

**NETWORK PARTICIPATION AND INTERNATIONALIZATION
OF SMALLER MANUFACTURING ENTERPRISES IN
CENTRAL EUROPE: A CASE FOR RESEARCH**

Paper

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Abstract

Building networks among small and medium-sized enterprises (SMEs) in Central Europe (CE) is a complex issue. Based on preliminary research it is apparent that the managers operating SMEs in that region have a limited understanding of the how and why of industrial networks, or supply networks specifically, operate. Many of the managers find it difficult to expose their operations to their customers. The dilemma faced by the SME managers in CE is their fundamental attitude towards cooperation. The available literature concerning operations of SMEs in CE also suggests that the level of quality and technological expertise needed to participate in some of the supply networks is hard to achieve by the SMEs. Although some of the larger international firms tried to invest in the operations of their suppliers in CE, the results were found to be marginal.

This paper presents a research framework designed to examine the propensities of SMEs in CE to enter into supply networks. The model is also designed to take into considerations the forces found in the external business environment that directly influence the operations of SMEs in CE. The model has two levels. First, the external environmental forces directly impacting the propensity of SMEs to enter industrial supply networks will be identified and integrated. Second, measures needed to assess the managerial propensity to enter industrial supply networks will be identified and examined. The development of this model is part of ongoing research among SMEs in CE. Initially the research approach was based on qualitative case development research. It is anticipated that, in the near future, quantitative research will be conducted among a large number of SMEs in countries designated for entry into the EU in 2004.

Key words: Small and medium-sized enterprises, networks participation, industrial supply networks, internationalization, research framework, Central Europe, EU.

NETWORK PARTICIPATION AND INTERNATIONALIZATION OF SMALLER MANUFACTURING ENTERPRISES IN CENTRAL EUROPE: A CASE FOR RESEARCH

Introduction

This paper addresses the development of small and medium-sized enterprises (SMEs) in Central Europe (CE) since the beginning of the political, social, and economic transitions in late 1989. Its purpose is to develop a research framework suitable for (1) examining the propensities of SMEs in CE, especially manufacturing SMEs, to participate in industrial supply networks and (2) exploring their potential to internationalize. The propensities of CE's SMEs to enter industrial supply networks has been raised recently by several researchers (Report 2000), and their potential to internationalize is important in the light of the EU's pending expansion. In order to examine these two concerns, it is important to conceptualize a research framework appropriate for comprehensive examination of developments among SMEs in CE. A review of both the academic and professional literature indicates that little attention has been paid to either concern—the participation of CE's SMEs in industrial supply networks or their potential for internationalization.

EU expansion and the recent relatively rapid economic growth in CE are generating even greater concern over foreign competition for SMEs in the region.¹ A number of large international firms, particularly those in the automotive and electronic industries, have changed their manufacturing and marketing strategies and are bringing their own supply network partners from outside of CE to this region. In reality, these firms are encouraging their network partners from other geographic areas to expand their operations into CE. Several large manufacturing firms using this approach include VW, Phillips, GM, Procter and Gamble, among others.

¹ The Central European countries expected to join the EU are the Czech Republic, Hungary, Poland, Slovakia, and Slovenia. The other countries that were invited to join the EU are the Baltic Republics—Estonia, Latvia, and Lithuania. The additional countries are Cyprus and Malta. This paper focuses only on CE countries.

This paper presents a research framework designed to examine propensities of SMEs from CE to enter into industrial supply networks. The framework also takes into consideration the forces found in the external business environment in CE that directly influences SMEs' operations. The proposed framework has two levels. First, the forces of the external business environmental that directly impact the propensity of SMEs to enter industrial supply networks are identified and integrated. Second, factors needed to assess the managerial propensity of SMEs' to enter industrial supply networks are also identified and considered. The development of this framework is part of ongoing research among SMEs in CE. Initially, the research approach was based on qualitative, case development research and was later followed by quantitative research. It is anticipated that, in the near future, quantitative research will be conducted among a large number of SMEs in countries designated for EU entry in 2004 (Tesar and Moini 2000).

