainly university graduates with relevant technical degrees. Usually, the management of all companies expects new recruits to have a high level of specialised knowledge already at the time of entry into the company. In

terms of recruitment, personal contacts between managers and people in academia appear to play the most important role.

Customer-supplier structure

All of the firms examined in this chapter seem to have a rather diversified customer structure, with the possible exception of company V, which relies to more than 50% on orders from a single corporate client. According to the location of their customers, the companies can be divided into two groups. Firms V and W prefer local customers as this facilitates the necessary cooperation in delivering and servicing the firms' products. At present, however, firm V finds some of its customers in Lower Silesia, but the management plans to shift its focus entirely towards the Wielkopolska region. Both companies also stress their aspiration to develop long-term relations with their customers, in which the initial delivery and installation of the product is succeeded by servicing and maintenance agreements. Company V is actually one of the customers of firm W, in the sense that W acts occasionally as a subcontractor to V. Furthermore, smaller orders are frequently directly passed on from firm V to firm W, without V charging commission. Apart from these and other corporate clients, firm W has also customers among the local universities which, however, do not include Politechnika Poznańska. Firm V, on the other hand, occasionally receives orders from the Politechnika.

The two other firms, companies X and Y, operate on the national market. This is due in the case of firm X to the specificity of the product and thus to the limited local market. Most customers of X are in academia, i.e. Polish technical universities. However, there are also some corporate clients, such as the Polish subsidiary of a large international engineering firm. These two groups also differ in the way they come into contact with X. Whereas corporate clients contact X after hearing about the software product through newspaper ads, the academic clients rather learn about the product through academic conferences. Like firms V and W, also firms X and Y prefer to develop long-term relations to their customers.

The suppliers of the companies examined typically are Polish subsidiaries of Western firms which deliver standard products. Nevertheless, long-term relations with these suppliers were judged to be essential by the managers interviewed, since the accumulation of specific knowledge is typically linked to an extended use of those products. This is also illustrated by specialised staff training courses provided by these suppliers. Company X has developed a particularly close link with the American producer of the engineering analysis software on which the business of X is based. This firm is a medium-sized software house that maintains a European network of representatives and has selected company X as the Polish representative. Thus, X is entitled to issue to Polish users licenses for the above software product. Apart from those foreign companies, which are mainly located in Warsaw or other major cities, there are few local firms that act as suppliers. An exception is again firm V, which supplies hardware to firms W and X, both for their own production purposes and for their respective customers.

The production process

The internal organisation of work is rather similar between the firms, since in all cases the staff is organised in project teams. These teams as well as the individual worker enjoy a significant degree of independence and work autonomy, which is possibly due to the generally high level of skills among the workforce. The organisation of work in company V is more complex than that in the other firms, as it frequently passes on tasks to subcontractors, which are either subsidiaries of V or closely related companies such as firm W. This complexity in turn has led the management of firm V to considerations to abandon the principle of autonomous work teams and to introduce more elements of hierarchical supervisory structures into its organisation.

On the other hand, the relative autonomy of working groups and individual specialists appears to be intrinsically linked to the interactive adjustment process between the firms examined and their clients. Typically, after the order for a customised product has been received, specialists of the project team undertake an evaluation of the actual situation of the client. During and after the production and installation of the product, there is a continuous adaptation process between the original product plan and the

ideas of the customer. Thus, the ability of their specialists on the site to respond to arising problems or customers' requests adds much to the flexibility of the examined companies.

Relations between the firms and to the technical university

As mentioned earlier, most of the owners of the firms examined share the same professional background as academic staff at the institute for computer science. However, whereas company X is owned and run by two full-time academics, the owners of V, W and Y are no longer employed in academia. In the case of firm W, an academic from the Adam Mickiewicz University joined in, being the only owner who is not closely associated with the institute of computer science at the technical university.

The academic work of this university institute appears to have provided all the owner-managers with the expertise that was utilised in setting up their companies. Two managers interviewed stated clearly that the founders intended to derive commercial benefits from their specific knowledge and, since the main field of activity of all firms is the development of software, it seems fair to assume that this is also true for the other companies examined. Apart from these impersonal knowledge ties, there are also inter-personal links between the owners that originate in the common academic background. Personal contacts of this kind not only link the firms together but also keep the bond between the firms and the technical university, which does not exist on an institutional basis. One manager described the relation between him and academics of the Politechnika as "friendship". The owner of X, who still works as a full-time lecturer, thinks that the technical university as an institution is "indifferent" to the commercial activity of its current or former employees.

The inter-firm links appear to be particularly strong between firms V, W, and X. Whereas the first firm contacted just gave names of further relevant interviewees, the manager interviewed at company V personally arranged the meetings with the managers of firms X and W. Subsequently, the managers of companies X and W also referred to the owners of V as "good friends". These personal ties might also explain

the existing cooperation between the three companies, which takes the form of dyadic relationships between V and W on the one hand and V and X on the other. W occasionally serves as a subcontractor to V, whereas X purchases some hardware components from V and joins V also at trade fairs in exhibiting its products on V's stand. The owner of X also reported that V assists him in obtaining information about potential suppliers. This is even more remarkable, as there is no obvious commercial advantage for V in providing this particular assistance. However, between these three companies and Y no direct formal or informal business relation could be identified.

The personal contacts to the technical university are utilised in a number of ways. The most important one again seems to be the role that the university plays in the recruitment process of the examined firms. All interviewees stated that a large proportion of their workforce is recruited from the technical university through the existing personal contacts. Firm X is the most extreme example in this context with all technical staff coming from the Politechnika. Following the example of their employers, some of the newly employed workers continue to work for the technical university. Furthermore, the Politechnika also served as a host for the development of personal relations, which can still be utilised for recruitment purposes, even if none of the persons involved is active at the university anymore.

The current transfer of technical knowledge from the university to the firms seems to be limited. The manager interviewed at V sees no possibility of how the technical university could serve as a source of technological knowledge to his firm, because he sees his company as technologically more advanced than the academic institution. Although companies W and Y did not argue along those lines, they also reported that they currently receive no knowledge transfer from the technical university. This, however, has to be qualified in so far as all companies, as mentioned before, recruit new staff from the technical university, which might well be a way of informal knowledge transfer. The case of firm X again is different: All products of the company are centred around a software package that was first introduced at the university and the owners as well as some workers of X use this programme, and the relevant equipment, for both commercial and academic purposes.

The connection between the business and the academic spheres also proves to be of some significance when it comes to the customer structure of the examined firms. Companies W and X find many of their customers in academic institutions, firm X even most of its clients. Although the technical university in Poznań is not among those, the owners of both companies confirmed that their personal contacts to the Politechnika helped in establishing business relations with other academic institutions. Company V also has clients from the academic sphere, including the technical university in Poznań, which, however, do not constitute a major group among V's customers.

