

Outcomes of Learning through International Joint Ventures for Local Parent Firms: Evidence from Russia



Irina Jormanainen

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For Aki

Abstract

It has been long recognized that joint ventures (JVs) provide parent firms with an excellent opportunity for learning. This phenomenon is particularly interesting in transition economies, such as Russia, where local governments have promoted the establishment of JVs due to a belief that local firms can benefit from acquisition of foreign firms' technological and managerial knowledge. However, the JV literature to date lacks empirical evidence of performance implications of learning through a JV for local parent firms in transition economies. Rather, it mainly concentrates on understanding learning outcomes at the JV level. Moreover, the comprehensive empirical tools allowing the full range of these implications to be captured are still underdeveloped. Thus, this thesis fills this gap and examines the performance implications for Russian firms of learning through Russian-Western manufacturing JVs. Furthermore, the study draws on insights from the innovation and strategy literature to develop comprehensive measurements of JV learning at the parent level and assess the influence of learning through JVs on the upgrading of technological and managerial capabilities of Russian parent firms, as well as on their modernization, restructuring and long-term competitiveness.

The complex nature of the research issue and the practical obstacles associated with undertaking research in Russia has called for the development of a novel methodological design. Hence, mixed methods combining a pilot survey with a multiple case study approach have been used to acquire reliable and rich empirical evidence. The survey was implemented at the first stage of data collection and was followed by an in-depth investigation of three manufacturing Russian JV parent firms from the aircraft engine building, automotive and auto component sectors.

The research found that, although upgrading took place in all functional areas of technological capabilities as well as managerial capabilities, Russian parent firms upgraded production process and investment capabilities to the largest extent, which is also perceived as the most important outcome from learning through JVs. Moreover, this upgrading permits the speeding up the process of modernization and strategic large-scale restructuring of Russian parent firms, and the achievement of sustainable competitive advantage within Russian and Commonwealth of Independent States markets. A further important finding of the study is that the beneficial application of JV knowledge in Russian parent firms is strongly inhibited by the presence of organizational inertia, rigid organizational structure and underdeveloped knowledge management mechanisms. Moreover, external factors associated with inefficient functioning of Russian System of Innovation that fail to support innovative activities of local firms seriously constrain the extent of positive outcomes from JV learning for Russian parent firms.

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Sincerely,

Irina Jormanainen

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List of abbreviations

Abbreviation	Description
CEE	Central and Eastern Europe
CIS	Commonwealth of Independent States
FDI	Foreign Direct Investment
IB	International Business
IJV	International Joint Venture
JIT	Just-in-time
JV	Joint Venture
KBV	Knowledge-based view
MNC	Multinational corporation
OL	Organizational learning
PPC	Production process control
QC	Quality control
R&D	Research and Development
RBV	Resource-based view
SA	Strategic alliance
S&T	Science and Technology System
SI	System of Innovation
TQM	Total quality management

Chapter 1 Introduction and research overview

1.1. Introduction

During the last two decades organizational learning has been recognized as the most important mechanisms for augmenting the knowledge base of firms (Fiol and Lyles, 1985; Bell and Pavitt, 1995). Amongst various types and mechanisms of learning Joint Ventures (JVs) have been recognized as being an excellent platform for learning whereby parent firms have close access to each other's knowledge-based resources (Khanna et al., 1998; Inkpen, 2000). Despite the presence of numerous strategic incentives to establish a JV that are well documented in the literature (Kogut, 1988; Glaister and Buckley, 1996), JVs have also been increasingly considered as 'learning vehicles' in which parent firms aim to acquire the knowledge-based resources of the other partner. Theoretical studies emphasize that firms expect their JV partners to contribute knowledge-based resources in order to achieve not only the objectives of the JV itself, but also to improve their own performance through the application of acquired knowledge with regard to the development of new products, processes, and services (Hamel, Doz, and Prahalad, 1989; Hamel, 1991). However, empirical studies that examine the specific outcomes of learning through JVs *at the parent firm level* and their influence on the parent firms' long-term development are scarce (Simonin, 1997; Jiang and Li, 2008).

The phenomenon of learning through JVs has specific implications in the context of the Russian transition economy. A radical upheaval of institutions and policies at the beginning of the 1990s had a serious negative impact on the technological development of local firms (Peng and Heath, 1996; Roth and Kostova, 2003). The lack of domestic sources for the knowledge acquisition necessary for upgrading of the technological foundations of local firms has put an emphasis on foreign firms as the potential source of advanced technologies and managerial expertise. The cooperation through JVs have been assumed to be one of the most beneficial mechanisms for

foreign firms' knowledge acquisition as JVs provide local firms with an opportunity to closely interact with their partners and access their knowledge.

Russia is a particularly interesting empirical setting for the investigation of implications of JV learning for local parent firms. Despite the presence of a well-developed R&D and technology infrastructure and strong technological competences in many industrial sectors prior to transition, Russia has failed to sustain technological capabilities and create a competitive firm sector in the post- transition period. The Russian economy provides an excellent illustration of an economy with a system for knowledge creation and technological development where most of the central pillars are individually present, but not functioning together efficiently and therefore failing, during the transition period, to support the technological upgrading considered vital for their long-term growth and competitiveness of local firms. After the start of the economic reforms the foreign multinational enterprises (MNEs) were expected to assist the upgrading of local firms and the Russian government promoted JVs due to the belief that they offer an excellent opportunity for local firms to acquire advanced technological and managerial knowledge from foreign parent firms. However, empirical evidence examining whether learning through JVs is truly beneficial for Russian firms and what is the nature and extent of these benefits is scarce and fragmented. Hence, a better understanding of this phenomenon has inspired the work of this research.

1.2. Research gap

Various aspects of learning through JV in transition economies have been extensively studied and reported in the firm-level learning literature. Nevertheless, despite that a large number of studies have investigated the antecedents of learning in JVs, learning process, and its mechanisms, less attention has been paid to understanding the outcomes of JV learning (see Inkpen, 2002 for a thorough review). Further, the majority of those studies which aim at understanding the implications of learning, assess them at the JV level (Lyles and Salk, 1996; Makino and Delios, 1996; Steensma and Lyles, 2000; Beamish and Berdrow, 2003; Berdrow and

Lane, 2003; Child and Yan, 2003; Tsang et al., 2004; Anh et al., 2006). Yet, an assumption in the strategy research field holds that processes taking place in JVs are not end results themselves, but, from the perspective of partnering firms, should lead to performance improvements in the partner firm level. In other words, JV's success must translate into a competitive advantage for the parent firms (Das and Teng, 2003). Still, relatively few empirical studies attempt to address this issue in the context of developed countries (Simonin, 1997; Jiang and Li, 2008) and no comprehensive research examining outcome of JV learning for local parent firms has been carried out in the context of transition economies.

Further, a literature review reveals that the empirical tools applied to examine the implications of JV learning lack comprehensive operationalization; the majority of studies use such measures as business volume, market share and profit to indicate the learning outcomes. Nevertheless, it has been argued that there are more insights beyond these measurements, and concepts such as capabilities and innovativeness have been suggested to be particularly suitable to grasp the learning through JV outcomes (Makino and Delios, 1996; Mowery et al., 1996). Indeed, the innovation literature stresses that development of technological capabilities occurs due to the processes of technological knowledge accumulation and learning (Lall, 1992; Bell and Pavitt, 1993). Studies in this field also recognize MNEs as a vital source of advanced technological knowledge which potentially can spill over to the local firms in transition economies (Wignaraja, 2002), and that the impact of local firms' learning from MNEs should be assessed in terms of capabilities building and industrial restructuring (Mytelka and Barclay, 2006). In other words, the central premise of the innovation literature is that local firms need to be able to learn about advanced technological knowledge from foreign MNEs in such a way that will lead to the building of long-term capabilities.

To conclude, the literature review illustrates that there is a lack of empirical knowledge about the outcomes of learning through JVs with regard to the operations of local JV parent firms in transition economies. Furthermore, the comprehensive empirical tools required for an examination of this phenomenon are still underdeveloped in the JV learning literature. Therefore, through empirical evidence collected in the Russian context, this research aims to fill this gap.

1.3. Research objectives and research questions

Research objectives

The main theoretical objective of the study is twofold. First, the study intends to fill the gap in the existing literature and to enhance our understanding of how learning through JVs affects the local JV parent firms operations in Russia. In other words, the thesis aims to examine whether/ how Russian parent firms achieve the improvements in their own operations from the application of knowledge acquired through JVs, and what are long-term implications of these improvements. In order to accomplish this objective the study attempts to integrate several streams of research, namely the learning, capability, innovation and strategy perspectives, and to develop a comprehensive model allowing a holistic understanding of the research phenomenon to be grasped.

Second, the thesis aims to develop comprehensive empirical measurements appropriate for the in-depth investigation of JV learning outcomes at the level of Russian parent firms. Indeed, as expressed in the previous section, the JV learning literature does not offer empirical tools that are suitable to assess the changes in operations of Russian parent firms that are attributable to learning from JV and the foreign parent. Hence, the objective here is to integrate the concepts that have been developed in capability, innovation and strategy studies into the research design in order to achieve this theoretical objective. In particular, I aim to illustrate that the application of concepts such as technological capabilities, managerial capabilities, modernization, restructuring and competitiveness permits the discovery of deep insights of learning outcomes for Russian JV parent firms, and that these can be described in the concrete terms suitable to the Russian context.

A further important objective of the current research is related to methodological issues. The study intends to demonstrate the benefits of a multi stage and multi level research design for the investigation of learning outcomes at the Russian parent level, and thereby addressing the methodological shortcomings of previous studies and to overcome the challenges associated with

the Russian empirical context and the complex nature of the research phenomenon. In particular, a mixed method approach is adopted by combining a pilot survey of the parent firms of Russian–Western manufacturing JVs and an in-depth case investigation of three Russian JV parent firms.

Research questions

The objectives of the research guided the formulation of the questions. Hence, the main research question is:

How does the learning through Russian-Western JVs lead to the upgrading of the capabilities of Russian parent firms and, as a consequence, their modernization, restructuring and competitiveness?

Further, in order to provide a coherent and logical understanding of this question, three sub questions are specified:

- 1. Research sub-question 1: How does learning through manufacturing Russian–Western JVs lead to the upgrading of technological capabilities of Russian parent firms?*
- 2. Research sub question 2: How does learning through manufacturing Russian–Western JVs lead to the upgrading of managerial capabilities in Russian parent firms?*
- 3. Research sub-question 3: How does the upgrading of capabilities lead to the modernization, restructuring and competitiveness of Russian parent firms?*

1.4. Research methodology

In contrast to the main body of the literature, this study takes a multi-stage and multi-level methodological approach defined as mixed methodology (Creswell et al., 1996; Tashakkori and Teddlie, 1998). Secondary data and quantitative pilot-survey are employed at the first stage to achieve an underlying understanding of the research phenomenon. Thereafter, in the second stage, a multiple-case study is carried out to collect rich data for an in-depth investigation of research objectives (Eisenhardt, 1989). The applicability of mixed methods in the context of transition economies has been emphasized because the combination of quantitative and qualitative methods can be helpful in gaining novel, relevant and reliable insights (Hoskisson et al., 2000).

The research design is the product of the emergent strategy that evolved during the research process. Hence, in order to grasp a good knowledge about the scale of JVs and scope of cooperation and learning in these JVs, the empirical work began with pilot interviews and a pilot survey of manufacturing Russian JVs established in 1998-2006. The choice of the time frame stems from the fact that Russia underwent a financial crisis in 1998 that seriously affected operations of local and foreign firms. The government has undertaken drastic measures to achieve the recovery and the following years can be considered as a second phase of economic transformation, which has been significantly less studied in comparison to its first phase prior 1998. The survey data consists of 25 completed questionnaires received from Russian and western JV parents. Eight of these questionnaires were completed during personal interviews with top managers of parent firms. The remaining 17 were completed by respondents and sent to the researcher by post or fax. The knowledge accumulated from pilot survey allowed the implementation of the main stage of the empirical research, namely case investigation. Three Russian parent firms that participated in the survey – from the aircraft engine building, automotive and auto component industries – agreed to take part in the further case research. The case study approach represented the main method for collection of empirical data. Fifteen interviews were conducted with the senior managers of Russian parent organizations. The results

and conclusions of the study were drawn on the basis of analysis of both the survey and case data thereby increasing their quality and value.

1.5. Contributions of the study

The main contribution of this study is twofold. First, this research extends JV learning theory by the development of a theoretical framework for examining the outcomes of learning at the parent firm level, and illustrates the comprehensive application of subjective measures for capturing the short and long-terms implications of these outcomes. The study shows that assessing a change in terms of specific types of capabilities of JV parents, and the impact of this change on their strategic development and competitiveness, enable the nature and extent of learning through JV outcomes to be comprehend.

Second, the thesis illustrates the application of this theoretical framework in the Russian context by providing a detailed understanding of implications of JV learning for Russian parent firms and develops an empirically grounded framework. Specifically, the research finds that JV learning does enhance the technological and managerial capabilities of Russian parent firms outside JVs. Moreover, due to the application of the comprehensive conceptualization of technological capabilities adopted from the innovation literature that distinguish between investment, production process, production product and linkages capabilities this study argues that investment and production process capabilities have been upgraded to the largest extent in Russian parent firms and this upgrading was perceived as the most important. Of importance is that the in-depth case investigation provides an explanation for the difference in the degree of upgrading across functional types of capabilities and across the case companies. These differences were found to be attributable to three main factors: the level of technological development of Russian firms prior the establishment of the JV; the scope of JV activities, and the intensity of interaction between parent firms and JVs.

Furthermore, the upgrading of each of these types of capabilities was found to have specific implications for the modernization, restructuring and competitiveness of Russian parent firms. In particular the upgrading of production and investment capabilities were found to have a positive impact on the modernization process as they permit the functioning of new and old production facilities to be organized in a more efficient and technologically advanced manner. The upgrading of linkages capabilities generates innovative activities within Russian JV parent firms as they enable a relationship to be initiated with new partners for new product development and production. Managerial capabilities influence the implementation of strategic organizational restructuring and the development of long-term strategic objectives oriented towards strengthening the competitive advantages of Russian parent firms in Russian and CIS markets. The important finding of this research is that learning through JVs represents a crucial strategic tool for Russian parent firms to achieve long-term development and growth.

Also, the results of this research revealed the presence of strong influence of firm and macro-level factors inhibiting the beneficial application of knowledge learnt through JV in Russian parent firms. In particular, organizational inertia and structural lock-in in the Russian System of Innovation undermine the knowledge integration and application processes. At the firm level, the roots of inertia stem, on the one hand, from an abundance of no longer efficient resources and the rigid structure and routines inherited from Soviet times and, on the other hand, from the absence of efficient organizational mechanisms and routines that able the enforcement of implementation of changes. At the system level, the inefficient functioning of the System of Innovation resulted in the weakening of competences of local R&D and educational organizations as well as an imbalanced industry sector that lagged behind which all together do not support the beneficial use of JV knowledge in Russian parent firms.