The main objective of the research framework presented in this paper is to generate constructive discussion of how preconditions for entry into industrial supply networks are formed and what environmental factors influence them. In addition, entry into industrial supply networks is typically perceived by many smaller enterprises as a form of internationalization since many of their customers and network partners are typically large international firms. Reluctance to internationalize is one weakness of many SMEs in CE and appears to be closely connected to their relatively low propensity to enter into industrial supply networks.

Background

SMEs in CE had a very turbulent development shortly after the transition. The entrepreneurial environment was relatively unstable, the political, legal, and ethical climates were evolving, and governments emphasized mass privatization rather than systematic

formation and growth of SMEs² (Boter 1994). During the mid-1990s when the entrepreneurial environment became more stable, most SMEs had already developed an operational perspective and managerial attitude that seemed incongruous with the interests of the larger international firms that started investing in CE and identifying potential network partners. Investors in industries such as automobile manufacturing, consumer packaged goods, small home appliances, or electronics attempted to develop industrial supply networks with local SMEs. Case studies, research among executives, and personal discussions with executives and government officials clearly suggested that the major obstacles in these efforts were the fundamental attitudinal differences in management practices and the inability of the SMEs to supply the quality and quantity of material, parts, components, or subassemblies that their potential customers needed (Tesar and others 2001b). One of the major reasons was that the SMEs were typically not prepared to cooperate with their customers (Tesar and Pribova 1994 and Meyer 2000).

By the end of the 1990s, SMEs realized that they would have to enter into major supply networks in order to survive in the new system. However, they also realized that the local economy had changed substantially and that they might have to give up some control over their day-to-day operations, such as scheduling manufacturing operations, setting delivery times, and that they might even have to make substantial modifications to their products. Some large international customers and network partners also required assistance with the actual development of products and packaging needs. Most of the SMEs were not used to such intimate contact with their customers and network partners. In the late 1990s, the discussions about joining the EU complicated the situation even further for the SMEs and

² A historical note: Although during the first half of the previous century most of the CE experienced a strong entrepreneurial base, both in the industrial and agricultural sectors, central planning during the Communist period that followed did not allow individual entrepreneurial initiatives. The political climate encouraged development of gigantic industrial complexes with specified production objectives. Innovation of any kind, especially entrepreneurial efforts, was discouraged. The central planners were responsible only to the leaders of the Communist party and did not care about entrepreneurial initiatives. The changes after the demise of Communist governments in CE countries launched a relatively free, but unstable, environment in which formation of SMEs exploded.

their concern over foreign competition intensified. Many of the original SMEs were one-product companies looking for a market and many of their products were based on obsolete technology carried over from the pre-1989 days (Tesar and others 2001c).

More recently the SMEs have started to systematically examine alternatives open to them in the rapidly changing market. Some SMEs have embarked on development of market-oriented strategies only in their domestic market while other SMEs have explored export markets. Those SMEs that are attempting to defend their domestic markets face strong competition from abroad (Pribova and others 2003). SMEs that have decided to explore export markets are finding it difficult to export their products on their own and are looking for external partners (Tesar and others 2001a).

A tentative summary of the available literature suggests several general developments that are shaping further development of research among SMEs in CE. First, there appears to be a need for systematic integration of previous studies into a comprehensive research framework for examining similarities and differences among SMEs in CE. More specifically, researchers need to examine those cultural similarities and differences that impact development of managerial practices among SMEs in CE. Second, there is a need to understand how SMEs view industrial supply networks. A review of the literature and preliminary research seem to suggest that SMEs are not only reluctant to join networks of any kind, but they appear to have strong negative attitude towards them. And, finally, SMEs in CE appear to be more concerned about participating in their domestic markets than in expanding and growing into international markets (Hoekman and Djankov 1997).

Recent EU developments are forcing SMEs in CE to rethink their management strategies (European Communities 2000). Many of these SMEs have deeply rooted convictions about their external business environment and their own managerial attitudes that prevent them from taking an active part in these developments.