Relations to business environment and local and regional authorities

Generally, there appear to be few contacts between the entrepreneurs and local or regional authorities. The attitudes of the interviewees towards the local government are restricted to the perception of the municipality as a tax collector. However, most entrepreneurs acknowledge that generally the framework for economic activity has been constantly improving on all legislative levels. Whereas company V, although it is reluctant to take the initiative, expressed its willingness to cooperate with the authorities, all other entrepreneurs did not see any potential need for such a cooperation.

None of the firms examined is a member of the local chamber of commerce. Again, whereas firms W, X, and Y ruled out any membership for the foreseeable future, the manager interviewed at company V regards the chamber as a useful institution, but said that until now it did not seem to be necessary to join. However, the owners of firms W and X are members of specialised associations related to computer science. Apart from providing technical advice, these associations also assist their members in tax and legal matters.

In summary, one can say that the links between the examined firms and those institutions that typically represent local business support infrastructure, are not very strong. None of the firms has any contact to either the chambers of commerce or to one of the initiatives set up with the cooperation of local or regional authorities.

The embeddedness of inter-organisational relations

The relational structures involving the firms examined as well as the Politechnika Poznańska resemble those found around the technical university in Szczecin. However, the relations between some of the companies examined are stronger than in the latter case, since actual business cooperation exists. Therefore, the four basic features of inter-organisational networks according to Grabher (1993a) are more pronounced.

The underlying social ties between the owner-managers at least three firms are bound to generate some expectations of reciprocity. Since the managers of companies V, W, and X see each other primarily as friends, considerations other than pure profit maximisation appear to play a role. The observed relational patterns here suggest that the relatively new business links were embedded in pre-existing social relations. A case in point is the relationship between firms V and X. V supports X by providing information about potential customers and by sharing exhibition space at trade fairs. This kind of behaviour by V can only be explained by the principle of reciprocity, as V and X operate in different fields and there is no obvious benefit for V in cooperation with X. Also the relationship of firm V to firm W can be interpreted along similar lines, since V passes on orders to W without deriving any immediate commercial benefit. Concerning the relationship with the technical university, links of a similar kind exist. All managers interviewed reported that they maintain social ties with researchers at the Politechnika, many of them being former colleagues. Furthermore, the owners of X are still employed as academic staff at the technical university and also partly work with equipment provided by the academic institution, thus generating a particularly intrinsic link. These long-term ties constitute the framework in which all other interactions between companies and the Politechnika must be interpreted.

On the other hand, the importance of the technical university as a source for new technical staff and as a customer for some of the firms' products generates in itself a long-term perspective of the relations between academic institution and the firms

examined. Finally, all firms also stress that they seek long-term relations with their customers, thus creating new potential for reciprocity expectations. In this case, however, it is more likely that commercial ties become superimposed with growing social ties.

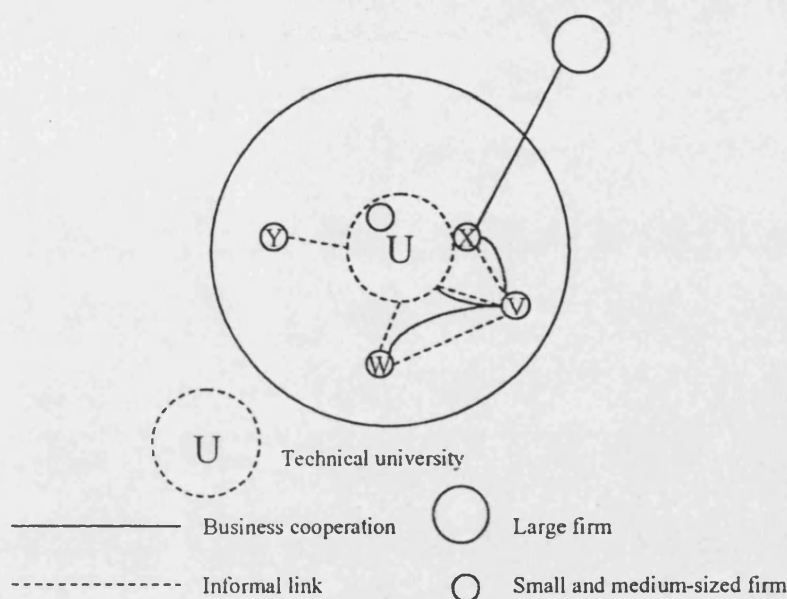


Figure 10.1: Economic activity in the environment of the technical university of Poznań

As in the similar case in Szczecin, mainly the common academic background of owner-managers and researchers shapes the basic characteristics, which could encourage increasing interdependence between the actors examined. The cooperation of the owner-managers as colleagues at the technical university, sometimes even at the same department, will have created a similar stock of technical knowledge and established common problem solving routines and procedures. The personal acquaintance of – and friendship between – the involved persons has generated a higher level of trust than could be found between unacquainted individuals. Three of the examined firms could be identified as having entered commercial interdependence on the basis of these trust-enhancing features. The business relational structure

between these firms has taken the form of two connected dyads with company V being the pivotal element (compare figure 10.1). The two firms, which rely on each other in a subcontracting relationship, have developed to some extent mutual dependence, whereas the relationship between V and X is more informal and no obvious commercial dependence of V on X could be identified. Thus it is likely that in the latter case, the interdependency crosses from the business into the social sphere. However, the development of mutual orientation is not limited to inter-firm relations. Since the common stock of knowledge, the common routines and codes of behaviour of the examined owner-managers originate from their time as academic staff at the technical university, they also share a similar basis with current staff at the Politechnika. This is particularly obvious in the case of those entrepreneurs who still are active in academia. Their company also relies partly on equipment provided by the technical university. Furthermore, all firms use the Politechnika as a pool for appropriately qualified labour. In this case, it is the insider knowledge of educational quality and focus that encourages that link. Moreover, one manager stressed in particular the importance of a general compatibility of new staff with the corporate climate of his firm, which is enhanced through the common academic background of current and new staff. The technical university, on the other hand, benefits, because – according to one of the managers interviewed – some companies have more up-to-date equipment than the academic institution. Thus students on internships in these companies constitute a means of immaterial technology transfer to the academic institution. Moreover, the Politechnika as well as academia in general also purchase some of the firms' products and thus further interdependencies are created. Again, the academic background of the entrepreneurs is likely to have facilitated the establishment of these commercial links.