Following from the above, the arguments developed in this thesis emphasize the value of using a multi level approach for the investigation of outcomes of JV learning at the parent level firms by integrating firm-level learning, capabilities and strategic perspectives with a macro-level SI approach. This permits a holistic understanding of the research phenomenon and makes an important contribution to the existing literature.

Finally, this thesis makes an important methodological contribution by illustrating the value of mixed methods in IB research, and illustrating the manner of how various methodological solutions can enhance the quality of the research findings and thereby overcome the obstacles associated with the empirical context.

1.6. Outline of the thesis

CHAPTER 2 Theoretical underpinning of the study

The aim of the chapter is to discuss the theoretical perspectives and concepts used in this study that are considered to be applicable for a thorough examination of the outcomes of learning through Joint Ventures for parent firms. I start by presenting the main premises of the organizational learning perspective; this is the perspective within which this research is grounded. I then outline the specific area of interest of this study, which is inter-organizational learning in the context of a JV, and delineate the particular research focus. I also present a review of previous studies that have examined the implications of JV learning, illustrate the existing gap and formulate the research questions which this thesis aims to examine. The final part of this chapter is dedicated to a detailed discussion of the choice of concepts appropriate to the understanding of JV learning outcomes for parent firms in context of transition economies, namely technological and managerial capabilities, modernization, restructuring and competitiveness. The final section presents the theoretical framework illustrating the theoretically grounded assumptions of the study.

CHAPTER 3 Methodology

This chapter presents the method of the study and the rationales behind the methodological choices. First, I discuss the realities of undertaking research in Russia, and emphasize the main challenges. Second, I explain the overall research design; this design combines several stages and methods. Third, I focus on each stage of empirical research describing their purpose, their implementation, and the logic behind the data analysis. Finally, I discuss how issues concerning

validity and reliability have been addressed in this study, and provide an overall summary of the empirical data.

CHAPTER 4 Russian–Western manufacturing JVs

This chapter provides background detail of the Russian context and presents findings of a pilot survey of Russian–Western JVs. I commence with a short overview describing the course of economic reforms and their implications for industrial enterprises in Russia. I then discuss the industrial distribution of Russian-Western manufacturing JVs using the JV dataset created for the purpose of the pilot survey. Finally, I present the results of the pilot survey illustrating the scope of Russian–Western JVs as well as the parent organizations’ learning objectives and outcomes.

CHAPTER 5 Case description

This chapter describes in detail the three Russian JV parent firms that participated in this study, data from which provided the main source of empirical evidence. The case description includes a brief overview of the industrial sectors of the Russian JV parent firms, the nature of their operations and their development path, as well as the scope of the JVs established with western firms. The first case company is an Aircraft engine building company, hereafter referred to as the ‘Aircraft engine case’, the second case is a Truck manufacturing company referred to as the ‘Truck case’ and the third case is an Auto component company referred to as the ‘Auto component case’.

CHAPTER 6 Upgrading of capabilities in Russian JV parent firms

This chapter presents the first part of the empirical findings describing the nature and extent of the upgrading of the technological and managerial capabilities in Russian parent firms that is attributable to learning through JVs. The presentation of these findings is organized for each functional type of capability in each of the three case companies. I start with a description of the learning outcomes from the upgrading of technological capabilities for the three case companies and conclude by discussion regarding the upgrading of their managerial capabilities.

CHAPTER 7 Implications of the upgrading of capabilities for the modernization, restructuring and competitiveness of Russian JV parent firms

This chapter illustrates how technological and managerial capabilities that have been upgraded through JVs influence the modernization, restructuring and competitiveness of Russian parent firms. Indeed, previous studies recognize that JVs can be a useful tool to speed up the modernization and restructuring of Russian firms, and that this, in turn, is vital for their competitiveness (Wright et al. 1998). However, there is lack of empirical evidence shedding light on this phenomenon, and thus, I address this gap by presenting the results of the analysis of empirical data collected from three Russian JV parent firms. As in the previous chapter, the discussion is organized separately for each of these case companies.

CHAPTER 8 Constraints of learning through JVs

This chapter discusses the emerging findings of this research which importance for the better understanding of learning through JVs became evident during the course of empirical research implementation. Specifically, it discusses the internal and external obstacles that undermine the benefits of learning through JVs for Russian parent firms. Indeed, if one aims to comprehend the nature and extent of positive outcomes, it is vital to comprehend those forces that limit these outcomes. I next discuss the underlying logic behind the constraints of learning and then elaborate in detail two main types of constraints, namely organizational and external.

CHAPTER 9 Propositions and empirical framework of the study

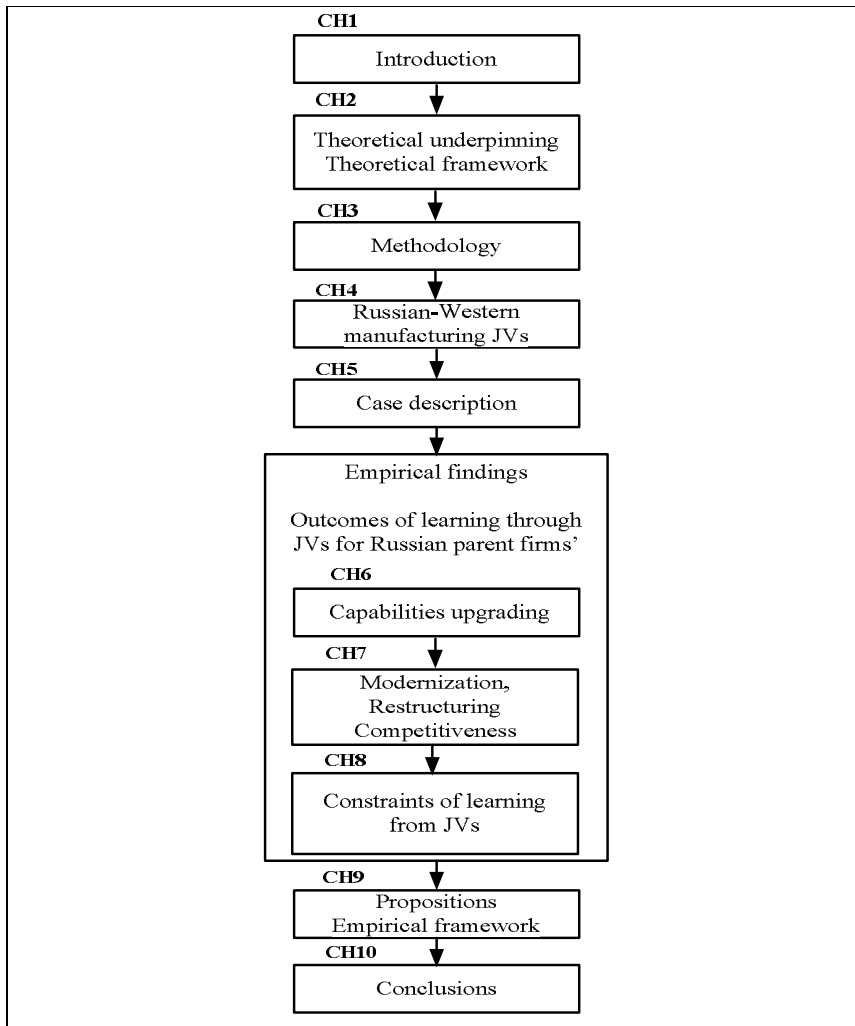
This chapter presents the results of the comprehensive analysis of the entire stock of empirical evidence. The objective here is to provide the reader with the overall conclusions which summarize the discussion of empirical analysis of evidence from the case study presented in Chapter 6, Chapter 7 and Chapter 8 and from the pilot survey presented in Chapter 4. Furthermore, on the basis of these conclusions, I formulate a number of empirical propositions aimed at extending the existing scholarly knowledge on learning through JVs. Finally, an empirically grounded framework is developed in order to offer a graphical illustration of the main empirical findings of the thesis.

CHAPTER 10 Conclusions

This chapter presents the main conclusions, contributions, and limitations of the thesis. In the final section, the implications for future research are discussed.

Figure 1.1 illustrates graphically the described above structure of the thesis.

Figure 1.1 Structure of the thesis



Chapter 2 Theoretical underpinning of the study

The aim of the chapter is to discuss the theoretical perspectives and concepts used in this study which are considered to be applicable for a thorough examination of the outcomes of learning through Joint Ventures for parent firms. I start by presenting the main premises of the organizational learning perspective; this is the perspective in which this research is grounded. I then outline the specific area of interest of this study, which is inter-organizational learning in the context of a JV, and delineate the particular research focus. I also present a review of previous studies that have examined the implications of JV learning, illustrate the existing gap and formulate the research questions which this thesis aims to examine. The final part of this chapter is dedicated to a detailed discussion of the choice of concepts appropriate to the understanding of JV learning outcomes for parent firms in context of transition economies, namely technological and managerial capabilities, modernization, restructuring and competitiveness. The final section presents the theoretical framework illustrating the theoretically grounded assumptions of the study.

2.1. The organizational learning perspective

Organizational learning has been recognized as the most important mechanism for how organizational knowledge can be acquired, and two aspects to this type of knowledge have been described; namely, an access to new knowledge, and building on this knowledge (Grant, 1996; Powell et al., 1996; Inkpen, 2000). One of the most frequently used definitions of organizational learning is that suggested by Fiol and Lyles (1985:803) who define learning as ‘a process of improving actions through increased knowledge and understanding’. Further, Levitt and March (1988) define learning as a process by which repetition and experimentation enable tasks to be performed better and more quickly and new production opportunities to be identified. Importantly, these definitions emphasize that learning has a positive impact on the actions of members of an organization, which in turn influences firm performance.

By its nature, organizational learning refers to changes in the stock of knowledge that exists within a company and is exhibited in organizational routines (Kim, 1993; Nonaka, 1994; Inkpen and Crossan, 1995, Crossan et al., 1999). Organizational routines refer to a set of tasks that an organization is capable of doing in a reasonably coherent fashion (Nelson, 1991). For Inkpen and Crossan (1995) and Crossan et al., (1999) the outcome of learning at an organizational level is the creation of new knowledge that is manifested in changes in systems, structures, strategy, routines and practices. An example of knowledge institutionalization is the implementation of adjustments in organizational strategy, which is considered as a change in pattern of an organization's actions. Overall, *the focus of this study is organizational learning in Russian JV parent firms, and the main objective is to capture the outcomes of learning through JVs that are manifested in changes in organization systems, structures, strategy, routines and practices.*

There are different types of knowledge, and some are more difficult to learn than others. The literature often distinguishes between two main types of knowledge: tacit and explicit (Polanyi, 1966; Inkpen and Dinur, 1998). Explicit knowledge is transmittable in formal, systematic language and includes clear facts, propositions and symbols. This knowledge can be easily codified and articulated in manuals, computer programs, and training tools, and hence, its acquisition and transfer is comprehensible (Polanyi, 1966; Inkpen and Dinur, 1998). The contrary can be said to apply to tacit knowledge, which is nonverbalizable, intuitive, unarticulated, and highly context specific, and therefore difficult to manage (Polanyi, 1966; Grant, 1996). Hedlund (1994) suggests yet another classification of knowledge, defining cognitive knowledge that is manifested in the form of mental constructs; skills; and knowledge embodied in products and well-defined services. In this classification the same underlying logic can be recognized, that it is more difficult to grasp the first two types of knowledge than the third.

The value of different types of knowledge varies in different national settings and periods of time. This study is particularly interested in an examination of knowledge acquisition in the context of transition economies, such as Russia, where a significant change from a planned to a market economy occurred in the early 1990s that greatly influenced the knowledge base of local firms. Knowledge accumulated for generations in a planned economy had become obsolete, whereas the other types of knowledge had become highly needed by local firms in order to be

able to operate in the new economic realities. Indeed, the knowledge base of local firms in both the technical and managerial areas required a significant upgrading in order to develop competitive advantages. However, the problem in transition economies is that there is a lack of local sources for the acquisition of required knowledge, and hence, foreign firms have been seen as one of the important source of advanced technological and managerial knowledge and expertise (Blomström and Sjöholm, 1999; Javorcik, 2004). Despite the large number of existing studies, *the impact of foreign knowledge on local industrial development in transition economies has not yet been thoroughly examined, and this study aims to understand better how foreign knowledge assists the upgrading of technological development and competitiveness in local firms*. There are different means to the ways that local firms in Russia can enhance their knowledge-based resources. This study concentrates on one, and perhaps the most challenging, which is learning through JVs with western firms. Thus, I next elaborate on the premises of organizational learning and learning in the JV context, and illustrate how the study is positioned in these theoretical fields.

Antecedents of learning

Fiol and Lyles (1985) suggest four antecedents or factors affecting learning in organizations: (1) organizational culture; (2) organizational strategy; (3) organizational structure and mechanisms for knowledge assimilation and application; and (4) the external environment. The first factor, organizational culture, defines ideologies and patterns of the existing behavior in the organization (ibid.). Schein (1996:11) refers to a culture as ‘a set of basic assumptions about how the world is and ought to be that a group of people share and that determines their perceptions, thoughts, feelings, and, to some degree, their overt behaviour’. In addition to culture, there are various subcultures developed in the functional units of an organization, which should be well aligned in order to support organizational learning (Schein, 1996). The second factor, organizational strategy, includes goals, objectives, strategic posture of the organization and its attitude towards the application of knowledge based resources (Fiol and Lyles, 1985). With regard to the third, the appropriate organizational structure and mechanisms allow the efficient creation, deployment and use of knowledge (Teece, 1998). The final factor affecting learning, the external environment, concerns how the company interacts with many economic actors, which might stimulate or

restrain the learning processes (Fiol and Lyles, 1985). This aspect has been particularly considered in the innovation and development literature that emphasizes the strong impact of the environment on technological learning and the innovativeness of firms (e.g. Edquist, 1997; Lall and Narula, 2006).

In addition to the above, the absorptive capacity of firms has been considered as a vital antecedent of learning and, perhaps, has gained the most attention in the learning literature (Cohen and Levinthal, 1990; Lane and Lubatkin, 1998; Zahra and George, 2002). In their study, Cohen and Levinthal (1990:128) conceptualized the absorptive capacity of the firm as ‘the ability to recognize the value of new, external information, assimilate it and apply it to commercial ends’. These authors stress that organization absorptive capacity is distinct from simply the sum of individual absorptive capacity, and includes not only the acquisition and assimilation of knowledge, but also, most importantly, the *ability to exploit* it. Consequently, the higher absorptive capacity the better the organization can exploit emerging opportunities (Cohen and Levinthal, 1990).