A Research Framework

Diagram 1 shows the development of a research framework for this study. This framework is based on a series of case analyses describing marketing operations of SMEs and a series of interview conducted among SMEs' managers.³ The framework consisting of environmental forces relevant to the exploration of network participation by SMEs from CE is presented in Figure 1. The factors influencing SMEs' propensities to enter industrial supply networks are presented in Figure 2.

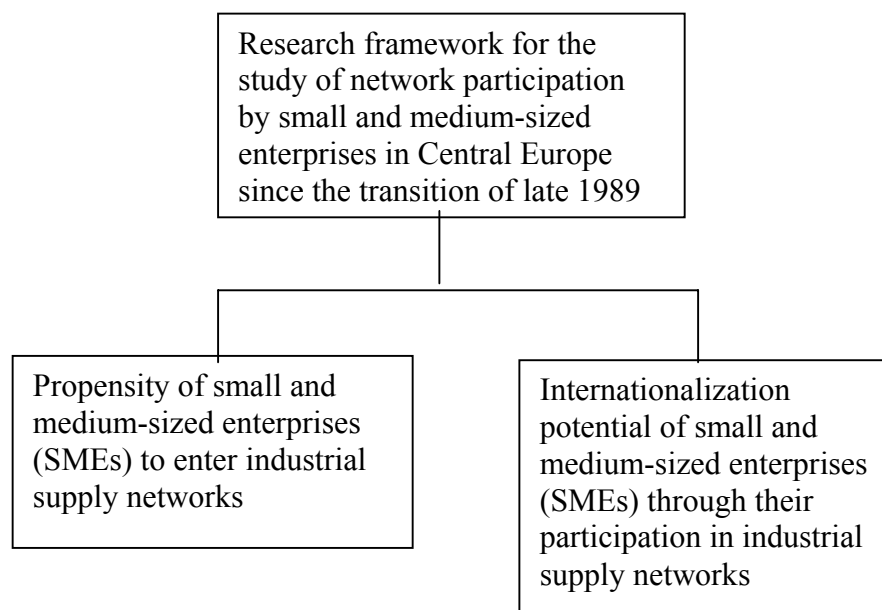


Diagram 1. -- Research design for the study of small and medium-sized enterprises in Central Europe

Environmental forces

The development of a research framework for SMEs in CE concerning their participation in industrial supply networks begins with an understanding of the relevant environmental forces that have shaped their operations since the beginning of the transition. According to SMEs' managers, there are four major environmental forces: (1) the

³ The cases were prepared by research specialists from the Czech Republic and Slovakia and are currently being evaluated and summarized (see Pribova and others 2000). The discussions with SMEs managers were typically held after management training workshops. SMEs' managers were asked to respond to a series of short situations and asked how they would react to them. Both of these exercises were conducted between 1999 and 2003.

technological climate; (2) economic conditions; (3) social conditions including legal, ethical, and political conditions; and (4) changing life styles (Figure 1). The development of SMEs in CE, since the transition that started in late 1989, can be classified into four distinct periods: (1) before 1990, (2) 1990 to 1993, also known as the “formation years,” (3) 1994 to 1998, known as the “shake-out” years, and (4) 1999 to the present, known as “tenuous growth” for SMEs.

In the period before 1990 all four environmental forces were completely controlled by the government. With some minor exceptions, SMEs in CE did not exist. During the 1990 to 1993 period, the development of SMEs was very unstable and unregulated. New technology became available for those SMEs that had sufficient financial resources, the economic environment focused on privatization concerns, the social climate was completely unsupervised from both ethical and political perspectives, new laws were passed, and managerial life styles were comingled with private life styles.

The period that followed, 1994 to 1998, introduced marginal stability for SMEs. The lack of appropriate technology began to impact financial sales revenue and profits. Economic and financial transactions became more stable. The legal structure became more unstable during this period and the political situation was in flux. SMEs became conduits for personal gain and managers developed their own culture. Major changes came to SMEs after 1999.