The ties between the organisations examined can be described as rather weak, despite the fact that their commercial interdependencies are more pronounced than in the respective case in Szczecin. The strongest link exists between companies V and W, since they form a subcontracting relationship. However, orders from this business connection do not constitute the most important part of W's turnover. The other inter-organisational links involve no further business commitment and thus represent rather loose ties. Firms V, W, and Y operate in similar fields and consequently are

also potential competitors. On the other hand, this also opens up further opportunities for cooperation in order to strengthen the companies' market position. The close connection between firm X and its American partner probably does not constitute a knowledge transfer channel for the entire network, since the US firm is highly specialised in a field that is not closely related with the activities of the other network firms. On the other hand, staff working simultaneously for several companies – such as in the case of firm W – can well constitute weak links, and thus channels for knowledge transfer, between local firms. As in the similar case in Szczecin, the local technical university as an institution is rather indifferent regarding the commercial activity of its current or former employees. An exception to this, however, are the projects that are conducted by academic staff under the roof of the Politechnika. The main interest on the side of the technical university in these cases seems to be the acquisition of additional funds for the university budget. Concerning individual links between the Politechnika and the firms examined, it should be noted that in Poznań less entrepreneurs or staff than in Szczecin work simultaneously at the technical university. However, also in Poznań the Politechnika is an important source for the recruitment of technical staff for all examined companies. As in Szczecin, this kind of connection between academic and business spheres generates positive effects by linking two complementary sets of knowledge.

The stronger ties of this network – compared to the Politechnika network in Szczecin – also introduce different power characteristics into the relational structure. In the triad of relations between firms V, W, and X, company V is the dominant actor, due to its size and resources. From an economic point of view, it decides about the number and size of orders to company W and also is free to cancel its cooperation with X. However, this power position in the business sphere is likely to be mitigated by the underlying social relations, which seem to be at the root of the business relations. Regarding links between the technical university and the economic actors examined, it is difficult to establish evidence about power structures. Maybe the most obvious power relation is that between the technical university and individual academics who undertake spontaneous projects for clients outside academia. The Politechnika as the host of this economic activity has considerable influence over the kind of projects that are conducted and also over the profits that it receives from that

activity. On the other hand, the difficult financial situation of the academic institution shifts the power balance back in favour of the entrepreneurial academics, since the technical university to some extent relies on the revenues generated by these ventures. The influence of the Politechnika is even more reduced in relation to company X. Although the firm sometimes makes use of university equipment, its long-standing relationship with a Western firm has generated a higher level of independence from the university than enjoyed by sporadically economically active academics. On the contrary, since the technical university also uses the main product of the Western company and this product is sold through X, the academic institution to some extent also relies on X. The other three companies are formally detached from the Politechnika and power relations at an organisational level are likely to exist only embedded in the commercial relations. At an individual level, however, the economic wealth of the companies as well as their reported technological superiority will give the entrepreneurs in the relations between academic and business spheres a stronger position, for example that of potential employers. But also in this case, it is difficult to assess to what extent these superficial power structures are moderated by existing social relations.

The above factors taken together produce a picture similar to that emerging in the environment of the Politechnika Szczecinska. The firms examined resemble both in product portfolio and structure of the workforce typical advanced technology firms as described by Allen and Levine (1986) in a survey of 459 high-technology firms in Pennsylvania. However, the observed business cooperation between three firms cannot be termed 'strategic alliance' in the sense of Jarillo's and Sydow's definition (Sydow 1992; Jarillo 1988), since the technological input of firms W and X seems too small as to improve significantly the competitive situation of V as the focal firm. On the other hand, for companies W and X, the connection to V can be helpful to sustain a competitive advantage over their competitors. Generally, as in the case in Szczecin, the size structure of the examined firms in Poznań does not match Grabher's observation of national high-tech networks consisting of at least one large and a number of small enterprises (Grabher 1993a). Also a classification of the above described structure as an industrial district does not seem appropriate, despite the local roots of the companies and the cooperation of firms, which are active in related

fields. The main mismatch in this respect is the small number of firms involved, compared, for example, to a typical industrial district in the Third Italy. However, as in the Szczecin case, parallels can be drawn to the early developments in Silicon Valley, where academics and graduates of Stanford University set up enterprises in order to exploit their specific technical knowledge. The cluster in Silicon Valley exhibits patterns of wide-ranging inter-organisational cooperation, also involving staff other than the owner-managers. Furthermore, Stanford University continues to play a key role in the process of technology transfer and skill development. In Poznań, the flat organisational structures with a high degree of autonomy at the workplace as well as – in many cases – the shared academic background as graduates from Politechnika Poznańska, could enable the workforce of the examined firms to establish patterns of cooperation on lower levels as well. Also the feature of technology transfer through staff movement, which is so characteristic for Silicon Valley, can to some extent be identified in Poznań, since part-time workers for company W are simultaneously employed at other firms in the same sector. The main difference between the case of Silicon Valley and the observed structures in Poznań is the lack of active involvement of the local technical university in the process of setting-up new technology-based firms. The interest of the Politechnika appears to be limited to the direct commercial benefit that it derives from the sporadic economic activity of groups of academic staff. Despite all similarities one has to bear in mind that the financial and technological resources involved in Poznań are by far smaller than in Silicon Valley. Furthermore, the geographical aspect of the customer structure indicates that the network in Poznań has a primarily regional or national orientation.

Coping with SME specific problems

Since all of the companies discussed above fall into the category of small and medium-sized enterprises and are also independent from other larger firms, they are likely to experience problems similar to those of other Polish SME. However, the embeddedness of the firms in the described network structures has the potential to alleviate some of the main problems, which could be one factor explaining the favourable business situation reported by the managers interviewed.

As in the similar case in Szczecin, the most important benefit for all companies is that of past and present knowledge transfer from the academic to the business sphere. All examined entrepreneurs acquired at the Politechnika the technical knowledge that was utilised for the individual business ventures. Furthermore, the firms are able to recruit staff, which already has a high standard of appropriate technical knowledge. In the case of company X, the connection to the technical university also makes it possible to use computer equipment, which otherwise had to be purchased. Thus in this case it mitigates the capital weakness typical for Polish SME. The ties to academia are also utilised to overcome the lack of marketing skills found in many small firms in Poland. The intimate knowledge of the academic sphere in general as well as personal contacts to responsible people at individual institutes of higher education put the examined firms in a favourable position in the competition for orders from universities.

The links between the firms can provide resources to tackle two different problem areas. The smaller firms, which are related to V, find in that relation either a source for additional orders and contacts with potential clients – thus assisting its marketing efforts – or a source for supplier information. Moreover, the informal links between firms spun-off from the same Politechnika department can also lead to a spread of best practice in a number of fields, including administrative matters. The personal acquaintance of many staff members as well as their insight into a number of practices and problems of their respective firms can further facilitate this process.

In conclusion, loose ties prevail in the examined relational network around the Politechnika Poznańska. Although some commercial cooperation has been established, they do not seem to create any danger of a relational lock-in, since all firms involved have also significant contacts outside that relationship. On the other hand, while this improves the flexibility of the system, stronger links would be desirable between the firms and the technical university at an organisational level. Thus, the technology transfer between academia and business sphere could be enhanced if the Politechnika as an institution could be involved in cooperative schemes, such as joint research or commercial projects.