Types of learning

Previous literature suggests that different types of learning are appropriate for the acquisition of different types of knowledge. In this regard two main types of organizational learning are described: observational and experimental. Observational learning is defined as the acquisition of new knowledge and knowledge practices while observing them. Experimental learning refers to knowledge acquisition from direct experience. Whereas observational learning can be suitable for the acquisition of explicit knowledge, Wibe and Narula (2002) argue that experimental learning through such mechanisms as learning-by-doing, learning-by-using, and learning-by-interaction are particularly relevant for the acquisition of tacit knowledge. A further typology of learning types widely used in the learning literature is that suggested by Argyris and Schön, (1978). Here, scholars define learning as: (1) obtaining know-how in order to solve specific problems based upon existing premises – understood as ‘single-loop’ learning, and (2) as establishing new premises such as paradigms, mental models, or perspectives – defined as ‘double-loop’ learning. Nonaka and Takeuchi (1995) argue that knowledge creation requires both types of learning.

To summarize, understanding the of essence of organizational learning, its antecedents, mechanisms and types allows a better interpreting of its outcomes with reference to JV parent firms. Moreover, the JV setting has its own specific features influencing learning as more than one organization is involved. I next elaborate in greater detail on the premises of inter-organizational learning.

2.2. Inter-organizational learning

The complexity of the learning phenomenon increases further in the context of inter-organizational learning as it involves the influencing factors of more than one organization (Inkpen and Tsang, 2005). The perspective of inter-organizational learning is of particular interest of this study where *the focus is placed on the outcomes of learning through Joint Venture (JV) at the parent firm level*. Learning in the JV context refers to a dynamic process of acquiring, generating and exploiting valuable knowledge through interaction, communication, interpretation, and comprehension across the partners (Zollo et al., 2002). This process may lead to the possession of new knowledge about customers and markets, technical know-how, JV management skills, and about the partners themselves (Zollo et al., 2002).

2.2.1. Joint Ventures

When speaking of learning through JVs, it is important to clearly delineate the JV concept. This study refers to a JV as a type of cooperation between two or more firms established outside their own operations in which parent firms contribute various types of resources with the objective of improving long-term strategic positioning. Firstly, this definition emphasizes the aspect pointed out by Inkpen and Beamish, (1997) that real JVs exist alongside the activities of both parent firms. Hence, this study explicitly excludes partial acquisitions, which are considered as JVs in

many previous studies on learning in JVs in transition economies. Secondly, the definition excludes short-term agreements aimed at improving short-term cost efficiencies, as suggested by Radosevic and Sadowski (2004). However, the most important feature of JVs emphasized in the definitions mentioned above is that JV and parent operations are distinct from each other, and consequently this permits inter-organizational learning, defined as learning by a parent organization from the JV. It is worth emphasizing that previous studies on JVs are conceptually ambiguous about defining a JV where both real JVs partial acquisitions were included in the JV datasets (Meyer, 2007). Meyer, (2007) rightly argues that strategic and operational management as well as parent firms' learning incentives in partial acquisitions differ from those in JVs. Hence, this study aims to address this shortcoming by including only JVs in which operations are separate from both parents. Most importantly, only in those cases when the JV is a separate entity, is it possible to examine the implications of learning through JV at the parent level.

Objectives for JV formation

There are many possible objectives for establishing a JV; these have been extensively discussed in the literature (e.g. Contractor and Lorange, 1988; Glaister and Buckley, 1996). Specifically, such incentives as investment risk sharing, market entry with restrictive conditions on foreign investors, product rationalization, economies of scale, transfer of complementary technology and strengthening the competitive position of parent firms have been pointed out in the literature (Harrigan, 1985; Glaister and Buckley, 1996). In addition to these incentives, another important motive for JV formation is 'knowledge exploration'; JVs, where this motive represents a primary goal for their establishment were defined as learning JVs (Khanna et al., 1998). Nevertheless, it has been also argued that there are other forms of JVs where the objective is 'knowledge exploitation' (Grant and Baden-Fuller, 2002). These JVs are used by the partners only as a means to access each other's knowledge in order to exploit complementarities, and have been labeled as co-specialization JVs (Grant and Baden-Fuller, 2002). This latter type of JV evolves in a different manner from a 'learning JV' (Nakamura et. al., 1996), and the effects on partner firms' operations also differ significantly (Mowery et al., 2002). Mowery et al. (2002) draw attention to the fact that only a few studies examining JV learning distinguish between 'learning' and 'co-specialization' JVs. Indeed, an examination of published research reveals that the learning issues

in 'co-specialization' JVs are not yet well addressed, and therefore there is a gap in the JV literature.

In transition economies, JVs were one of the most broadly used modes for technology transfer (Child, 1994; Radosevic, 1999). The preference for this mode stems from the fact that it offers multiple benefits for both partners in pursuing strategic goals and objectives (Robson et al., 2002). From the perspective of the Western firm the option to form an equity JV with the Eastern partner appears to be attractive because it provides better opportunity to exercise control over transferred technology than is the case in, for example, a licensing agreement, and allows profit from its application to be extracted (Wong et al., 1999). Furthermore, cooperation in foreign countries with local firm gives the Western firm the opportunity to pursue such strategic objectives as to establish long-term presence in particular foreign country, to enter the local market, or (and) to access local resources which otherwise could not be available (Yan and Grey, 1994; Wong et al., 2003). Essentially, it is important to point out that the decision of a Western MNE to share own modern technology with another firm is built upon on the strategy of exploitation its technological advantage in the most efficient way by utilization at minimum cost the knowledge it already possesses (Al-Obaidi, 1993). Furthermore, the formation of an equity joint venture with the Western firm is also highly beneficial for the local partner whose main strategic objective is to access the technological knowledge and skills which cannot be fully accessed through other means due to its tacit nature (Child, 1994).

Theoretical perspectives on JV formation

There are a number of theoretical perspectives on JV formation, such as the transaction cost approach (Buckley and Casson, 1988; Hennart, 1988, 1991), resource dependency (Pfeffer and Nowak, 1976), strategic perspective positioning (Contractor and Lorange, 2002; Harrigan, 1985) and the institutional perspective (Ang and Michailova, 2008). However, in recent years the JV literature increasingly refers to knowledge sharing and acquisition as to one of the main objectives of JVs and explaining the rationales behind JV establishment from organizational learning perspective (Lyles, 1988; Mowery et al., 1996; Simonin, 1997; Kogut, 1988; Westney, 1988). It is often less costly and time consuming to acquire knowledge already developed by other firms (Lane and Lubatkin, 1998). Indeed, in the global economy, JVs have become

increasingly important as they provide the opportunity for the partners to acquire new knowledge from this form of cooperation (Inkpen and Dinur, 1998). In fact, a JV implies a presence of a close cooperation between parent firms, the contribution of different resources and, thus, provides an excellent ground for learning. Recently, JVs, where learning and knowledge exploration is a primary objective, have gained a particular popularity among scholars and have been labeled a ‘vehicle for learning’ (Khanna et al., 1998; Hitt et al., 2000).

2.2.2. Learning through Joint Ventures

Antecedents of learning through JVs

Learning through JVs has some specific antecedents. In particular, the JV structure and its relational aspects affect greatly the nature, process and outcomes of learning (Hennart, 2006; Jormanainen, 2009). Hennart (2006) suggests that the structure of a JV to a large extent explains the outcomes of the processes taking place in JVs. Hence, we assume that structural features of JVs will significantly influence the scope and outcomes of learning. In order to understand the nature of learning and knowledge acquisition processes, previous research links organizational learning with concepts of trust, conflict, control, and bargaining power, proposing their close interconnectedness. In their study Inkpen and Curral (2004) use trust as a central concept, and argue that when inter-partner trust increases, the willingness of partners to provide access to information is also likely to increase, thereby providing the foundation for inter-partner learning. Consequently, they conclude that inter-firm trust is the key variable that determines knowledge accessibility. The concept of trust is closely related to that of conflict (Kale et al., 2000), a greater extent of conflict in partnership decreases the level of trust between parents, and vice versa that, in turn, influences the achieved degree of learning.

Further, concepts of power and control also have an important impact on learning dynamics. Makhija and Ganesh (1997) develop the model, which centers on control processes as a primary means through which learning takes place within a JV, and addresses the manner in which JV control processes affect different types of learning for each of the partners. Moreover, possession and control of key resources in the partnership provides the basis for bargaining power (Inkpen

and Beamish, 1997), which allows resources attractive for another partner to be withheld. However, over time, knowledge acquisition by one partner may erode the value of knowledge contributed by another partner, and as a result, the bargaining power of one partner would be decreased (Inkpen and Beamish, 1997).

Nevertheless, despite the importance of the antecedents for learning process above described and their outcomes, their detail examination is beyond the focus of this research, which aims to concentrate on the understanding the nature of learning outcomes for JV parents. Next I elaborate on the specific aspects that this thesis attempts to address.

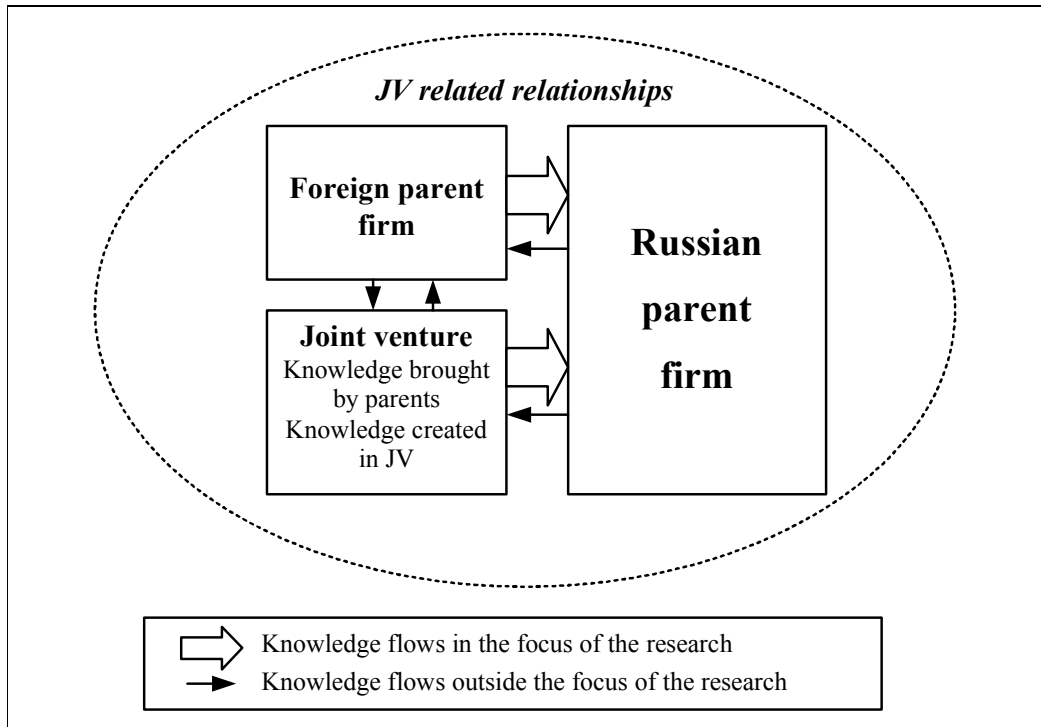
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The focus of this research is to examine the outcomes of learning through JVs for Russian parent firms. Specifically, the objective here is to investigate the full range of changes in operations of Russian parent firms attributable to learning through JVs with foreign firms.

Further, it is important to clearly delineate several concepts in theoretical terms in order to gain a precise understanding of the research focus. First concept is the source or origin of knowledge learnt through JVs by Russian parent firms. In this respect, Inkpen and Dinur (1998) distinguish three types of knowledge from which parents can benefit: (1) Knowledge useful in the design and management of other JVs. In other words, this knowledge may be useful when initiating further partnerships in the future and refers to the partner skills to manage JVs. (2) Knowledge and skills not applicable /needed in their own operations. This knowledge might be specific to the established JV but does not have value outside the JV. (3) Knowledge that can be used by parent companies to enhance their own strategy and operations. These types of knowledge might be either transferred to the JV from another JV partner, or it might be created in the JV in the course of its operations. As the JV provides the potential for interactions between the parents, the knowledge can be acquired during the communication that, for JV purposes, are carried out between parent firms.

With reference to the above, in this study I am interested in the first and third type of knowledge because they can be used beneficially by parent firms outside a particular JV. Figure 2.1 illustrates the knowledge flows in a JV context, and presents those that are in focus of this research.

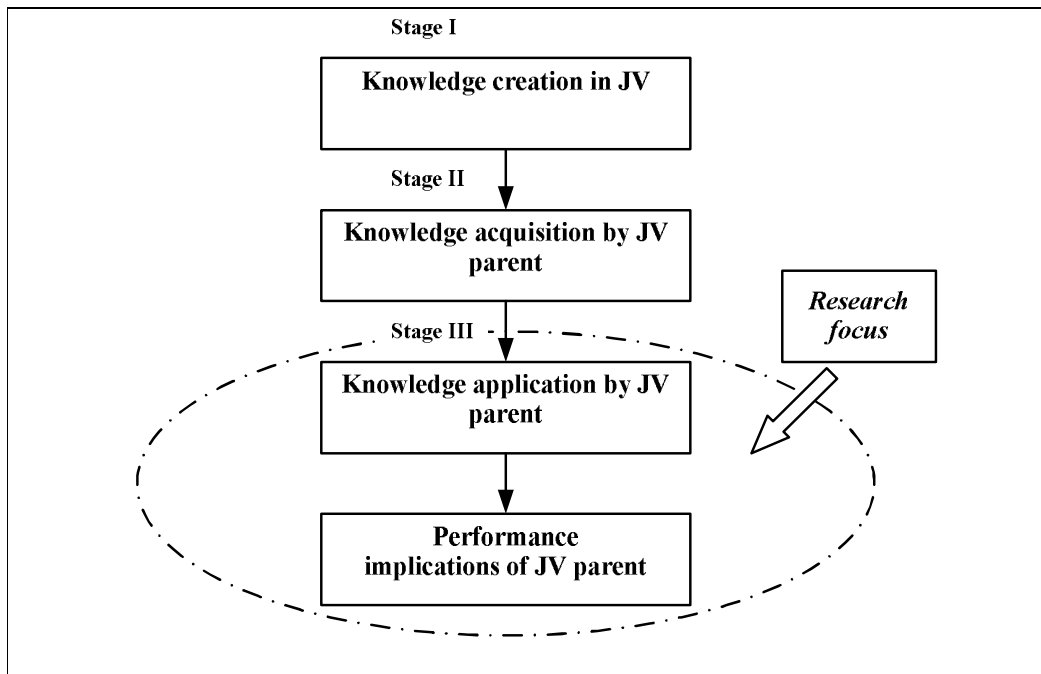
Figure 2.1 Knowledge flows in JV context



Second concept worth of discussion with regard to research focus is a stage of learning. Indeed, as learning through a JV is a multi-stage process (Inkpen, 2000), it is important to clarify which of these stages is the focal point of this study. The first stage is knowledge creation in the JV, the second is the interaction between the JV and the parent, or the knowledge transfer from JV to a parent firm, and the third stage is the integration and application of the JV knowledge transferred from the parent firm (ibid.). As suggested by learning theory of importance here is to recall that whether learning is successful or not becomes obvious only at the third stage because knowledge

can be beneficial only when it is disseminated in the organization and integrated in that organization's knowledge base (Cohen and Levinthal, 1990). Thus, the focus of this research is this third stage. Figure 2.2 presents the stages of the process, and illustrates the focus of this research; the third stage of the JV learning process.