The present period that started in 1999 is most significant for development of SMEs and their ability to assimilate into the conventional business climate that exists throughout most of the EU. SMEs in CE started to realize that they would have to become part of a large international environment. More specifically, however, appropriate technology became an issue for SMEs, especially for those SMEs that had already become network members. It became obvious that they had to keep up with the latest technological developments, not in each CE country, but internationally. They also realized that, as SMEs, they were sensitive

not only to domestic economic forces, but they also had to understand international economic conditions. Most of the SMEs also recognized, that as the legal structure stabilized in most CE countries, they had to move beyond the domestic social conditions and ethical and political realities and respond to the needs of individual customers and network partners. As interactions with outside managers became more common, SMEs' managers discovered that their managerial behavior had to change and that their professional and personal life styles had to change. In the early 2000s it became clear to SMEs' managers in CE that the rules of the game had changed. If they want to join international industrial supply networks, they must begin to make decision within networks.

A number of local case studies that have been developed for use in executive development and training programs for SMEs' managers in several of the CE countries clearly suggest that since 1999 some of the SMEs have changed dramatically.⁴ It is important to recognize that the unstable and rapidly changing environmental conditions in CE after the initial transition contributed to the formation and development of SMEs. SMEs in CE are products of their own environments and reflect each environment's dynamics.

In summary, the combination of environmental forces after 1999 indicated three fundamental considerations: (1) appropriate technology became important for those SMEs that joined industrial supply networks, (2) internationalization became important for SMEs that participated in industrial supply networks, and (3) a professional life style began to emerge among SMEs' managers.

Factors that influence propensity

The factors that influence propensity to enter networks by SMEs in CE can be examined in a way similar to how the environmental forces were examined over the same four

⁴ Executive development and training programs in the Czech Republic, Hungary, Poland, and Slovenia (not necessarily in Slovakia) had been written and discussed in the local language. A number of these cases address directly the need of executives to develop a better understanding of how industrial supply networks operate and what specifically is expected from the individual network partners.

periods of SMEs' development. The factors deemed to be important in determining the propensity of SMEs in CE to enter into industrial supply networks are the following: (1) psychological distances towards industrial supply networks, (2) trust in networks, (3) commitment to networks, (4) cooperation within networks, (5) time urgency to meet deadlines within networks, and (6) commitment to quality within networks. Although these factors are well embedded in the network literature they are not necessarily apparent among the SMEs' managers in CE. In discussion with SMEs' managers, each factor was evaluated individually and either examined directly or in the context of cases that were being analyzed.

Before 1990 none of these factors were relevant simply because SMEs did not exist.⁵ During the SMEs' "formation years," 1990 to 1993, the propensity of SMEs to participate in industrial supply networks was very low. *Psychological distances* between SMEs from CE and their perceived membership in industrial supply networks were great; the CE's managers responsible for SMEs at that time simply did not understand how industrial supply networks operated. The *trust* factor was also very low; many of the managers were suspicious of collective actions. Any *commitment* to networks was nonexistent; managers preferred individual orders without any contractual agreements. *Cooperation* within networks was very low and was perceived as a compromise by management which limited SMEs' flexibility. The managers had very low *time urgency* mainly because they were opportunistic in their behavior and focused on immediate results. And finally, managers' *commitment to quality* was not even considered at that time. The new market system was price sensitive and faced with unmet demand in which any product of questionable quality was marketable.