Conclusions

The thesis sought to examine evidence of formal initiatives, which aim to foster inter-firm cooperation, as well as of spontaneously developed informal cooperative structures. Different examples of inter-organisational cooperation from two Polish regions were described and analysed. The formal institutions were assessed according to their objectives and comparable initiatives in advanced-industrialised economies, whereas the cases of informal cooperation were examined against the background of the embeddedness concept, first put forward by Mark Granovetter (1985). The purpose of this chapter will be to sum up and evaluate the findings of the previous chapters with regard to the theory of institutional change by Douglass C. North (1990a), which was discussed in the first chapter. From there, a more general assessment is offered regarding policy attempts to support small and medium-sized Polish firms by forging structures of wider inter-organisational cooperation. Finally, implications for further research in the area will be discussed.

The discussion of two approaches to network analysis in chapter 2 has shown that inter-organisational cooperation cannot only be explained by efficiency gains. The embeddedness concept put forward by Granovetter (1985) emphasises the importance of individual social relations in the construction of economic networks and thus limits the scope for purely economic considerations of inter-organisational cooperation. Based on Granovetter's approach, four basic features of cooperative relations in networks – reciprocity and power, interdependence and loose coupling – were developed. They create two sets of opposite poles between which different network arrangements are possible. The chapter presented high-tech, supplier, and regional networks, which are all at different points between the above poles. Well-researched examples of inter-organisational cooperation in advanced industrialised economies were discussed to illustrate the basic concepts of the three types. While in all examples social relations provide an element of trust, which is necessary for the functioning of network exchanges, relations that are too strong can also lead to the danger of a lock-in of networks. Thus, formal institutions of cooperation can establish 'weak' links to the outside world and deliver the stimulus that is needed to maintain the adaptability of the network.

The thesis then went on to outline the transition-specific context in which Polish private firms operate. After a brief overview over the current macro-economic situation of the country, chapter 3 reviewed the political situation between the end of the Second World War and 1989. It then looked in more detail at the implications of socialist rule for the spatial economic structure of the country and for the agricultural and non-agricultural economy in general. It showed that private economic activity was mainly possible in the agricultural sector, whereas the non-agricultural sector was overwhelmingly dominated by large state-owned firms. After the reforms started in 1989, consecutive Polish governments made efforts to eradicate the formal institutional legacies of the socialist period and to install market economic institutions in a 'shock therapy'. The creation of private property through the privatisation of state-owned enterprises proved to be particularly difficult, due to friction between the new formal institutional framework and the behavioural routines and practices that survived from communist times. Socialist legacies are also decisive in shaping the new spatial economic pattern of the country. Chapter 4 commenced with a review of the private non-agricultural sector under socialism. During that time, private firms were subject to frequently changing legal restrictions, which resulted in few private firms, mainly artisans, being able to operate throughout this period. However, in the second half of the 1980s, foreign investment and private 'economic working groups' were increasingly permitted in Poland, thus introducing a training-ground for entrepreneurial activity. The chapter then went on to show that after 1989 – contrary to the 'top-down' approach through privatisation – the creation of a strong private sector succeeded through a surge of newly established private enterprises. The same chapter, however, also emphasised the problems, which these new firms face in the particular context of the socio-economic transition. The most important obstacles to growth are the restricted access to bank loans, the lack of managerial skills, the bad pay morale of state-owned enterprises, red tape, and inconsistent tax policies, thus constituting problems, which are rooted in the institutional transition. The chapter then went on to examine governmental policies, which aim to tackle these problems, as well as the existing business support infrastructure.

The third part of the thesis was introduced by the description of the research methodology, which restricts the data collection to two Polish voivodships and was underpinned by both the theoretical considerations of chapters 1 and 2 and by the background information of chapters 3 and 4. Chapter 5 commenced by providing historical and economic background information on the voivodship Szczecin in north-west Poland. After that, two public business support initiatives in the region were examined. The regional development agency appears to be under-funded considering the wide range of objectives that the public founders prescribed. Moreover, it competes with some of its service offers against other business service providers in the region, often undercutting their price. Generally, the agency is not yet appropriately tied into the business environment of the region. Also the second initiative, a business incubator, has objectives that are too broad for the available resources. Furthermore, the lack of programmatic focus has led to a very diverse business population, which undermines attempts to foster synergy between the resident firms. Considering its aim to promote the growth of advanced-technology firms, there is a conspicuous lack of formal links to research institutions. Thus, the connection to the broader regional institutional environment seems to be a problem also for the incubator. The rest of the chapter was dedicated to an examination of the regional chamber of commerce, which went bankrupt in early 1997. The detailed description of the chamber was preceded by a review of the concept of chambers of commerce as well as an introduction to the Polish Chamber of Commerce. In Szczecin, a survey among small and medium-sized member firms showed that the general level of satisfaction with the chamber's services was relatively low. The chamber suffered primarily from underfunding, due to low levels of membership and bad pay morale of some members. In addition, the chamber had to compete against similar service offers by other institutions, which are frequently subsidised by governmental bodies.

The sixth and seventh chapters of the thesis examined in detail two inter-organisational networks in the city of Szczecin. The first example is a subcontracting network around the largest industrial company in the region, the Szczecin Shipyard. An examination of the nine local subcontractors and the leading company concluded that the subcontracting firms fall into two categories. On the one hand, there are firms that are locked into the relationship with the shipyard and depend almost

completely on orders and technological information from it. A second group, however, consists of firms that also have links to enterprises in other markets. These companies benefit from their association with the shipyard, which provides an element of market stability and is also a source for technology transfer. Yet, both groups of subcontractors found themselves in a comparatively favourable business situation. The common feature of all inter-firm relations examined is that they were built on previously existing inter-personal ties between the owners or managers of the new firms and responsible people within the Szczecin shipyard. In many cases, the management as well as the original workforce of the subcontractors were previously employed at the shipyard and thus had a wealth of social ties to individuals employed by the shipyard. Due to these ties, the relations between the subcontractors and the leading firm were perceived by the smaller firms to be particularly stable. The second case of informal inter-organisational relations was presented by describing and analysing five firms in the environment of the faculty of electrical engineering at the technical university of Szczecin. After a brief introduction of the current situation in Polish academia, the companies were examined regarding their general characteristics as well as with regard to their links to each other and to the technical university. Although no commercial exchanges could be identified between the firms, social links between the entrepreneurs were maintained after leaving academia leading to a certain level of information flow between the firms. The university plays a role as a customer for some of the firms examined, but also provides a source of appropriately skilled labour. Thus in both cases, the existing social relations between entrepreneurs and to individuals at the academic institution are an important asset of the companies examined, probably contributing to their business success. However, the technical university as an institution has – apart from individual customer-supplier links – no formal links to any of the firms.