Figure 2.2 JV knowledge management process



In the context of learning through JVs one of the most serious problems is that a large part of knowledge transferred from a JV to a parent will dissipate as it spirals up to the organization level of the parent firm. In the JV context, in addition to issues at the organizational level that are related to the organizational learning outcomes discussed in the previous section, obstacles arise during the knowledge transfer from JV to the parent firm. Knowledge transfer does not happen automatically and a parent firm needs to undertake a conscious effort to transfer knowledge to its own organization. In other words, a parent firm needs to have a learning intent which refers to

the desire of the organization to learn and acquire a partner's knowledge (Pucik, 1988; Hamel, 1991; Levinthal and March, 1993; Inkpen and Dinur, 1998), and to the extent of the resource commitment to learning (Hamel, 1991). These efforts imply the creation of various connections through which individuals can share their observations and experiences (Von Krogh et al., 1994). The intensity of the efforts of parent firm learning reflects the degree to which the parent is actively trying to acquire the skills and capabilities of the partner (Inkpen and Dinur, 1998). Scholars have found four important mechanisms between JV and the parent that provide the individuals with an opportunity to share their observations and experiences: (1) technology sharing, which implies the establishment of various processes to gain access to technology brought to the JV and existing in the parent firm such as, organizing structural meetings, access to technology links, etc.; (2) inter-organizational interaction beyond specific technology initiatives such as, social interaction, visiting JV facilities and illustrating the differences in practices; (3) personnel transfer, which implies the structured rotation of personnel between JV and the parent as a means of mobilizing personal knowledge; and (4) strategic integration, which refers to the process through which a JV strategy is linked with that of the parent firm. Doz (1996) argue that close relationships are important to the ability of the parent to appreciate the processes taking place in JVs.

To summarize, the focal point of this study is the final stage of learning as presented in Figure 2.2, which takes place within the boundaries of the parent organization. At this stage an efficient integration should occur which refers to "the ability of productive system to access, transfer and apply multiple types of knowledge needed in the production of goods and services" (Grant and Baden-Fuller, 2002:423). A key challenge here is to establish mechanisms for knowledge integration, or in other words, for the transformation of individual knowledge into the broad organizational knowledge base. Grant and Baden-Fuller (2002) point to two mechanisms: (1) the direction in which firms transform specialized knowledge into directives, rules and operating procedures; and (2) the organizational routines, which include complex patterns of coordination, that enable specialists to integrate their knowledge into the production of goods and services.

Hence, the phenomenon of interest in this research is the nature and extent of outcomes stemming from the application of knowledge acquired by Russian parent firms through JVs. Of

importance is that an examination of prior research finds that this issue has been overlooked in the previous literature. The next section presents a concise summary of the existing studies focusing on outcomes of JV learning.

2.3. Outcomes of learning through JVs: literature review

Outcomes of learning have long been discussed in the literature which, in majority of studies, scholars measure using the concept of performance (Agyris and Schön, 1978; Fiol and Lyles, 1985, Argote et al., 2000). Although the intention of this study is not to investigate the objective determinants of performance changes attributable to JV learning, but rather the influence of JV learning on various aspects of parent firms' operations, the review of the studies examining the learning-performance relationship is essential for illustrating the research gap in the field. Hence, only those studies that mainly use the organizational learning perspective and knowledge-based view were included into the critical review. Table 2.1 presents the list of the studies.

Table 2.1 Literature review on performance outcomes from learning through JVs

	Authors	Phenomenon/ Theoretical ground	Level	Measures	Context	Method/ Data	Findings
1	Lyles and Salk, 1996	Influence of knowledge acquisition from foreign parent in IJV on IJV performance/ Organizational learning	IJV	Business volume, market share, achievement of planned goals, profit), Competency- based HR management (providing adequate worker training, improving management skills).	Hungari an- Foreign IJVs	Survey, 201 IJVs	There is a significant relationship between knowledge acquisition and all indicators of performance. Also, such determinants as capacity to learn, articulated goals and structural mechanisms are positively associated with knowledge acquisition by JVs.
2	Makino and Delios, 1996	Influence of knowledge acquisition from different channels on IJV performance/ Organizational learning perspective, internationaliz ation theory	IJV	Managers' categorical assessment of IJV financial performance	Japanes e-Asian IJVs	Survey, 558 IJVs	Partnering with local firms decreases location- based local knowledge disadvantages in the host countries and improves JV performance.
3	Steensm a and Lyles, 2000	Influence of knowledge acquisition from foreign parent in IJV on IJV survival/ Social exchange and knowledge- based perspectives	IJV	IJV survival	Hungari an- Foreign IJVs	Survey, 135 IJVs	An imbalance in the management control structure between the parents increases likelihood of JV failure. However, an imbalance in the ownership control structure has no influence on survival. Yet, support from the foreign parent is positively related to JV learning and JV survival.

4	Lane et al., 2001	Influence of knowledge acquisition by IJV from foreign parent mediated by the ability to apply this knowledge on IJV performance/ Organizational learning theory	IJV	Business volume, market share, achievement of planned goals, profit	Hungarian- Foreign IJVs	Survey, 78 IJVs	Trust between a JV's parents and the JV's relative absorptive capacity influence its ability to understand new knowledge held by foreign parents; a JV's learning structures and processes influence its ability to assimilate new knowledge from those parents; the JV's strategy and training competence shape its ability to apply the assimilated knowledge; trust and management support from foreign parents are positively associated with JV performance, but not learning.
5	Child and Yan, 2003	Influence of organizational learning on IJV performance/ Organizational learning, strategy perspectives	IJV	'Goal' and 'system' criteria	Sino-foreign IJVs	67 manufacturing IJVs	Organizational learning, resourcing and control are more strongly associated with variance in system performance than in goal performance.
6	Beamish and Berdrow, 2003	Learning in IJVs on parent firms/ Organizational learning perspective	IJV	Sales performance, operational performance, financial performance, achievement of original goals	Canada, USA IJVs	Survey, 75 IJVs	Production-based JVs are not typically motivated by learning outcomes. Find no conclusive evidence of a direct relationship between learning and performance. For a minority of firms, there are strong indirect learning outcomes, particularly regarding partnering and market knowledge

7	Berdro w & Lane, 2003	Impact of learning in IJV on value creation/ Organizational learning	IJV	Mindset, controls, strategic integration, training and development, resource contribution and integration, relationships development	Canada n, USA, Mexican IJVs	Case- based, 20 interviews	Learning adds value to JVs and enhances adaptability and responsiveness. Learning is the most beneficial when leads to new opportunities. Not all JVs provide similar learning opportunities or demand similar degrees of learning and inefficient learning can disable the achievements of performance outcomes.
8	Dhanara j et al., 2004	Influence of knowledge transfer to IJV on IJV performance/ Organizational learning, economic sociology	IJV	Business volume, market share, achievement of planned goals, profit	Hungari an- Foreign IJVs	Survey	There is a positive relationship between explicit knowledge transferred to JV and its performance. However, there is a negative link between tacit knowledge and JV performance, and its influence stems from the indirect effect on the learning of explicit knowledge.
9	Tsang et al., 2004	Influence of knowledge acquisition in IJV on IJV performance/ Organizational learning, knowledge- based view	IJV	Business volume, market share, planned goals, market penetration, product quality, reduction of product defect, customer service, customer satisfaction, reduction of customer complaints, reduction of operation cost, operational efficiency, employee productivity	Vietnam ese- Foreign IJVs	Survey, 89 IJVs	Finds that characteristics such as foreign parent commitment, local parent receptivity, goal clarity, intensity and frequency of conflict influence knowledge acquisition in JVs, which, in turn, has a positive impact on JV performance.
10	Anh et.al., 2006	Influence of tacit and explicit knowledge acquisition in IJV on IJV performance/ Knowledge- based view	IJV	Business volume, market share, achievement of planned goals, profit	Vietnam ese- Foreign IJVs	Survey, 173 IJVs	Finds that all components of absorptive capacity contributes substantially to the level of knowledge acquisition reported by JVs; This, in turn (in particular acquisition of tacit knowledge), contributes significantly to JV performance

11	Li, 2006	Knowledge acquisition by IJV from foreign parent/ Technological capabilities, organizational learning; strategy perspectives	IJV	Technological capabilities accumulation in IJV	Chinese IJVs	Survey	Finds that accumulation of technological capabilities positively associated with JV performance
12	Zhan and Luo, 2008	Ability of IJV to exploit resources and explore new resources on IJV performance/ Capability and organizational learning perspectives	IJV	Financial outcomes (ROI, ROA, and revenue growth), and competitive outcome (market share, competitive position vis-à-vis rivals, customer satisfaction, organizational reputation and product image, realization of long-term strategic goals).	Chinese-Foreign IJVs	Survey, 113 IJVs	IJVs perform better in both competitive and financial terms when they possess greater abilities to exploit current resources contributed by parents and to continuously upgrade and develop new capabilities
13	Mowery et al., 1996	Knowledge transfer within strategic alliances/ Knowledge-based view, capabilities perspective	Strategic alliance parent	Change in TC measured by change in citation patterns of partner's patent portfolio (overlap with the parent after participation in SA)	USA strategic alliances	Survey	Transfer of technological capabilities within alliance partners is greater in equity-based alliances, and depends on the parent firms' absorptive capacity.
14	Inkpen and Crossan, 1995	Framework of learning from IJV in parent firms/ organizational learning	USA parent	Outcomes are discussed, but no clearly defined measurements of learning outcomes, focus on the process of learning	US-Japanese IJVs	Case-based, 58 interviews; 40 IJVs	Examines learning at individual, group and organizational level, and finds that parent firms are often unable to develop the appropriate mechanisms and systems to transfer knowledge from JVs. Also, rigid set of managerial beliefs can severely limit the effectiveness of organizational learning.

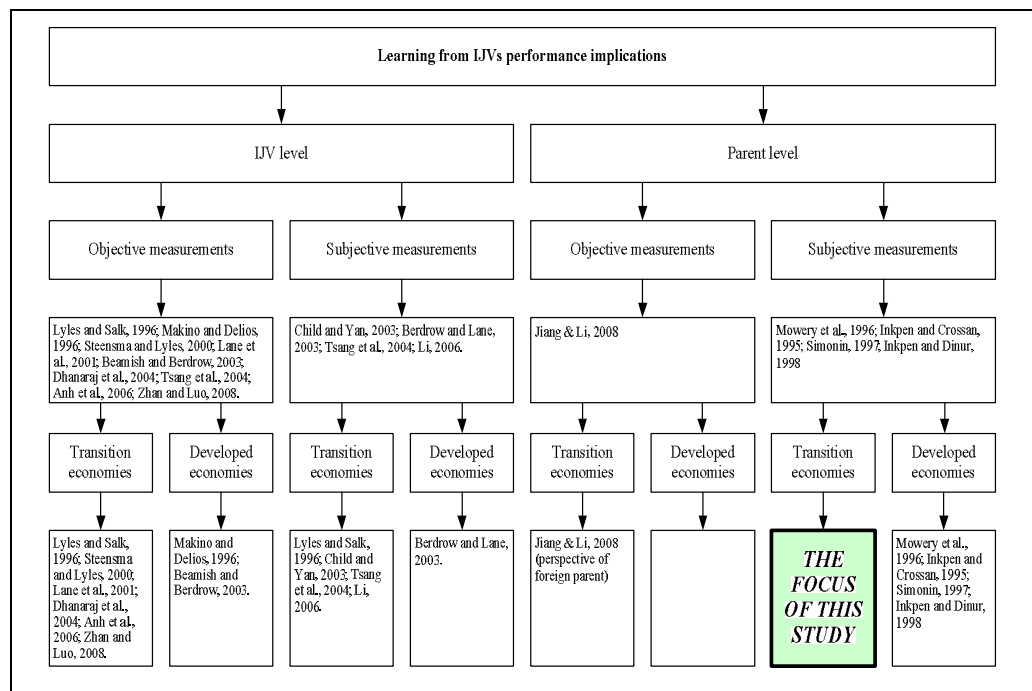
15	Simonin , 1997	How parent firms learn from strategic alliances/ organizational learning, resource based view, strategy perspective	Parent firms	Collaborative know-how of parent firms linking it with tangible and intangible benefits	USA strategic alliances	Survey, 151 firms	Finds that the mere fact of cooperation in alliances is not sufficient condition for achievement of benefits. The important aspect is that the acquired knowledge must be internalized first and collaborative know-how must be developed to contribute to future collaborative benefits.
16	Inkpen and Dinur, 1998	Framework of knowledge transfer process from IJV to parent firms/ organizational learning	USA parent	Outcomes are discussed, but no clearly defined measurements of learning outcomes, focus on the process of knowledge transfer from IJV to parents	US-Japanese IJVs	Case-based, 5 longitudinal cases	Identifies key processes used by JV parents for sharing knowledge, and some of them lead to more efficient knowledge transfer than others. Provides examples how parent firms learn from JVs.
17	Jiang & Li, 2008	Relationship between organizational learning and firm-level financial performance/ organizational learning	German parents	Parent firms' financial performance	German-foreign IJVs	Survey, 127 firms	Finds a significant, positive, and strong relationship between organizational learning and financial performance of foreign parent firm. This positive relationship is stronger in JVs and weaker in contractual alliances. Also, the relationship is stronger when the partners are based on the same industry and weaker when they are across industries

As shown in Table 2.1, in order to emphasize the research gap, these studies were analyzed according to several criteria:

- (1) The level of analysis, which is JV vs. parent firm;
- (2) The type of empirical measurements, which is objective vs. subjective;
- (3) The geographical focus of the study, which is transition vs. developed economies.