The situation improved somewhat during the "shake out years" of 1994 to 1998. SMEs' managers began to notice the emerging importance of industrial supply networks in

⁵ It is essential to consider that some of the state-owned enterprises actually participated in supply networks before the transition but these relationships were viewed as contractual and were organized typically through a state-owned trading company. In most cases, because of political reasons, the managers participating in these networks had limited contact with their network partners and perceived only a marginal benefit in these relationships (see Tesar and Pribova 1994).

several rapidly growing industries in CE, but they were still hesitant to participate. The *psychological distances* were still great; SMEs' managers were convinced that networks placed undue burdens on operations and management. *Trust* in networks was low; the managers were concerned about competitive information and financial disclosure. Some *commitment* to networks started to emerge, but it was very low; although contracts were signed, they frequently were not enforceable. *Cooperation* was low and perceived as a compromise which limited opportunities. Because of the prevailing opportunistic behavior that focused on best results at the time, *time urgency* was very low (working within the framework of networks was too time consuming). During this period there was also a very low *commitment to quality*; most managers felt that quality was not important since most customers were one-time customers.

After 1999 and currently, i.e., the “tenuous growth” period, the professional approach to most of the factors contributing to the development and growth of SMEs in CE has improved. Their propensity to participate in industrial supply networks has also improved. *Psychological distances* towards participation in networks have decreased; networks are perceived as a necessary evil and caution is required by SMEs' managers. *Trust* among network partners is increasing; partners are working together and financial transactions have become more transparent. *Commitment* to networks is still low among SMEs' managers and network participation is sometimes perceived as disclosing proprietary information. *Cooperation* within networks is also relatively low and is perceived as a long-term obligation and frequently requires an alternative management style. Time urgency within networks is also relatively low and is perceived as placing too much pressure on SMEs' management because of relatively short deadlines. And, finally, *commitment to quality* is still low; the prevailing attitude among the SMEs' managers is that the “customer” specifies the quality and SMEs try to meet it.

Based on examination of the above factors, the following observations can be presented: (1) propensity by SMEs in CE to participate in industrial supply networks is still relatively low, (2) their memberships in networks is perceived with suspicion and lack of professional enthusiasm, and (3) the importance of product or service quality is not well understood by SMEs' managers.

The combination of the two analyses above is useful in formulating a research framework that specifically addresses the two objectives of this study-- the propensity of SMEs in CE to enter industrial supply networks and the internationalization potential of SMEs in CE. The following propositions emerge from the above analyses:

Proposition 1: SMEs that appeared after the start of the transition in CE were clearly a product of the rapidly changing environment. As the environment in each CE country moves closer to the European "standard" and the environmental forces stabilize, SMEs will become more professionally stable and will increase their propensity to enter into industrial supply networks.

Proposition 2: The propensity of individual SMEs in CE to join industrial supply networks is still a subjective decision made by SMEs' management based on insufficient resources, including technology, and individual perceptions of industrial supply networks.

Proposition 3: Industrial supply networks in CE are perceived by SMEs as limiting in scope and restrictive in market opportunities. SMEs' managers feel that they have more market flexibility by not belonging to industrial supply networks.

Proposition 4: The internationalization potential of SMEs in CE through their participation in industrial supply networks is still limited.

Conclusion

The research framework that evolves from the above discussion suggests a multilevel approach to further analysis. First, there is a need for comprehensive research to focus on the external business environment itself. More specifically, it is important to examine the nature of the external business environment that is needed to stimulate the growth of SMEs in CE countries. The external business environments are still substantially different and provide different levels of opportunities for SMEs. The individual forces that make up the external business environment also differ substantially. For example, the economic climates

throughout CE are not identical; the economic climate in Slovenia tends to be more conducive to the growth of SMEs than in the Czech Republic which is focused more on the presence of large international manufacturing operations. Second, there is a need to understand what types of SMEs are more likely to grow and expand in what kind of external business environment. For example, more aggressive foreign market oriented SMEs might be products of more stable and open environments.

It is also important to explore the decision-making process among SMEs in CE regarding their participation in industrial supply networks. It appears that the managers of SMEs in CE are preoccupied with relatively low-level operational issues without the necessary understanding of major strategic issues. For example, the use of obsolete technology is frequently preferred over investment in new technology leading to higher productivity and better quality. The lack of managerial understanding of how networks operate prevents SMEs' managers from participating in networks and potentially growing within networks.