Chapter 8 introduced the voivodship of Poznań in historical and economic terms. It then went on to examine a science and technology park in the city, which aims to establish and promote links between local advanced-technology firms and the largest university in Poznań. The park suffers from a largely inappropriate business population as well as from a lack of links to other research institutions in the town, and thus cannot be deemed successful yet. On the other hand, the regional chamber

of commerce in Poznań seems to be in a better position. Although it has achieved only a comparatively low market penetration, it managed to attract an appropriate mix of local companies and also the services of the chamber were well received. The chamber also reported making efforts to help integrate the business support environment in the city. It does not seem to suffer significantly from competition by other public or public-private business service providers.

Chapters 9 and 10 again described and analysed two patterns of inter-organisational cooperation, which developed without purposeful external influence. The first case is that of Swarzędz, a small town near Poznań, in which more than 1,300 firms are involved in the production of furniture. The historical roots of this trade in the town go back more than 100 years and, over time, formal structures of cooperation evolved, complementing the existing social relations among the carpenters. In the present situation of radical changes in the business environment, the formerly strong cooperative fabric of the town seems to have loosened up and also the productive structure within the local furniture sector is undergoing changes. One formal collaborative institution, the purchasing cooperative, ceased to exist and the local guild suffered a considerable reduction in membership numbers. At the same time, there is an active discussion within the guild about the appropriate future strategy, thus indicating the continuing involvement of the local business community in matters concerning the guild. Social ties appear to play an increasing role in the establishment of subcontracting and other commercial collaborative links between local firms. These links can provide important information channels for the spread of best practice and new product ideas into and throughout the local cluster of furniture producers. The second case study of endogenously evolved cooperative structures in Poznań resembles the group of spin-off firms from the technical university in Szczecin. However, it differs from that case in so far as the informal relational structures between organisations, which also existed in Szczecin, are complemented by concrete commercial cooperation between at least three of the companies analysed. These collaborative links were established on the basis of pre-existing social ties that developed at the time when the respective owner/managers were working as colleagues in academia. The three cooperating firms derive direct commercial benefit from those links, which thus might contribute to their favourable economic situation. The technical university as an institution has no formal links

with the enterprises examined, although it encourages economic activity by individual academics. It seems that this policy is based on the motive of raising additional funds for the university budget rather than on considerations of long-term cooperation between academic and business spheres.

The problems of formal institutional imports

The research has shown that formal institutional initiatives, which aim to instigate inter-firm cooperation, encounter considerable difficulties. These initiatives were originally created to overcome problems rooted in a lack of adaptation of behavioural practices to the new formal institutional environment. However, the organisations, which implement these initiatives, suffer as well from contradictions between their organisational design based on Western models and the institutional reality in the transitional context. Moreover, some of the initiatives examined are inhibited by conceptual flaws such as ill-defined objectives and inappropriate funding. On the other hand, economically active individuals resort to the utilisation of social ties to tackle problems specific to the transitional environment.

The theory of institutional change by North, as reviewed in chapter 2, provides some insights that help to understand this peculiar situation. Institutions, according to North, are all constraints created by human beings which structure human interaction. In explaining the evolution and function of such institutions, the distinction is crucial between formal institutions, such as constitutions or laws, and informal institutions, such as socially implicit norms of behaviour, which complement or qualify the former. Usually, both sets of constraints evolve over time and change only incrementally. Yet, formal institutions are modified as a result of purposive action, whereas informal institutions change only through the *de facto* establishment of new forms of interaction, possibly as a result of changes in the formal institutional structure. The fact that formal institutions can be altered deliberately also makes radical or revolutionary change possible. Since in such situations the informal set of institutions, which developed according to the former set of formal constraints, will not change at the same speed, the result are tensions and friction between the two sets. In the long run, an adaptation process sets in, in the course of which both sets of constraints will undergo changes. A consistent

formal institutional framework will then lead to a new evolutionary trajectory of institutional change in which actors who comply with the newly established rules will experience advantages compared to those who act according to different rules.

All the business support organisations examined are based on formal institutions, since they are the result of purposive action. They all aim to facilitate the process of institutional change in Poland by assisting those actors who comply with the new market economic environment, namely private entrepreneurs. Yet – with the exception of the carpenters' guild in Swarzędz – the initiatives are themselves part of the radically new formal institutional environment and therefore do not fit smoothly into the present context. In the interaction of these organisations with other economic or political agents, there are two main areas of friction. The first concerns the relations between the organisations and individual firms, which constitute their target population. By and large, the examined new organisations failed to appeal sufficiently to the group of firms for which they were originally designed. The chamber of commerce in Szczecin appears to have a bias towards large enterprises, whereas the science park in Poznań and the business incubator in Szczecin have business populations which seem to conflict with the aim to promote small advanced-technology firms. The regional development agency in Szczecin focused its activities mainly on the large enterprises in the region and thus neglected the regional small firm sector, which appears inappropriate with regard to the agency's aim of creating new jobs in the voivodship. The chamber of commerce in Poznań managed to attract a membership, which in its structure is similar to comparable chambers in Britain. However, the market penetration of the Poznań chamber, like that of the chamber in Szczecin, is significantly lower than that achieved by chambers in Britain. On the other hand, the carpenter's guild in Swarzędz, as the only institution that evolved endogenously and without a significant break, achieves a much higher level of involvement of the target population.

The second problem area is that of interaction between organisations of the business environment. The regional development agency in Szczecin offers services that compete with those of organisations which are not supported by government funding. The same problem arises with many other foreign or publicly-funded initiatives, such as the information centre of the European Union, and contributed to

the bankruptcy of the Szczecin chamber of commerce. Similarly, the business incubator in Szczecin and the science park in Poznań suffer from the lack of appropriate links to local academic institutes. Although the initiative in Poznań is affiliated to the leading regional university, the focus of this university on the humanities together with the existence of a strong local technical university suggests that links to the wider academic sphere could contribute to a better performance of the science park. On the other hand, the chamber of commerce in Poznań does not face significant competition from public business support bodies and also tries to establish links with other organisations in the local business environment. It is difficult to assess, however, to what extent these efforts have been successful. In this context, it is also worth noting that even the historically developed guild in Swarzędz was not able yet to establish wider cooperative links with the local authorities, which came into existence in the present form in 1990.