Moreover, Figure 2.3 provides a graphical illustration of the results of this classification where studies have been grouped together according to these criteria. In particular, at the first stage, studies were divided between those that examine learning outcomes at JV vs. parent levels. At the second stage, the categorization was carried out according to the type of measurements used by the researchers, namely objective vs. subjective. The objective measurements are understood in this study as business indicators such as business volume, market share, profit, whereas subjective measurements are considered as indicators of change in, for example, capabilities, mindset, and product quality. Finally, within each of four groups studies were divided according to the empirical context according to those conducted in transition economies vs. developed economies.

Figure 2.3 Literature review on outcomes of learning through JVs



Several conclusions can be drawn from the review. First, and the most important, is that the majority of the studies have examined performance implications of JV learning at the JV level. Although JV performance is an important indicator of learning outcomes, strategy research explicitly recognizes the fact that the success of JVs must translate into a competitive advantage for the partners (Das and Teng, 2003). Learning in JVs is not an end in itself, but from the perspective of partnering firms its final objective is performance improvements (e.g. Mowery et al., 1996; Jiang & Li, 2008). Further, the learning approach suggests that learning manifests itself through changes in knowledge and performance of the 'student', and in turn, in the context of the inter-organizational learning, this implies that learning from JVs should have a value and performance implications for parent firms. A JV allows a parent firm to get close enough to other partners to understand tacit components of their knowledge. Still, it appears from the literature review, that the number of studies assessing implications of learning at the parent firm level is noticeably smaller than those focusing on the analysis of learning outcomes at the JV level (Mowery et al., 1996; Inkpen and Crossan, 1995; Simonin, 1997; Jiang & Li, 2008). Beamish and Berdrow (2003) point out that this is the least investigated area in alliance knowledge management, and define this phenomenon as 'knowledge harvesting' which provides an opportunity for parent to leverage the acquired knowledge in such a way that it can improve existing operations as well as activities of other new ventures in the future.

The second conclusion is that, in both groups of studies there is a clear preference for the sole use of objective measurements such as business volume, market share and profit. The JV research findings support a positive relationship between organizational knowledge transfer and JV financial performance (Lyles and Salk, 1996; Steensma and Lyles, 2000). In their study of international joint ventures, Lane et al. (2001) found that the amount of learning from foreign parents that results from the acquisition and assimilation of new external knowledge is positively associated with the performance of JVs. However, researchers such as Child and Yan (2003), Makino and Delios (1996) propose the use of subjective measures based on managers' perceptions of performance. The argument here is that there are more insights beyond the objective measurements. Learning enables an organization to access new information and knowledge which in turn can generate various types of improvement in different functional areas

such as, manufacturing process development, or product development that do not lead to immediate financial outcomes.

One of the potential concepts applicable for an assessment of the outcomes of JV learning is different types of capabilities. Scholars argue that such evaluation is more relevant for examining the impact of learning and knowledge acquisition since the application of acquired knowledge in term of organizational action represents the basis for the development of new skills and capabilities, which in turn have an influence on the competitiveness and business performance of the firm (Lyles and Salk, 1996; Li, 2006). Inkpen and his colleagues apply this concept in their studies. However, the detailed operationalization of this type of measurement has not yet been developed in a JV learning context. Mowery et al. (1996) attempt to examine the change in capabilities and measure the capabilities citation pattern reflecting the extent to which parent technological resources overlap with another partner technological portfolios as a result of participation in the alliance. Thus, analysis of the literature shows that subjective measurements for performance assessment have been found particularly pertinent for examining the changes associated with enhanced knowledge base. In this regard Beamish and Delios (1997) argue that, in the context of a JV, perceptual and objective measures of performance are generally correlated.

The third conclusion is that when analyzing research in the field, particular attention has been paid to the empirical context in which studies have been conducted. Indeed, if one aims to understand the performance implications of learning, from the strategy perspective context matters and allows for a more meaningful understanding of the research findings. Overall, the results of the literature review indicate that there is an approximately equal number of studies to date conducted in transition and in developed economies. However, although transition economies have received significant scholarly attention, the focus of research in this context has mainly been on understanding the performance implications at the JV level. Indeed, research examining implications at the level of parent firms presents the empirical evidence from parents firms from developed countries rather than transition economies (Inkpen and Crossan, 1995; Simonin, 1997).

The discussion above reveals that the literature to date has several shortcomings that are worthy of redress in this research. First, the implications of JV learning at the parent firm level have not yet been studied in sufficient depth and detail. Second, comprehensive measurements of learning that permit an understanding of its full impact on parent firm operations are still underdeveloped. It has been recognized that the assessment of performance implications of learning is an extremely challenging task due to the time lag between learning and its outcomes (Berdrow and Lane, 2003). The other possible explanation for the limited number of studies could be the fact it is a challenge to isolate the impact of learning through JV from other factors which have similar performance implications. Finally, the value of JV learning for local parent firms in transition economies, and in particular in Russia, have yet not been empirically understood.

For the reasons described above, there is a theoretical gap of lack of knowledge about the implications of JV learning for parent firms. Indeed, the investigation of this phenomenon in the context of transition economies adds to existing knowledge and permits some novel conclusions to be made. Understanding the nature and extent of the benefits from learning from JVs for local JV parent firms sheds new light on the real benefits of JVs for local industrial development. This would be of interest to practitioners and policy makers. For the reasons described above, the main research question of this study is:

How does learning through JVs in transition economies improve operations of local parent firms?

In order to answer this question, appropriate measures should be applied, and this study argues that several theoretical perspectives offer comprehensive concepts for the purpose of this research. The next section explains in detail the choice of concepts and their applicability to the study.

2.4. Outcomes of learning through JVs for the upgrading of capabilities in Russian parent firms

The concept of capability has been closely related to learning outcomes and used in various streams of studies for the assessment of learning benefits (Simonin, 1997; Figueiredo, 2002). Hence, the capability approach is particularly useful for an examination of the outcomes of JV learning for parent firms.

2.4.1. Capability-based approach

The capability-based approach is closely linked with knowledge-based and organizational learning. The development of capabilities takes place through learning or, in other words, by the creation, acquisition and integration of knowledge. Hence, a change in capabilities is a direct outcome of learning and mediates learning and performance. Indeed, capabilities are considered as a vital resource necessary for gaining competitiveness and superior performance (Nelson and Winter, 1982; Teece, 1982; Prahalad and Hamel, 1990; Pisano, 2002). Many different types of capabilities have been considered through different lenses in various research fields. At the organizational level, Dosi et al. (2002) define capabilities as the know-how that enables organizations to perform different types of activities. Grant (1996: 377) suggest that organizational capabilities represent a 'firm's ability to perform repeatedly a productive task which relates either directly or indirectly to a firm's capacity for creation value through effecting the transformation of inputs into outputs'. The underlying meaning of these definitions is that capabilities allow firms to efficiently use their resources and implies the implementation of activities in a repetitive manner. In practical terms, Dosi et al. (2002) suggest that organizational capabilities are manifested in routines and define them as units of organized activity with a repetitive character. Organizational routines are, in turn, built upon individual skills (ibid.).

The process of capabilities development has several features acknowledged by scholars from different research traditions. First, it requires the implementation of continuous effort by all

members of the organization and it is path-dependent (Dosi et al., 2002). Second, the development of capabilities requires complex patterns of coordination between people and between people and other resources, which, in turn, requires learning through repetition (Grant, 1991). In other words, a combination of knowledge-based and physical resources is needed for capabilities to develop. Third, the process of building capabilities requires correspondence between scope of knowledge and organizational structures and other resources necessary to support this process. Specifically, Pisano (2002) argues that the building process depends upon the presence of three forces: (1) a technical base, which refers to scientific principles, theories, algorithms, conceptual models, specific analytical or experimental techniques, heuristics and empirical regularities; (2) organizational knowledge, including knowledge of how to organize and manage projects, coordinate different problem-solving activities, determine goals and incentives, allocate resources and assign personnel, and resolve disputes; and (3) the constraints imposed by the need to integrate new process technologies with existing process technologies or production capabilities, such as new process techniques, might be at odds with physical capacity or operational competences of an existing plant.

As a result of the process of building capabilities the organizational knowledge is generated and transformed into new patterns of activity, routines and the organization of new logic (Teece et al., 1997). However, these capabilities represent the source of a competitive advantage only when firms deploy them to a productive end (Grant, 1996).

In addition to organizational capabilities, the literature distinguishes several other specific types of capability. Organization studies and strategy research focus on the examination of such organizational capabilities as dynamic capabilities and argue that these are vital for firms to sustain a competitive advantage in a rapidly changing business environment (Nelson and Winter, 1982, Teece et al., 1997; Dosi et al., 2002). Furthermore, the innovation and development literature concentrates on understanding the impact of building technological capabilities on industrial development, and argue that a process of acquiring technological capabilities is the driving force behind technical change, and the achievement of international competitiveness requires the presence of technological capabilities (Pack and Westphal, 1986; Figueireido, 2002; Schroeder et al., 2003). Indeed, technological capability is required to increase productivity and

develop the new products that represent the underlying force of industrial development of firms and economies.

To summarize, the development of capabilities is one of the most important strategic objectives of firms as it leads to superior performance, and this is achieved through learning. Hence, the concept of capability is recognized in this research as a suitable tool for the assessment of the learning acquired through JVs. Overall, it is a difficult task to measure performance implications, and this complexity increases in the setting of inter-organizational learning. Most studies that aim to capture the direct impact of learning on business performance do not capture the dynamic nature of activities of industrial enterprise. The analysis of firm capabilities permits a better understanding of the insights of firm development, and the underlying reasons for its success or failure. For example, Schroeder et al. (2003) study the development of capabilities in manufacturing plants as a means to enhance performance and competitiveness.

In transition economies in particular, firms need to strengthen their technological foundations in order to catch up with western rivals, and JV studies find that learning about advanced technologies of foreign partners is one of the most important objectives of local parents (Lyles and Salk, 1996; Tsang et al., 2004; Javorcik and Spatareanu, 2008). Therefore, this study operationalizes the performance implications of learning in terms of the development of technological capabilities at the level of the parent firm. As the JV literature does not offer comprehensive measurement, I have adopted the empirical tools from innovation studies. Furthermore, the previous literature also emphasizes the need for local firms to improve their managerial capabilities, and the presence of learning intent to acquire managerial knowledge has been extensively pointed out by scholars (e.g. Lane et al., 2001). Taking this view into consideration, I also include managerial capabilities as a performance implication of learning. I next discuss these capability types in greater details.

2.4.2. Technological capabilities and technological learning

Technological capabilities have always been a fundamental component of economic growth and welfare (Pavitt, 1988; Bell and Pavitt, 1997). Dosi, (1988) states that performance differences are attributable to differences in the accumulation of technological capabilities. The processes of economic adjustments in countries with transition economies have significantly weakened the competitiveness and technological foundations of domestic firms, and thus, domestic firms need to undergo processes of technical change in order to catch-up with western rivals. This process of technological change, in turn, requires the development of technological capabilities.

Technological capability is defined as the resources needed to generate and manage technological change, including skills, knowledge, experience and organizational systems (Bell and Pavitt, 1995). A further definition developed by Kim, (1997:4) is ‘the ability to make an effective use of technological knowledge in efforts to assimilate, use, adapt, and change existing technologies’. Technological capabilities, therefore, refer to the skills, knowledge and experience required to achieve technological change at different levels (Costa and de Queiroz, 2002). Hence, the presence of technological capability in an organization implies that the organization possess the ability to implement internal improvements in process and in production organization, product, and project engineering.

It is important to stress that technological capabilities require not only knowledge-based assets but also physical and financial assets. One part of technological capabilities refers to an understanding of scientific principles and the other to their application to a commercial end. More concretely, technological capability ‘is a set of pieces of knowledge which includes both practical and theoretical know-how, methods, procedures, experience and physical devices and equipment. It also represents the superior and heterogeneous technical assets of a firm and closely related to product technologies, design technologies, process technologies and information technologies’ (Wang et al., 2006:30).

Technological capability is acquired as firms undertake technological effort, or learning (Bell, 1984; Lall, 1992; Figueiredo, 2002). Bell and Pavitt (1993:163) argue that 'technological accumulation and learning refers to any process by which the resources for generating and managing technical change are increased and strengthened'. In the innovation literature learning is understood as processes by which additional technical skills and knowledge are acquired by individuals and, through them, by the organization (Bell, 1984; Figueiredo, 2002). The concept of technological knowledge is in the centre of this perspective. This is described by Hitt et al. (2000:234) as 'individual explicit such as individual skills pertaining to a particular technology that can be codified; individual tacit such as individual skills pertaining to a particular technology that are personal; collective explicit such as standard operating procedures or collective tacit such as an organization's routines and culture regarding technology'.

Previous literature distinguishes a number of specific features of the process of building technological capability that are, to a large extent, similar to those of organizational capabilities. First, the process of building technological capabilities is incremental and cumulative in nature (Wignaraja, 2002). Firms gradually develop their technological foundations over time, and the existing knowledge base and technological trajectories of the past development of the firm defines, to a large extent, the speed and nature of the future capability building process. This corresponds with idea put forward by Cohen and Levinthal (1990) that absorptive capacity depends on the prior knowledge of the firm. There are two main features of absorptive capacity; cumulativeness, which allows more informed choices that are based on previous knowledge to be made, and the better understanding of new knowledge.

In the context of the current research, the Russian transition economy, the stock of knowledge in firms is influenced by the path of the country and industry the development of technology in the pre-transition period. In Central and Eastern European countries the technological development of firms and economies as a whole was the complete responsibility of the state. This defined the priorities for technological development and the allocated financial resources (Radosevic, 2003). As a result of this coordination, some of the industrial sectors were the focus of state attention and were technologically advanced, thus representing an area of comparative strength for these

Central and Eastern European countries, whereas some others were developed to a significantly smaller extent (Radosevic and Kutlaca, 1999).

The second process relating to the building of technological capability is that the development of technological capabilities does not take place automatically, and firms have to undertake investments in the acquisition of technological capabilities and for this purpose allocate different kinds of resources (Wignaraja, 2002). The literature stresses that in doing so, firms need to search for different types of knowledge from various domestic and non-domestic sources, and develop the appropriate strategies for the acquisition of such knowledge. Of importance here is that foreign knowledge sources have gained a particular value when Foreign Direct Investment (FDI), and in particular JVs, are considered as an important learning source for local firms. However, the literature also emphasizes that knowledge acquisition from foreign firms per se is not sufficient for successful building technological capabilities and should be complemented by the internal technological effort. The acquired knowledge should be efficiently integrated in the existing knowledge base in order to have value and implications for performance. In the current research context, the allocation of investment is manifested in the intensity and frequency of communication between the JV and parent firm. The parent firms, as discussed in section 2.3, can use various means to acquire knowledge from the JV or directly from the JV partner and transfer it to their own organization.