Another aspect of this study is the notion that membership in networks, especially industrial supply networks, limits market opportunities for SMEs in CE. There appears to be a perception among the SMEs' managers that they can be more profitable outside of networks rather than inside networks. It would be interesting to test this perception further, particularly from the perspective of some of those SMEs that actively participate in international networks.

The internationalization potential among SMEs in CE is also challenging. SMEs that actively participate in networks suggest that working closely with their international network partners helps them internationalize their operations and management approaches. The concept of internationalizing through network relationships is an important concept that has not been fully explored in SMEs literature, let alone in relationship to SMEs in CE.

If such a multilevel research approach could be developed and implemented, it would be easier for regional and national economic development agencies to stimulate the growth of SMEs further and to assist with their integration into large international networks. At the same time, the results of such research would also be useful for management development specialists concerned with management training to help SMEs' managers better understand how they need to think strategically in order to grow and even survive in a highly competitive international market. Even the managers of SMEs need to understand their own operations and strategic objectives and could benefit from this type of research.

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Figure 1.--ENVIRONMENTAL FORCES ACTING ON CENTRAL EUROPEAN SMALLER MANUFACTURING FIRMS

Periods of development and growth of smaller manufacturing firms in Central Europe				
	Before 1990	1990 to 1993 Formation years	1994 to 1998 Shake-out years	1999 to present Tenuous growth
Environmental forces	Completely controlled by central planners—slow technological change.	Completely open—with adequate financial resources global technology became available.	The lack of appropriate technology started impacting financial efficiency.	Appropriate technology becomes an issue especially among network members.
Economic conditions	Completely controlled by central planners.	Very unstable—privatization issues—financially unstable transactions.	Stabilizing economic and financial transactions.	Relative stability with linkages to international economy.
Social conditions (including legal, ethical, and political)	Controlled by the government.	Very unstable—changing legal structure, questionable ethical framework, and unstable political climate.	Unstable—legal structure stabilizing, low ethical standards, political situation in flux.	Stabilizing—legal structure stabilized, ethical behavior more positive in response to outside influences, political situation in flux.
Life styles	Controlled by central planners and availability of imported consumer products on domestic markets.	Completely open—only constrained by disposable income and ability to get manufacturing orders. Little differentiation between personal and business consumption.	Completely open—personal gains form business income. Life styles reflected the type of business culture.	Constrained by managerial behavior—separation between personal life style and managerial life style.

Figure 2.--FACTORS THAT INFLUENCE PROPENSITY TO ENTER NETWORKS BY SMALLER MANUFACTURING FIRMS IN CENTRAL EUROPE

Periods of development and growth of smaller manufacturing firms in Central Europe				
	Before 1990	1990 to 1993 Formation years	1994 to 1998 Shake-out years	1999 to present Tenuous growth
Factors				
Psychological distances	Not relevant—no significant SMEs	Very long (lack of understanding of how networks operate)	Long (networks placed undue burden on operations and management)	Medium (networks are perceived as the necessary evil—caution is required)
Trust	Not relevant—no significant SMEs	Very low (frequently accompanied by suspicion)	Low (concerned about competition and financial disclosure)	Increasing (formation of working relationships and financial transparency)
Commitment	Not relevant—no significant SMEs	None (preferred individual orders frequently without contractual agreements)	Very low (contractual agreements emerged but were generally unenforceable)	Low (network participation is perceived as disclosing proprietary information)
Cooperation	Not relevant—no significant SMEs	Very low (cooperation perceived as compromise—limits flexibility)	Very low (cooperation is perceived as compromise—limits opportunities)	Low (cooperation is perceived as a long term obligation—needs different management)
Time urgency	Not relevant—no significant SMEs	Very low (opportunistic behavior focused on immediate results)	Very low (opportunistic behavior focused on best results at the time)	Low (too much pressure on management—short deadlines)
Commitment to quality	Not relevant—no significant SMEs	None (new market system that is price sensitive faced with unmet demand—anything sells)	Very low (quality is not important—most customers are one time customers)	Low (quality is specified by the customer—we try to meet it)