The latter problem area can be explained by North's theory in so far as the formal institutions of a transitional economy do not yet constitute an organic whole but were imported from different contexts. New formal or informal institutions are required to structure the interaction between those organisations, which administer and embody the imported set of market economic institutions. The previous central-hierarchical system of state organisations did not encourage any such interaction of public bodies at the same level. Thus, even if formal rules of inter-organisational cooperation are in place, the informal behavioural patterns, which are required to make this interaction meaningful, will still take time to develop. This is also corroborated by a study of Hausner et al. (1997) on the development of organisations active in regional development in south-eastern Poland. These authors report that the "network of links between the institutions under investigation is underdeveloped" and "person-to-person contacts are the only significant form of links" (Hausner et al. 1997, p. 203).

Also the problem of interaction between support bodies and business community can be explained by socialist institutional legacies. Apart from the – perceived or real – poor quality standard of some of the above formal initiatives, the reluctance of private entrepreneurs to become involved with state organisations could be a further reason for their lack of acceptance by the target population. Sztompka (1991) pointed out that the Polish society of the early transitional period maintained a clear

separation of the public and the private sphere, which is rooted in the basic opposition and mistrust of Polish citizens towards state declarations and policies. Interaction in the private domain is characterised by high levels of trust and commitment, whereas interaction in the public sphere is frequently perceived to be subject to double standards. The evidence from the interviews conducted at Polish companies suggests that this has not changed as far as private entrepreneurs are concerned. In general, the interviewees did not regard government at any level as a factor conducive to business activity. The chambers of commerce have the additional disadvantage that a state organisation of a similar name existed in the socialist era, which served to exercise state-control over individual businesses. The legacy of this organisation is one of the main reasons why the Polish business community resists the idea of mandatory membership in chambers of commerce (OECD 1994, Polish SME Foundation 1997). On the other hand, the carpenters' guild in Swarzędz and the set of informal institutions governing the relations between member firms and this association evolved in the historical context of the town and its business community. Although the change in external conditions also triggered modifications of the mode of behaviour and cooperation, these changes start from an established set of formal and informal rules. As a result, the guild has maintained a higher degree of involvement than the new initiatives were able to achieve. Although this is helped by the fact that the guild plays a semi-official role in the training of apprentices, many local carpenters also appreciate the common marketing instruments of the Cech, such as the exhibition pavilion. The current debate regarding a new marketing strategy takes place mainly between members, thus indicating that through the period of its existence the guild was able to develop some kind of informal conflict resolution mechanisms. Consequently, many carpenters in Swarzędz choose to cooperate on the basis of historically evolved institutions, whereas the majority of private firms rejects offers of new formal cooperative institutions in the absence of an appropriate set of informal rules governing the relationship between firms and the institutional business environment. An exception to this is the newly established upholsterers' guild in Swarzędz, which was set up in 1994. This, however, underlines the analysis proposed above, since also the new guild is based on rules and principles that are known to and recognised by the local business community.

The contrast between private and public realms might also lie at the root of the observed preference for long-term relations between companies, often on the basis of pre-existing social relations. Commercial ties, which are maintained over an extended period are frequently through time complemented by social relations and thus have characteristics similar to business relationships that follow pre-existing social ties. In both cases, interaction between companies is attached to the private sphere and consequently leads to higher levels of trust and commitment. This is particularly important in commercial relations, in which a high degree of interdependence between the actors is required, such as in the case of some subcontractors of the Szczecin Shipyard. But also in the other examples, social ties facilitate commercial operations, since business-relevant information is transmitted along lines of personal contacts. This was also confirmed by the findings of the questionnaire survey among members of the two chambers of commerce examined. Thus, informal institutions rooted in the social sphere help to govern economic relations and thus improve the performance of firms in an environment in which no consistent set of formal and informal commercial rules has yet been developed. However, the institutions deriving from personal contacts cannot always yield sufficient means to tackle business problems. Since social ties penetrate the economic sphere only irregularly and can also lead to a lock-in effect of the involved economic ties, they provide no universal governing mechanism but can even create further problems. Thus, although many of the firms examined relied on social or family contacts to obtain the financial means necessary for their establishment, only few companies were able to secure bank loans, which are often essential for major investments. At the same time, some carpenters in Swarzędz find it difficult to change their socially embedded set of rules and norms in the face of revolutionary developments in the socio-economic environment. Furthermore, some of the shipbuilding subcontractors in Szczecin rely on the link to the local shipyard in a way that assists their economic survival in the current situation, but may create problems in case the shipyard experiences an economic crisis.

North in his theory emphasises the limited scope of social ties as a basis for economic coordination and thus explains the creation of formal institutions to facilitate interaction across boundaries of social ties. The experience of the recent restructuring of the industrial districts in the Third Italy provides an example of how

formal institutional business support helped to overcome problems, which could not be solved by the evolved set of informal norms and codes of behaviour (Cossentino 1996). Yet, even in Italy, where these institutional initiatives were introduced gradually and thus allowed for a mutual adaptation process between organisations and the economic and social environment, some projects have encountered problems of credibility in their start-up phase (e.g. Scott 1988). Problems of this sort are likely to be exacerbated in the context of a radical socio-economic transformation, in which almost the entire set of formal institutions and a significant part of the informal institutions have to be changed in a relatively short time.

On the other hand, the transitional economies of East-Central Europe cannot afford to go through a full-length process of institutional evolution, which could take almost as long as it took the advanced industrialised economies to develop their specific institutional sets. Thus, institutional imports can help to speed up the process of institutional development, but only if these imports are not perceived as final versions or perfect blueprints. On the contrary, the necessary adaptation and modification process should be encouraged to prevent institutional initiatives from becoming locked into an evolutionary trajectory which does not fit the social and economic environment. One of the main prerequisites for successful institutional initiatives in Poland seems to be to restore the credibility of public or quasi-public bodies. In the present state of the transformation, interaction in the private sphere still appears to be accompanied by higher levels of trust than in the public sphere. In some instances, it might be possible to utilise relations of the private realm for economic or political interaction, as shown in concrete examples of inter-firm cooperation. The initiatives, for example, that aim at fostering the growth of small advanced-technology firms could benefit from personal links between academics at Polish technical universities and firms that have spun-off from academia. Thus, well-established contacts between executives of support organisations and academics at universities could open up a wealth of new contacts to firms of the organisations' target population. However, no such straightforward opportunity exists for the other initiatives examined. In these cases, networks of social ties could help to facilitate the adaptation process of the business support environment by harmonising objectives and activities of individual organisations. To this end, Hausner et al. (1997) suggest the formation of regional bodies, which bring together representatives

of all organisations important for regional development. The effectiveness of these networks could be further strengthened by more political and fiscal autonomy for Polish regions, since then more of the key actors for regional development will be linked by personal contacts in face-to-face negotiations.