The third feature of the process of development of technological capabilities is that it is unpredictable in nature, and the outcomes of technological learning are always uncertain (Wignaraja, 2002). The most important reason for this is that technological knowledge has a large tacit component, and thus, it is costly and time-consuming to acquire (Cantwell, 1991). Tacit knowledge is embedded to a great extent in people and organizational cultures, and this characteristic influences greatly the ease and speed of its acquisition and internationalization. The main part of knowledge acquired through a JV is tacit, and the outcome of its transfer and integration is even more uncertain. Thus, learning-by-doing and observational types of learning are particularly useful for building technological capabilities (Figuereido, 2003; Narula, 2003). Active involvement in the implementation of new technological processes and operations enable a deeper comprehension of their underlying principles and elements.

The fourth feature of capability building is its embeddedness in the external environment (Wignaraja, 2002). The particular path of development of technological capabilities that domestic firms follow in each country has historical origins, and thus, the processes of building technological capabilities have specific features in each of the national contexts. Therefore, it is recognized that firm-level technological capability development is embedded in the national system of innovation, defined as a network of institutions in the public and private sectors, that support the initiation, modification and diffusion of new technologies (Freeman, 1995). This implies that capability building involves co-operation between agents such as competitors, buyers, suppliers and support institutions. Moreover, national policy and institutional factors have a significant impact on the process of the development of technological capabilities in firms. Furthermore, there is interdependence between firm, industry, and country-level technological accumulation. Lall (1992:169) suggests that ‘firm technological capabilities development is the outcome of investment undertaken by the firm in response to external and internal stimuli, and in interaction with other economics agents, both private and public, local and foreign’. Indeed, whether companies develop technological capabilities and if this development will be successful depends on the structure and efficiency of the National System of Innovation (NSI) due to the fact that technological learning requires an efficiently operating NSI (Diez and Berger, 2003). Therefore, there are factors that are firm-specific and those that are common to given countries depending on their policy regimes, skills endowment and institutional structures (Lall, 1992).

This study considers the concept of technological capabilities to be highly appropriate for the assessment of learning through JV outcomes for parent firms in transition economies. Hence:

Research sub-question 1: How does learning through manufacturing Russian–Western JVs lead to the upgrading of technological capabilities of Russian parent firms?

Measurements of technological capabilities

The literature suggests various ways to measure technological capabilities. The most common practice is to assess R&D expenditure, investment in R&D personnel and patenting (Mansfield et al., 1979; Patel and Pavitt, 1997). However, most of these indicators do not provide insights into which specific function the change in skills and capabilities takes place. As previous studies point, innovation process goes beyond the application of knowledge generated by formal R&D activities (Srholec, 2005). Moreover, improvements in managerial and marketing skills may cause different types of innovative activities that are not directly linked with R&D activities. To address the limitations of these measurements, more comprehensive categorizations of technological capabilities have been developed. The most recognized is that suggested by Lall (1992), which classifies a firm's technological capabilities according to technical functions, and distinguishes investment capabilities, production capabilities and linkages capabilities as well as several levels that firms follow in their development. A number of recent studies have applied and modified this classification.

For the purpose of this study, I develop an analytical framework for the assessment of capabilities developed from learning from JVs in parent firms by modifying the concepts presented by Lall (1992) and Bell and Pavitt (1995) which have been used in later studies (Figueiredo, 2002; 2003; Li, 2006). The framework describes in detail the content of technological capabilities in three main functions: (1) investment, (2) production and (3) linkages.

Investment capabilities are defined as 'the skills needed to identify, prepare, obtain technology for, design, construct, equip, staff and commission new facility or expansion' Lall (1992:168). In other words, investment capabilities are the knowledge, skills and routines that are used to conduct a new industrial project, from pre-investment activities such as feasibility studies to project execution, as well the ability for efficient external sourcing. Specifically, they include the knowledge, skills and routines required to define the needs for the development and acquisition of new technology or production lines, for planning lay out and equipping new facilities; for making informed decisions regarding the scale of new operations and the range of products based on the optimal costs estimation. Further, as described in Li's (2006) study these capabilities

include upgrading information technologies, which directly influences the speed and quality of the decision-making process within a firm.

Production capabilities, according to Lall (1992:168), 'range from basic skills such as quality control, operation, and maintenance, to more advanced ones such as adaptation, improvement, or equipment 'stretching', to the most demanding ones of research, design and innovation'. Practically, these capabilities define the knowledge, skills and routines necessary to operate a plant, and encompass production management, production engineering, repair, and maintenance. Production capabilities refer to the skills required for the assimilation of process and of product technology, its adaptation and improvement, quality control, the monitoring of productivity and co-ordination of different production stages and departments, process, and product innovations following basic research activity. The manifestation of improved production capabilities can be the changes in product design, manufacturing process design and specification, product quality, and product quality control processes.

With reference to production capabilities, it is particularly important to emphasize the difference between process and product technology. Process technology is used to create and deliver products and services. This distinguishes them from product technology, which is the technology embedded within a product. Process technology includes quality control, maintenance, plant layout, inventory control and improvements in equipment and processes. Product technology includes mastering product design and specifications, improving existing products, developing new products and licensing product technology (Wignaraja, 2002). It is also important to stress that there are two sources to achieve improvements in the product. One is associated with improvements in the process, and is classified as process-technology related, and the other originates in product development activities and understood here as the product technology.

Process related capabilities are the same as manufacturing capabilities and there is an extensive literature on this. They include four main areas: costs, quality, delivery, and flexibility. Studies find a positive relationship with performance, albeit, there is not yet an agreement on the extent

of each of the individual areas of manufacturing capabilities. The development of capabilities is related to the adoption of certain practices such as Total Quality Management (TQM), Just-in-time (JIT) delivery and others. However, the capabilities are built when there is the ability to continuously integrate various practices into the production system, and implement continuous changes in aspects of operations. Process technology depends on the level of development and sophistication, and the mechanization of plant and equipment, on labor productivity, achieving quality at the appropriate costs (quality performance), the cost effectiveness and timeliness of logistics, reliability, on the availability of suppliers (delivery performance). Manufacturing capabilities play an important role regarding the way firms compete in the product markets, and firms have to continuously develop these capabilities. The ability of an organization to achieve low costs, high flexibility, dependability and quality is an important aspect that local firms need to improve in order to become competitive.

Linkages capabilities have been defined as ‘the skills needed to transmit information, skills and technology to, and receive them from, component or raw material suppliers, subcontractors, consultants, service firms, and technology institutions’ (Lall, 1992:168). They enable knowledge and technology transfer networks within the firm, with other companies, and with the domestic science and technology infrastructure to be organized.

The three functions described above, investment, production and linkages, are classified into four levels of difficulty; operational, advanced and innovative.

Operational capability is the ability to produce goods at given levels of efficiency and given input requirements. It may be described as technology through the use of skills and knowledge (Bell and Pavitt, 1995). In other words, this capability encompass the skills, routines, knowledge and experience to search, acquire and assimilate, use, master and make minor adaptations at the existing level of manufacturing processes and product technologies. Simply speaking, improvements in operational capabilities can be manifested as the ability to implement activities more efficiently at the existing level of technological development.

Advanced capability refers to the abilities and knowledge needed for incremental adaptation, improvements and re-design of initially acquired or ‘old’ products, processes and production organization at the level of the domestic market (Bell and Pavitt, 1995; Bell, 1997). Such capabilities are the skills, routines and knowledge needed for the implementation of significant improvements in the existing manufacturing process and product technologies leading to the development of new products for the domestic market. In other words, they are the skills, routines and knowledge associated with major creative imitation of existing technologies, and more complex than operational capabilities (Costa and de Queiroz, 2002).

Innovative technological capability is defined as the capability to change or improve products and processes. It may be described as change generating capability or technology changing skills (Bell and Pavitt, 1995). In other words, these capabilities permit the substantial development of technology and products to the world class level.

It is worth of noting that there are also other classifications of capabilities, and some scholars understand innovative capability as a separate type rather than level of sophistication of technological capabilities. For example, Bell (1997) defines innovative capabilities as the capabilities needed to make more substantial developments in technology, such as are incorporated in new ‘generations’ or ‘vintages’ of product or process. However, in this study I adopt Lall’s classification as it offers more concrete concepts well suited for the assessment of changes in technological foundations of Russian parent firms attributable to learning through JVs. Table 2.2 presents the framework in which columns set out the technological capabilities by function, and the rows, by the level of difficulty. This framework provides specific examples of routines at the organization level, which are organized according to the functions and levels of capabilities mentioned above. It is important to emphasize that the focus of this research is on capabilities at the organizational level that are manifested in routines shared throughout the organization, as opposed to personal capabilities of employees manifested in skills. When conducting analysis of the empirical data, the concepts presented in the framework (Table 2.2) were used to assess at which functional areas and levels the Russian parent firms were able to upgrade their technological capabilities through JV leaning. Of importance, this approach to data

analysis also enables a comparison across case firms regarding the nature and extent of upgrading to be conducted. Indeed, as the objective of the study was not to examine the overall path of capabilities development, but changes attributable to JV learning, this framework represents a good analytical instrument for this purpose.

Table 2.2 Taxonomy of technological capabilities: an analytical framework

Capability type/level	Investment functions	Production functions		Linkages
		Process and production organization	Product centred	
Operational	Monitoring of existing plant; preparation of initial project outline; monitoring and control of feasibility studies, search, evaluation and the choice of technology/suppliers; outline of project planning; standard equipment procurement; Technically assisted plant expansions; detailed engineering; project scheduling	Production coordination; Basic PPC and QC; Obtaining certification for routine process QC(e.g. ISO 9000); Minor and intermittent adaptations in the process, de-bottlenecking, 'capacity-stretching'; Systematic studies of new process control systems; Manipulating key process parameters (e.g. reduction); new organizational techniques (e.g. TQM, JIT)	Replication of product specifications and designs; Routine product QC awarded international certification (ISO 9000); minor adaptations in given specifications to market needs; incremental improvement in product quality; systematic 'reverse engineering';	Procurement of available inputs from existing suppliers; sale of given products to existing and new customers; searching and absorbing new information for suppliers, customers and local institutions
Advanced	Search, evaluation and selection of technology; full monitoring of: feasibility studies, search, evaluation, selection and funding activities; plant expansion without technical assistance; procurement engineering; basic engineering of the whole plant; working with suppliers in new facilities projects; overall project management	Continuous process improvements; routinised 'capacity-stretching'; licensing new technology; logistics systems for JIT delivery; Integrated automated systems with corporate control system	Licensing new product technology; continuous improvements in product specifications, non-original design; design of basic characteristics for new products for domestic market	Technology transfer to local suppliers to increase efficiency, quality for local supply
Innovative	Developing new production systems via R&D; World class project mgt; world class engineering; New process design and related R&D	Innovation based on research and engineering; World class production	World class new design and development; Original product design via R&D ; product for export markets	Collaboration in technological development with suppliers, customers and partners

2.4.3. Managerial capabilities

Managerial capabilities represent another important functional type of capability of which upgrading is of particular importance for Russian firms in the post-reform period. Moreover, previous studies argue that learning how to operate in conditions of market economy is one of the most important learning objectives of local firms in transition economies, when cooperating with foreign firms (e.g. Lyles and Salk, 1996; Dixon, 2006). In this study the concept of managerial capabilities refers to the ability of the organization to integrate build and reconfigure organizational knowledge how to organize structure of organization, planning and control systems, determine organizational goals and incentives, coordinate different problem solving activities, allocate resources and assign personnel.

Moreover, this research distinguishes one particular type of managerial capability relevant to the context of JV learning; the cooperation capability or collaborative know-how. This capability recently gained attention among scholars and has been recognized as a source of specific competitive advantage (Dyer and Singh, 1998 Simonin, 2002). Indeed, the success of firms related to managing partnerships and expanding their network is argued to be attributable to the particular competence that concerns creating and sustaining beneficial collaboration. In other words, experience in first JVs will improve performance of the following JVs (Reuer et al., 2002; Zollo et al, 2002). As firms acquire knowledge related to managing JV they are likely to be more efficient in managing and extracting benefits from subsequent JVs (Inkpen, 1998). Simonin (1997), in the context of US alliances, suggests that first the lessons should be internalized by the firm and drawn into specific know-how before they become useful for guiding future actions. This has been referred as to collaborative know-how. Collaborative know-how has been recognized as critical to understanding of a firm's performance (Simonin, 2002) and therefore, I include that this type of managerial capability is one form of measurement of learning through JVs. The literature refers to learning-by-doing as being particularly effective for the accumulation of collaborative know-how (Tsang, 2002).

Simonin (2002) shows that collaborative know-how is multi-dimensional construct with five underlying factors: (1) managing and monitoring (building trust with the partner, conflict resolution, managing JV-parent relationships, logistics and resource transfer, cross-cultural training, staffing, technological assessment); (2) negotiating (estimating asses values, legal aspects, negotiations); (3) search and selection (partner selection, partner identification, understanding strategic implications of collaboration); (4) knowledge and skills transfer (knowledge/skills acquisition, knowledge/skills safeguarding); (5) exiting (exiting from JV, profit or capital repatriation).

Overall, it is assumed that the upgrading of managerial capabilities attributable to learning through JVs takes place due to the changes in the mindset of managers in Russian parent firms, and these result in the development of new organizational routines. A mindset has been defined as the set of attitudes, thoughts and feelings that influence decisions and actions (Berdrow and Lane, 2003). Thus, a further concept to measure the implications of learning through JVs is managerial capabilities. On this basis and I have formulated the second sub-question of this research as:

***Research sub question 2:** How does learning through manufacturing Russian–Western JVs lead to the upgrading of managerial capabilities in Russian parent firms?*

2.5. Strategic implications of capabilities upgrading in Russian transition economy: modernization, restructuring and competitiveness

The extant literature argues that there is a strong relationship between organizational capabilities and performance (Nelson and Winter, 1982; Teece, 1982; Prahalad and Hamel, 1990; Pisano, 2002; Wang et al., 2006). Hence, capabilities in various functional areas of the firm were found to contribute to the development of the deployable resources of the firm (Schroeder et al., 2002).

For example, technological capabilities decrease a unit's costs, improve product quality and range which results in profit increase (Cantwell, 1991). Overall, the underlying idea here is that changes in technological and managerial capabilities should be further linked to strategic objectives and long-term organizational development. In this respect, this section aims to take the argument forward and illustrate in theoretical terms the performance implications of upgrading of capabilities through JV learning at the Russian parent firms. This research explores whether capabilities developed as a result of learning from a JV contribute to the firms' strategic goals and objective, thus, integrating the learning and strategy perspectives. In other words, I suggest that learning that results in a better mastering of processes and competences contributes to the long-term enhancement of performance.