Implications for further research

Several analysts have suggested that the transformation process in Eastern Europe should not only be seen as a transition from a centrally planned to a market economy, but also as a transition from an industrial to a post-industrial society (e.g. Gorzelak 1996). In this context, the emergence of networks of cooperation between small and medium-sized firms in Poland could be taken as evidence of this process, along the lines of Piore and Sabel (1984) who presented the Third Italy as evidence for the 'Second Industrial Divide'. However, since the cases examined in this thesis were identified on grounds of similarity with Western cases, which frequently are cited as evidence of Post-Fordist production, the sample is biased and cannot be taken as a proof that such transition is actually under way. Nevertheless, the question whether the belated integration of the Central and Eastern European economies into the world economy has triggered an accelerated transition to a Post-Fordist mode of production is interesting in itself and worth investigating. The evidence produced in this thesis could feed into such research in providing a starting point for the identification of further examples of flexible small firm networks in Poland.

Furthermore, there are also limitations on the research conducted for this thesis, due to the fact that only few selected cases could be examined. The evidence produced in this work does not allow broad generalisations about the effectiveness of the Polish business support environment. Whereas this thesis suggests that most of the institutional initiatives examined have encountered serious problems in their implementation, more research on other institutions in other regions would be necessary to produce a more comprehensive picture. Furthermore, the provinces examined represent relatively successful examples of restructuring and private sector development. Since the role of public bodies in less successful regions is likely to be of higher significance, research there could produce different results. Moreover, although an attempt was made to take into account the history of formal projects and

informal cooperative structures, the evidence represents the state of affairs in early to mid-1997. Since the transformation process in Poland is very dynamic, only future re-visits of the cases examined can show to what extent the structures presented here were successful. This could also produce a dynamic account of the institutional adaptation process and thus yield more insights into micro- and meso-adjustments in transitional economies.

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APPENDIX

Interviews Szczecin:

Tomasz Adamczyk, Vice-President EPA Sp.z.o.o.	14.3.1997
Janusz Bożek, President Biuro Techniczno Handlowe Sp.z.o.o.	14.3.1997
Wolfgang H. J. Brohm, Director Protection Sp.z.o.o.	19.3.1997
Bronisław Chitrow, Director IPH Szczecin	29.8.1996, 10.3.1997
Zbigniew Cimek, Specialist Business Incubator Szczecin	29.4.1997
Kathy Dehm, Specialist ZARR (Westpomeranian Regional Development Agency)	3.9.1996
Grzegorz Fiuk, Head of Department Department for Geographical Information Systems City of Szczecin	13.3.1997
Stanisław Gaborek, President Meramont, Sp.z.o.o.	2.9.1996
Zbigniew Gackowski, Vice-President Meramont Sp.z.o.o.	2.9.1996
Dr. Jerzy Gajda, City Counsellor City Council Szczecin	13.3.1997
Hanna Galewska, Head of Department Polish Chamber of Commerce, Szczecin	5.9.1996
Arkadiusz Goj, Vice-President, Procurement Director Stocznia Szczecińska S.A.	11.3.1997
Dr. Modest Gramz, Deputy Dean Technical University of Szczecin	2.9.1996
Dorota Iwanowska, Specialist IPH Szczecin	29.8.1996

Marek Kamiński, Consultant Polish-German Agency for Economic Promotion	18.3.1997
Professor Jan Karwowski, Dean Department of Marketing West-Pommeranian Business School	4.9.1996
Dr. Janusz Kulijewicz, Quality Control Manager Optimum Sp.z.o.o.	30.8.1996
Roman Lis, Director Finomar, Sp.z.o.o.	20.3.1997
Andrzej Madany, Sales and Marketing Director Mühlhan Sp.z.o.o.	12.3.1997
Franciszek Makarewicz, President Szczecin Business Club	18.3.1997
Władysław Marecki, President Rotary Club Szczecin	3.9.1996
Zenon Markowski, President Escort Sp.z.o.o.	17.3.1997
Mirosław Matwijow, Director Elektromontaż Szczecin S.A.	2.9.1996
Krzysztof Michalski, Director Business Support Centre ZARR (Westpomeranian Regional Development Agency)	30.8.1996, 10.3.1997
Zdzisław Mikuła, Owner AmiCor	3.9.1996
Jarosław Mroczek, Chairman of the Board EPA Sp.z.o.o.	14.3.1997
Jarosław Mrozek, Specialist EURO INFO Correspondence Centre, Szczecin	2.9.1996
Zbigniew Municzewski, Director ASS Sp.z.o.o.	17.3.1997
Bogdan Olech, Partner Autocomp Sp.z.o.o.	4.9.1996
Andrzej Ostajewski, Owner Ostar electronics S.C.	29.4.1997

Henryk Pająk, Director PCH Sp.z.o.o.	18.3.1997
Stanisław Parczewski, Director and Partner Autocomp Sp.z.o.o.	12.3.1997
Anna Piskorska, Marketing Manager CiRoKo Sp.z.o.o.	30.8.1996
Klaus H.D. Ranner, General Consul General Consulate of the Federal Republic of Germany, Szczecin	11.3.1997
Dorota Rusak, Director Department for International Co-operation Voivodship Szczecin	13.3.1997
Mirosław Szydelski, Director Department of Economic Development and Ownership Changes Voivodship Szczecin	18.3.1997
Maciej Taranda, Vice-President Sabra Sp.z.o.o.	20.3.1997
Alice Thömmes, Economic Attaché General Consulate of the Federal Republic of Germany, Szczecin	29.3.1997
Janusz Wawrzyniak, Owner Wajb P.U.H.	3.9.1996

Interviews Poznań

Henryk Bielawiak, Owner/Manager Pracownia Tapicerska	9.5.1997
Dariusz Kałużny, Chairman of the Board Regional Development Agency in Konin	13.6.1997
Klaus Kloosterhuis, Owner/Manager Wytwarznia Mebli Klaus Kloosterhuis	8.5.1997
Elżbieta Książek, Specialist Poznański Park Naukowo-Technologiczny	6.6.1997
Lech Łangowski, Director Department of Information and Development Poznań City Authorities	5.5.1997
Krzysztof Leraczyk, Marketing Manager Talex Sp.z.o.o.	10.6.1997
Dr. Tomasz Łodygowski, Owner/Manager Budsoft Sp.z.o.o.	12.6.1997
Beata Joanna Łozińska, Specialist Division of International Cooperation Voivodship Poznań	12.6.1997
Arkadiusz Małyszka, Town Clerk City Authorities Swarzędz	8.5.1997
Maciej Matysiak, Assistant Lecturer Institute for Computer Science Technical University Poznań	5.6.1997
Bogdan Nowacki, Owner/Manager Stolarstwo Bogdan Nowacki and Guild Master, Carpenters' Guild Swarzędz	8.5.1997
Andrzej Nowak, Vice-Director FORCOM Sp.z.o.o.	9.6.1997
Dariusz Smoczyński, Owner/Manager PSO Sp.z.o.o.	11.6.1997
Mirosław Sobieszcański Owner/Manager Zakład Mebli Stylowych Jozef Pawlowski	6.5.1997

Dr. Tadeusz Stryjakiewicz, Adjunkt Department of Geography Adam Mickiewicz University, Poznań	5.5.1997, 13.6.1997
Jadwiga Twardowska, Specialist Governmental Centre of Strategic Studies Voivodship Poznań	12.6.1997
Marcin Warzecha, Owner/Manager Miwa-Media	12.6.1997
Krystyna Wasiłowska, Manager Foreign Markets WIPH	7.5.1997
Mr. Mieczysław Wierzbicy, Co-owner/Manager StylArt	7.6.1997
Mr. Paweł Zugaj, Assistant to the Director General Swarzędzkie Fabryki Mebli S.A.	8.5.1997

Questionnaire used in the surveys of members of the chambers of commerce in Poznań and Szczecin – chapters 5 and 8

“Co-operation among Polish enterprises in Szczecin/Poznań”

Dear Madams/Sirs,

This questionnaire is part of a study concerned with the level of co-operation among enterprises in Poland which is being conducted at the London School of Economics, England.

I would be very grateful if you could take the time to answer the following questions which are divided into five broad areas. Please answer by placing a cross in the appropriate box, or where you are asked to write something, by putting down the key points.

1. Customer-supplier links

1.1 Where do you mainly find your customers?

- in the same town
- the same voivodship
- neighbouring voivodships
- Poland
- Western Europe
- Central and Eastern Europe (including CIS)
- all over the world

1.2 For how long do you usually work with the same customer?

- for one order only
- for several orders
- we try to establish long-term relations

1.3 What share of your turnover (approximately) is generated by your main customer? (in percent)

1.4 How many suppliers do you have at the moment? _____

1.5 Where are your suppliers mainly located? _____

- in the same town
- the same voivodship
- neighbouring voivodships
- Poland
- Western Europe
- Central and Eastern Europe (including CIS)
- all over the world

1.6 For how long do you usually work with the same supplier?

- for one order only
- for several orders
- we try to establish long-term relations

2. Specialisation/Range of products/services

2.1 Since founding the company, was there any change in the range of products/services you produce/offer?

- Yes, in products
- Yes, in services
- No, none at all

If you answered "Yes", please describe these changes briefly:

2.2 Do you intend to change the range of products/services in the near future?

- Yes, in products
- Yes, in services
- No, we intend no changes

If you answered "Yes", please give a brief description:

Please answer the following question only if you answered at least one of the questions No. 2.1 and No. 2.2 with "Yes".

Otherwise, please go directly to question No. 2.4

2.3 What are the reasons for these changes in your case? (e.g. concentration on few products in order to strengthen the company's position in the market/new market opportunities/uncertainty or collapse of old markets, etc.)

2.4 What is the percentage of your turnover generated by your main product/service (estimate)?

2.5 What would you see as the main strength of the company? (e.g. quality, unique product/service, etc.)

3. Information flows/Willingness to co-operate

3.1 How do you get information about potential customers?

- trade fairs.....
- personal contacts.....
- business directories
- approached by customer.....
- others.....

If you answered "others", please specify: _____

3.2 How do you get information about potential suppliers?

- trade fairs.....
- personal contacts.....
- business directories
- approached by suppliers
- others.....

If you answered "others", please specify: _____

3.3 Are you looking for a co-operation partner?

- Yes
- No
- Don't know.....

If you answered "Yes":

3.3a How do you get information about potential co-operation partners?

3.4 Which service of the local Chamber of Commerce have you used?

- Information about offers from abroad.....
- Legal certification of documents.....
- Special Training
- Trade missions, organised trips to trade fairs
- Others.....
- None.....

3.5 Were you satisfied with the services provided by the Chamber?

- Yes
- No

If you answered "No", please explain why:

(The following question was only asked in Szczecin¹)

3.6 What do you think is the reason that the services of the Chamber did not attract enough users?

3.7 Would you have been prepared to pay higher membership fees to the Chamber in return for better quality of services?

Yes
No

3.8 Is your firm a member of any other business association?

Yes
No

If you answered "Yes":

3.8a What is the name of the business association?

3.9 Is the owner/manager of the firm member of any club in which business-related information could be exchanged? (e.g. Rotary, Lions Club etc.)

Yes
No

If you answered "Yes":

3.9a What is the name of this club?

3.10 Is there any link between your company and a local academic institution? (e.g.: presently or formerly student/staff, joint projects, student internships with the company, etc.)

Yes
No

If you answered "Yes":

3.10a What kind of contact?

¹ The questions in section 3 of the questionnaire used in Poznań are numbered accordingly, i.e. the last question of the section has the number 3.11, but corresponds to question 3.12 of the questionnaire shown here.

3.11 If your company used to be part of a formerly state-owned enterprise, is there still co-operation with other units of that enterprise?

Yes

No

Does not apply

If you answered "Yes":

3.11a Could you please describe briefly the kind of co-operation?

The following question should assess your personal perception of the situation in the market your company operates in. The given scale ranges from "fierce competition" to "high degree of co-operation". Forms of co-operation could be, e.g. sharing information about idle productive capacity in companies, common representation on trade fairs, several firms bidding together for a contract that is beyond the capacity of a single firm, etc.

3.12 How would you characterise the situation in your market? Please tick the box of the category that comes closest to your own opinion!

fierce competition	rather competitive	balanced	some degree of co-operation	high degree of co-operation	no opinion

If there is any co-operation, can you please describe briefly how it looks like?

4. Information about the founder of the company

4.1 Had the founder (or any of the founders) had any previous experience in this sector?

Not at all

He (they) had his (their) own business in the same or a similar branch.....

He (they) worked in a state-owned enterprise.....

in the same or a similar branch

4.2 What was the previous occupation of the founder(s)?
Please describe briefly:

4.3 If the founder still works for the company, does he have another occupation besides being owner/manager of this firm?

Yes

No

If you answered "Yes":
Please describe briefly:

5. Data about the enterprise

In this section I would like to ask you about basic data of your company in order to be able to classify the results of the survey. Of course all data will be treated confidentially and will be only accessible to the researcher.

5.1 In which year was the company founded? _____

5.1a Was the company part of another company before that date?

Yes
No

5.2 What is the legal form of the company? (e.g. S.A., Sp. z.o.o., etc.)

5.3 Have you raised any capital abroad?

Yes
No
Joint-venture

If you answered "Yes":
Please state country: _____

5.4 Is the company active in manufacturing (as opposed to services)?

Yes
No

5.5 What kind of services does the company offer?

Questions 5.6 to 5.8: Please include self-employed working for the company.

5.6 With how many employees did the company start? _____

5.7 How many people does the company employ now? _____

5.8 How many people are involved in management/administration?

Thank you very much for your co-operation!