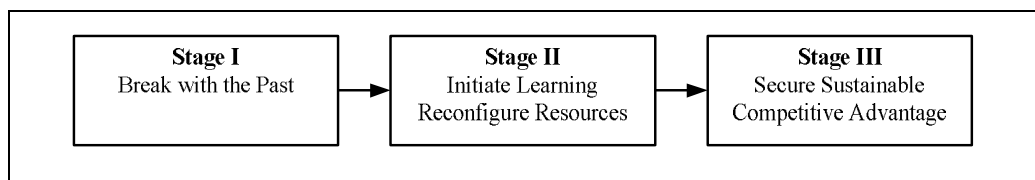
In Russia, the main strategic challenge that industrial enterprises face in the post-transition period is restructuring and an organizational transformation from the Soviet type into a new type of organization suitable for functioning in the market economy. Thus, the concept of restructuring particularly suits well a means to describe the strategic implications of learning and building capabilities through JVs. The issues associated with corporate restructuring in the Central and Eastern European (CEE) transition economies are already well documented in the literature (Filatochev et al., 2003; Uhlenbruck et al., 2003). In theory, there are three types of restructuring: portfolio restructuring, financial restructuring and organizational restructuring (Johnson, 1996). However, in CEE countries industrial enterprises faced specific challenges which restricted their options with regard to restructuring processes. Empirical studies point to several major issues that appeared in the post-reform period in transition economies: (1) outdated production facilities; (2) outdated technologies, (3) a lack of internal financial resources; (4) a lack of market demand for products; (5) the elimination of state support; (6) a lack of the managerial capabilities required to undertake profound changes needed for efficient functioning in a market economy, (7) distorted linkages with other economic actors (Wright et al., 1998). Industrial enterprises were in urgent need to implement changes in order to survive under the new conditions, and to become competitive in domestic and international markets. The ability of organizations to learn and to change flexibly is critical to restructuring (Newman and Nollen, 1998). The reality is that fundamental organizational change and deep restructuring of organizational resources has to

occur before former state-owned enterprises in the CEE can compete effectively in their home markets and abroad (Antal-Mokos, 1998; Newman, 2000).

Wright et al. (1998) distinguish several revitalization strategies available to enterprises. These include short-term strategies aimed at cost, employment and capacity reduction, and long-term or restructuring strategies oriented towards long-term improvements in market positioning, product offering, expansion to new markets and increased innovative activities. Studies drawing on empirical evidence from the first period of reforms 1992-1998, report, to a large extent, the attempts to implement short-term changes for immediate survival (Wright et al., 1998). Privatization is one of the central themes of this research stream (e.g. Uhlenbruck and De Castro, 1998; Filatotchev et al., 2003;). However, at the later stage some enterprises have shown the symptoms of recovery and some have shown signs of pursuing strategic restructuring strategies.

There is another categorization of enterprise restructuring or change described in the literature. Drawing on Russian case data, Dixon, (2006), defines three main stages: (1) breaking away from the past; (2) initiating learning and reconfiguring resources; and (3) secure sustainable competitive advantage. Figure 2.4 illustrates these stages of enterprise restructuring in transition economies.

Figure 2.4 The stage-based model of organizational transformation process in Russia



Adopted and modified from Dixon (2006)

At the first stage organizations attempt to break from soviet administrative heritage by the replacement of the old management team with a new one which has entrepreneurial orientation helps to do so (Dixon, 2006). The actions of management implemented at this stage result in improved organizational absorptive capacity and organizational learning (ibid.).

During the second stage, enterprises implement an effort towards the configuration of resources and increasing organizational learning (Dixon, 2006). This, it is argued, results in the development of organizational and dynamic capabilities which, in turn, leads to short-term survival (ibid.). Organizational capability refers to ‘a high level routine (or collection of routines) that, together with its implementing input flows, confers upon an organization’s management a set of decision options for producing significant outputs of a particular type’ (Winter, 2000:983 in Dixon, 2006). In other words, these are the capabilities necessary for conducting day-to-day operations. Dynamic capabilities are defined as a firm’s systematic methods for modifying operating routines (Zollo and Winter, 2002 in Dixon, 2006). At this stage organizations engage in exploitation learning, which refers to refinement, implementation, efficiency, production and selection (March, 1991 in Dixon, 2006). Hence, dynamic capabilities are employed at this stage for resource re-deployment, leverage and integration which ensure short-term survival (Dixon, 2006).

At the third stage, organizations aim to achieve a sustainable competitive advantage and long-term survival. Firms are involved in exploration learning which is characterised by search, variation, risk taking, experimentation, creativity, flexibility, discovery and innovation (March, 1991 in Dixon, 2006). Dynamic capabilities are manifested in the search and selection strategic actions oriented towards long-term survival. Organizations develop strategic flexibility defined as ‘the capability of the firm to proact or respond quickly to changing competitive conditions and thereby develop and/or maintain competitive advantage’ (Hitt et al., 1998:9).

Therefore, as Russian parent firms are in a serious need for the various types of resources and capabilities required to undertake the restructuring process, JVs with foreign firms represent an excellent source for the acquisition of these resources and capabilities and their subsequent upgrading. Hence, I formulate the third research sub question as:

Research sub-question 3: How does the upgrading of capabilities lead to the modernization, restructuring and competitiveness of Russian parent firms?

2.6. Theoretical framework of the study

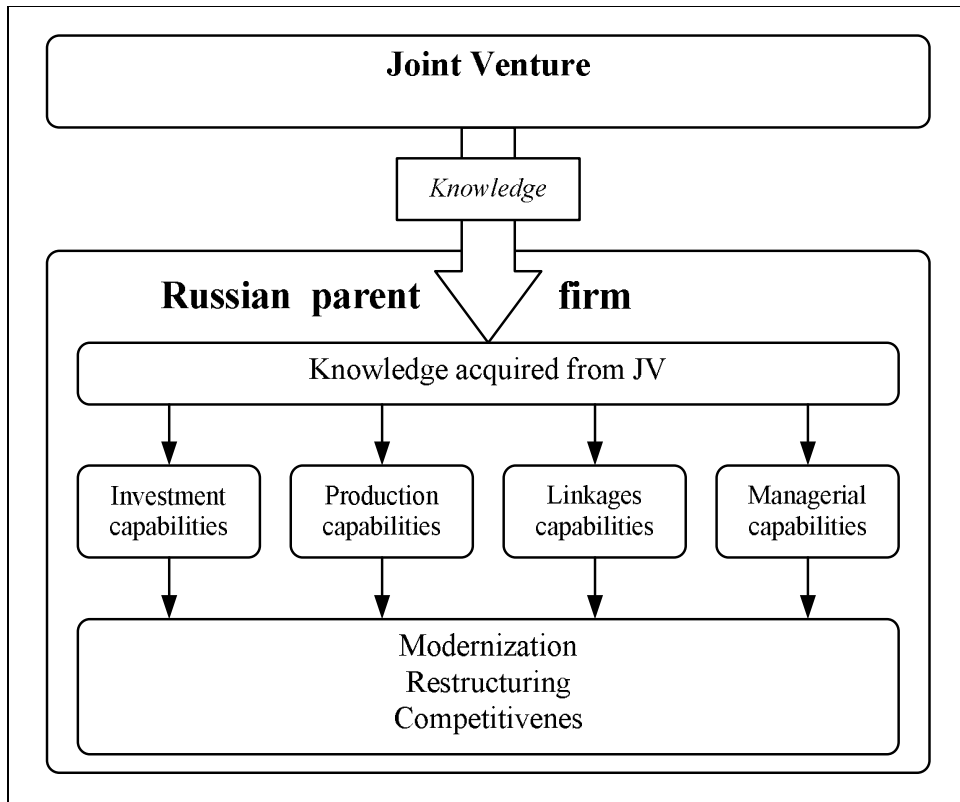
This section aims to summarize the discussion presented in this chapter and illustrate it in the theoretical framework. Indeed, the focus of this study is to examine the outcomes for Russian parent firms of learning through JVs. In order to do so, the research assesses the upgrading of technological and managerial capabilities attributable to JV learning and the impact of this upgrading on the modernization, restructuring and long-term competitiveness of Russian parent firms. Hence, the main research question is:

Main Research Question:

How does the learning through Russian-Western JVs lead to the upgrading of the capabilities of Russian parent firms and, as a consequence, their modernization, restructuring and competitiveness?

This argument is reflected in the theoretical framework of the study. Figure 2.5 presents the framework, indicating the main concepts of the study and the causal links between these concepts.

Figure 2.5 The outcomes of learning through JVs for Russian parent firms



The purpose of this theoretical framework development is to guide the empirical data collection. In the next chapter I describe the methodology of this study and thereafter present the data collected in the Russian empirical context.

Chapter 3 Methodology

This chapter presents the method of the study and the rationales behind the methodological choices. First, I discuss the realities of undertaking research in Russia, and emphasize the main challenges. Second, I explain the overall research design; this design combines several stages and methods. Third, I focus on each stage of empirical research describing their purpose, their implementation, and the logic behind the data analysis. Finally, I discuss how issues concerning validity and reliability have been addressed in this study, and provide an overall summary of the empirical data.

3.1. Introduction: realities of empirical research

The empirical evidence for this study was collected during the period of the Russian transition economy and the process of empirical research was, perhaps, the most challenging and time-consuming part of the doctoral study. In fact, this part can be described as a long but interesting journey full of discoveries and unanticipated turns. The challenges of collecting the empirical data are attributable to two main issues. The first is the research context. The specific issues arising in the process of conducting research in transition economies have been widely discussed in the previous studies (Michailova and Liuhto, 2001; Michailova, 2004; Dixon, 2006). Indeed, when conducting empirical work for this study I faced many of the practical obstacles mentioned in prior studies, and throughout the entire process of data collection the methodological choices were strongly affected by factors associated with the realities of doing research in Russia. Overall, the poor quality of publically available information and the lack of understanding of practitioners about the nature of academic research were, perhaps, the most serious factors undermining the research process. However, while previous research mostly stresses the obstacles of doing the fieldwork, I find it important to describe my positive experiences. There were a number of noteworthy incidents during which the attitudes of Russian managers towards sharing the knowledge with the researcher, and their respect for the researcher, led to extremely insightful and enlightening conversations allowing a deep understanding of the discussed issues.

At the same time, when collecting data from foreign firms, I faced some hostile responses and an unwillingness to openly speak about strategically important subjects.

The second aspect that added to the challenge of empirical data collection is the complex and sensitive nature of the studied phenomenon. Indeed, an investigation of implications of learning through JVs at the parent firm level requires finding the right persons in the parent firms who are able to indicate the specific outcomes attributable to JV learning, and to explain their role in the overall development process. In addition, as these issues are of strategic nature, it was necessary to gain the trust of respondents, which is always a difficult task. Hence, the combination of these two aspects, namely context and topic specificity resulted in the development of research design that included multiple stages and methods.

This chapter aims to discuss in detail how and why the methodological choices were made during the research process, thus, opening a ‘black box’. This extensive discussion on methodological matters is inspired by the call for more explicit presentation of the realities of empirical work which helps to ensure the reader with the quality of the collected empirical evidence (Michailova and Clark, 2004). The ‘voicing’ of problems related to methodological issues enhances the awareness of the scholars of the realistic expectations regarding the research process, the quality of available data, and a realistic time table for the research process. Furthermore, the communication of the insights of research conduct enables a better interpretation of the findings of academic work and an understanding of the rationales behind the methodological choice. As has been rightly pointed out there is often a gap between the presented ‘cleaned’ findings and real practice, and this is seldom addressed by researchers (Michailova and Clark, 2004). A further objective for the open dialog presented in this chapter is to illustrate the possible means for tackling the methodological challenges. Indeed, the design of this study was not defined prior the empirical data collection, but emerged during the process as a result of the sequential choices that were made to account for theoretical and practical considerations. Each stage was planned on the basis of information accumulated in the preceding stage. It is important to note that adjustments in research design have also led to the discovery of interesting aspects relevant to the studied matter that permitted enrichment of the findings with new dimensions. In other words, my eyes were open during the research process and a ‘research led’ approach was employed.

This emergent strategy allowed the many shortcomings found or reported in previous studies to be overcome.

A further aspect that greatly influenced the implementation of the research is my personal and professional background. In other words, if one aims to really comprehend how the research should be carried out, it is necessary to turn the attention to the researcher because she or he is a central figure of the process (Michailova and Clark, 2004). It has been recognized that the ability to proceed through challenging conditions of transition economies depends on the background of the researcher (Michailova, 2004), and this argument can be well illustrated using, as an example, my experience of conducting this study. Indeed, my personal background in terms of nationality, age, gender, and education affected, to a large extent, the manner in which the empirical research is implemented and its outcomes.

I was born in Russia and educated as an economist at a well-known Russian University. My home city is one of large industrial centers in Russia where large industrial enterprises in machinery, chemical and other sectors are situated. While doing my Master Degree, I worked at one of these enterprises in the investment planning unit as a junior level manager. At that time I acquired a realistic understanding of the realities of functioning Russian industrial enterprises and the obstacles to their development. After my graduation I married a Finnish man and moved to Helsinki. Hence, during the last 8 years I have lived, worked and studied in Finland and I have become well accustomed with a 'western' approach to business, personal conduct and customs.

My background had a significant impact on the success of the empirical work in several ways. First, the good knowledge about operations of Russian industrial enterprises and the path of their industrial development prior to and after the economic reforms was extremely useful for the informed selection of companies and an understanding of the issues that Russian enterprises encounter in their operations. Second, Russian language skills and an understanding of Russian culture were of crucial importance for negotiating access to the firms. Language skills were also necessary for secondary data collection as the majority of information about Russian companies was available only in Russian. Third, an understanding of the realities of Russian business and managerial thinking permitted a better comprehension of respondents' responses and increased

my credibility in the eyes of Russian and western managers. Of relevance here is that I observed that managers often had a 'negative' image of researchers due to the belief that academics are not able to really understand the insights of business operations, and this prevented managers from openly sharing their opinions and perceptions. Thus, it was important to change their attitudes towards academic research in order to obtain meaningful and open answers.

Despite the advantages, there were also some drawbacks associated with my close familiarity with the research context. As pointed in other works (e.g. Soulsby, 2004) the role of 'naïve outsider' can allow difficult and indiscreet questions which can shed valuable insights on research matter to be asked. In this research, often, my good understanding of some 'political' matters did not allow me to be provocative or too direct due to the consideration that respondents might lose their sense of confidence and openness.

To conclude, both personal and professional skills enabled me to implement the empirical research and to achieve the established goals. In the next section, I describe the overall research design and each of its stages in greater depth.

3.2. Empirical research design

The research design of this study is the product of the emergent strategy that evolved during the research process. Although in the early stage of the planning process the case study approach was chosen to be a sole empirical method, during the first steps of the process it became obvious that additional information was needed prior to conducting the case study. Previous studies on JVs in transition economies were of little help to define sources of information relating to how to define the population of manufacturing JVs in Russia established outside the operations of both parent firms and did not provide knowledge of the nature of cooperation in JVs in the Russian context. Hence, the empirical work had to begin with pilot interviews and the preparation of a pilot survey of manufacturing Russian JVs established between 1998-2006 in order to grasp a good knowledge of the scale and scope of cooperation and learning in JVs. The knowledge

accumulated from pilot survey allowed the start of the final and main phase of the research, namely case investigation. In summary, the final empirical methodology included both quantitative and qualitative methods; this is known as a mixed methodology (Creswell et al., 2003).

Mixed methods

The mixed methodology has gained popularity amongst academic scholars during last two decades (Datta, 1994; Miles and Huberman, 1994; Creswell et al, 2003). In particular, its applicability in the context of transition economies has been emphasized because the combination of quantitative and qualitative method can be helpful to gaining novel, relevant and reliable insights (Hoskisson et al., 2000). Mixed methods allow the deficiencies associated with the quality of publically available information, and the lack of the cooperation when collecting primary data to be overcome (Bryman, 1992; Creswell, 2003). In addition, as all methods have their own specific limitations, the combination of different methods in single research design allows those limitations to be addressed in a comprehensive manner.

Hurmerinta-Peltomäki and Nummela (2004) argue that mixed methodological design has: (1) Order (sequential or parallel); (2) Role (equal or dominant/less dominant); and (3) Purpose (knowledge based, topic or method related). In this study, methods are used in the sequential order. Furthermore, case study research is a dominant method while other methods applied to prior case research have a complementary role. With regard to purpose of methods, pilot interviews and pilot survey have both method and topic related purposes whereas the purpose of case study method is mainly topic related. The comprehensive use of mixed empirical methodology provided an opportunity to collect reliable data despite the challenges associated with context and the research matter.

Although increasing in popularity, the application of mixed methods has not yet gained sufficient acknowledgment in the field of international business research, in which the majority of studies use quantitative methodology and only relatively few apply qualitative methods (Marschan-Piekkari and Welch, 2004; Gibbert et al., 2008). Moreover, those studies that conduct both qualitative and quantitative analysis, very often consider case study approach as a tool for

achieving a pre-understanding about the research subject and survey-type methodology to test hypothesis developed on the basis of case data. Contrary to the main body of the literature, this research takes a novel multi-stage methodological approach using secondary data and a quantitative pilot-survey at the first stages to achieve a pre-understanding of the research phenomenon, and multiple-case research at the second stage in order to collect detailed empirical material for the in-depth analysis of how Russian firms benefits from learning through JVs with foreign firms.

The application of mixed methods implies the need for the use of triangulation techniques throughout the implementation of the research (Denzin, 1978; Patton, 1990; Tashakkori and Teddlie, 1998). Triangulation has been defined as ‘the combination of methodologies in the study of the same phenomenon’ (Denzin, 1978). Furthermore, Denzin (1978) distinguishes three types of triangulation: data, theory and methodology. In this research triangulation takes place at all of these levels. First, data triangulation occurs when I conducted the triangulation between multiple types of empirical material collected during the pilot survey and the case study in order to develop the comprehensive conclusions of the study. Second, methodological triangulation is represented by the combination of pilot-survey and case study research. Third, from the theoretical perspective, several firm-level approaches, namely the learning, capability and strategy approaches as well as the macro-level System of Innovation approach were integrated into the final discussion of the research findings, with the aim of providing a holistic understanding of the research phenomenon. In the next section, I present in greater detail the stages of empirical research.

3.3. Pilot survey

3.3.1. Pilot survey purpose

The survey represents the initial stage of the empirical research, and was planned to be a pilot-type survey. The main purpose was to acquire a further understanding of the scope of cooperation and learning through de novo manufacturing Russian–Western JVs established between 1998-2006 as well as to discover the main features of learning benefits for the development of parent firms. The implementation of the pilot survey implied collecting responses from both Russian and western parent firms, which permitted the most ‘insightful’ and information-rich (from a theoretical perspective) cases worthy of study in greater depth to be defined. It is worth of noting that, although the focus of the study is on the understanding of Russian parent firms’ learning, the survey was designed to grasp the perspective of Western parent firms as it was exploratory in nature and aimed at discovering the ‘larger’ picture of learning in JVs. Furthermore, from the practical perspective, during the survey it was possible to build initial credibility with the companies, which was extremely useful to negotiating further access for the case research.

Thus, using the classification developed by Hurmerinta-Peltomäki and Nummela (2004), the main purpose of survey could be defined as being ‘method-related’ since it provided an opportunity for the more justified selection of case companies. It can be argued that the implementation of the survey prior to the case investigation is a ‘top-to-the-bottom’ approach to the empirical work, starting from the examination of the research phenomenon in the broad terms, and then narrowing down the focus in the following stages based on the accumulated empirical knowledge and experience.

Moreover, as the survey was implemented in a manner to acquire data about the views on learning in JVs and its outcomes from both parent organizations, these findings contribute to JV literature. To date, the majority of studies report their findings on the basis of empirical data collected either from JVs themselves or from only one of the JV partners. Findings that shed light

on the perspectives of both partners advance the scholarly research in the JV and strategy fields. Hence, the purpose of the survey can be also defined as being ‘topic related’.

It is worth noting that the role of the survey evolved in the process of its implementation. Achieving a sufficient response rate by conducting the survey in the traditional way proved to be an impossible task, and hence, some innovative solutions had to be sought. In particular, the companies were approached in many different ways such as emails, phone calls, faxes which enabled the collection of a large quantity of additional information during this process. Moreover, a number of personal interviews were conducted with senior managers from survey firms and the questionnaire completed in the presence of the respondents. These interviews provided good insights to the understanding of various relevant aspects of the study, which significantly increased the importance of this stage of empirical work in the research design, and were used when drawing final conclusions.

Furthermore, during the implementation of the survey new important issues pertinent to the understanding of outcomes of learning through JVs were revealed. In particular, organizational and external elements were extensively emphasized by the respondents as contributing to the serious constraints undermining the application of knowledge acquired through JVs. These findings resulted in the developing an additional research sub-question of the study. This was formulated as:

Sub-question 4: “How do internal and external obstacles influence the extent of benefits resulting from learning through JVs?”

For the reasons described above, and due to the extensive qualitative data acquired during the implementation of the survey, the role of the survey with regard to its ‘topic-related’ nature increased significantly. Overall, in the whole design of the study the survey results were beneficial to the interpretation of the research findings and improved the theoretical discussion of this study.

3.3.2. Pilot survey implementation

3.3.2.1. Defining pilot survey population

Prior to the implementation of the survey two pilot interviews were conducted in order to achieve an overall understanding of the level of industrial development in Russian enterprises, the issues they encounter in technological development and the attitudes towards cooperation between local and foreign firms in different industrial sectors. These interviews were conducted with the heads of production departments of two Russian industrial companies that are typical manufacturing enterprises situated in the central Russia region. The access to interviewees was negotiated through the personal network of the researcher. Interviews were inductive in nature, and a broad range of questions relating to the aspects examined in this study were discussed with respondents. Interviews were tape-recorded; their duration was between 40 to 90 minutes. In-depth discussions with managers with long experience working in the industry was highly useful for to the development of a survey questionnaire because they revealed the areas in which Russian industrial enterprises need to implement the improvements and insights on how technological learning takes place.

The next step in the implementation of the survey was to accumulate information on all existing Russian–Western manufacturing JVs, and create a full JV dataset. The most important aspect at this phase was to identify *de novo* JVs that satisfied the definition adopted for the purpose of this research. Taking into account the time and resource limitations, it was decided that only manufacturing Russian–Western JVs established between 1998 and 2006 were to be included in the dataset. The decision to include JVs established after 1998 was based on the fact that Russia had gone through a financial crisis in 1998, and that this seriously affected the firm sector, and after 1998 a second phase of economic reforms was commenced. The rationale to focus on this period of transition was rooted in the fact that the majority of previous studies in transition economies are based on data collected in early 1990s, during the first phase of economic transformation, and less is known about the activities of Russian firms in the latest stage of transition.

The identification of existing JVs and the creation of a JV dataset was an onerous task. The research process revealed that neither the Russian Statistics office nor the foreign direct investment agencies readily had available databases on de novo Russian–Western manufacturing JVs. Although the official organizations possess several databases including the list of firms with foreign ownership, there were two main problems with the use of these databases. The first problem was that the datasets did not specify whether these establishments were partial acquisitions or de novo JVs established outside both parent firms. Due to the large number of companies included in these datasets it was impossible to verify manually the nature of operations of each firm in datasets. The second problem was that the datasets did not include those JVs that had no separate legal entity, but had a separate production site organized on the basis of a JV agreement. These limitations led to the conclusion that alternative information sources needed to be sought in order to acquire the appropriate data on the de novo Russian–Western manufacturing JVs. It is important to stress that although previous studies repeatedly report that official organizations such as the National Statistics Offices and the foreign direct investment agencies are the most appropriate sources for the collection of information on JVs, this research finds that not all establishments included in these datasets can be considered to have de novo JV status. This issue has been earlier pointed out by e.g. Tsang, (2003) and Meyer (2007) who explain that including organizations that have partial acquisition form in JV research causes a bias in findings and conclusions due to the principal difference in the nature of operations of these establishments.

The search for additional information sources resulted in the discovery of databases available in the Business and IT Centre of the British Library. These databases report all press announcements published in local and international newspapers regarding the business activities of local and foreign firms, including their engagement in cooperating activities. The design of databases allowed the implementation of a search according to key words, which significantly decreased the number of announcements for further manual processing in order to verify JV status. As a result of the detailed analysis of this information, the full dataset on Russian–Western partnerships reported as JVs was created. The dataset at that stage consisted of 180 manufacturing JVs established between 1998–2006.

3.3.2.2. Selection of pilot survey sample

The pilot survey sample was chosen from JV dataset created in the first stage of the research. As, on the one hand, this was a ‘pilot’ survey for acquiring a pre-understanding of the research phenomenon rather than for the purpose of main data collection, and on the other hand, the resource limitations, not all parent firms from the dataset were included in the survey sample. I aimed to include the most interesting and relevant firms that could potentially participate in the case study at the later stage of the research. Specifically, the choice of those firms was based mainly on the assessment of a depth of cooperation between JV partners and the preference was made for those JV that were more informatively discussed in the secondary sources. In addition, the selection was guided by a wish to include JV parent firms from different industries.

The announcements relating to JVs did not include detail information on the JV activities. It was therefore necessary to conduct a further investigation of the nature of JVs and the operations of parent firms. This phase was extremely time-consuming due to the large quantity of additional information that was sought manually through various sources such as company websites and the industry reports available on the internet. A major problem was that the websites of parent companies do not always report any information about JV activities due to considerations of confidentiality. Specifically, this was the case for most of Russian partner firms, which are particularly silent about anything related to cooperation with foreign firms.

Initially, 100 JVs parents were included in the survey sample. However, because few responses were received, the first round of the pilot survey was followed by a second round when an additional 40 JVs parents were included. In total, during the course of the implementation of the survey 140 questionnaires were sent.

3.3.2.3. The structure and content of the pilot survey questionnaire

The main survey instrument is a pre-tested questionnaire (Appendix 1). The survey instrument was designed to accommodate responses from both partners of the JV. The survey aimed to overcome the bias of many previous studies which had accounted for the perception of one partner alone. The structure and content of the questionnaire were developed using the concepts of previous studies on JVs in transition economies (Lyles and Salk, 1996; Tsang et al., 2004) and the capabilities literature (Lall, 1992; Figueiredo, 2002). In addition, the information gathered during the pilot interviews was used at this stage.

The questionnaire includes 5 sections: (1) General information about the structure a JV; (2) Objectives of a JV; (3) Contributions of parent firms regarding learning objectives; (4) Parent firms' related aspects such as motivation for the partner choice and the relationships between parent firms outside a JV; (5) Parent firms' outcomes from learning through JV. The learning objectives and outcomes were measured in different operational areas such as process and product technology, manufacturing support, quality control, sales and marketing, purchasing, human resource management, accounting and finance, information systems, the collaborative skills required to run partnerships.

The questionnaire was developed in two different versions: for Western and Russian partner firms. The aim was to address the same set of questions to both parents with minor differences in order to be able to compare the partners' perception of the cooperation in the JV and of each other. The length of the questionnaire was limited to 4 pages in order to reduce its complexity and improve the response rate. Appendix 1 presents the questionnaire items. A separate page describing the guidelines for completing the questionnaire preceded the sections. The respondents were asked to answer the questions referring to one particular JV with a Western (in the Russian version) or with a Russian partner (in the Western version). The importance of asking for information regarding one JV in one questionnaire has been also pointed out in previous studies (Inkpen, 1992).

The questionnaire language was Russian for the Russian firms and English for the foreign firms. The English version was developed first as the previous literature on which it is based is written in English. It was then translated into Russian by the researcher who is Russian native speaker.

3.3.2.4. Administration of pilot survey

The survey was administered in several stages. The first stage involved pre-testing of the survey questionnaire. This was considered essential to ensure the appropriateness and clarity of the questions asked in the survey. Several academics with experience in conducting surveys were asked to comment on the quality of the questionnaire. Further, the test version was sent to the senior managers of one Russian JV partner in order to obtain a response from the business representative. The feedback from pre-testing procedures helped ensure the relevance of the questions asked.

Subsequently, more detailed information was collected on each of the JVs' parent firms using secondary sources of information. The goal at this stage was to understand better the basis of cooperation in JVs and the suitability of each organization to contribute to the research aims before contacting the companies. Detailed contact information such as physical addresses of companies' head offices and telephone numbers was also collected at this stage.

The next stage was to send questionnaires by mail to 100 Western and Russian partner firms representing 50 manufacturing JVs. The survey package included a cover letter (Appendix 2) and the questionnaire (Appendix 1). In the cover letter confidentiality and anonymity were assured to respondents. Furthermore, in order to motivate participants to take part in the survey, a report indicating the survey findings was promised to participating companies. Although this is the conventional way of conducting a survey, none of the questionnaires was returned.

After careful consideration, an alternative strategy for approaching the companies was chosen. It was decided to target personally the responsible individuals in the selected companies. In order to

so, the companies were contacted by phone and questionnaires were sent by fax. Thereafter, receipt of the questionnaire was verified by phone calls. At this stage, and as briefly mentioned in the previous section, 40 additional JV parent firms were also included in the survey. However, despite this personal approach a low number of questionnaires were returned. The main reasons for not participating in the survey were: (1) The real JVs operation have never been started although JV has been officially established; (2) The denial of JV existence, in some cases even despite the fact that the company's press release provided information of the establishment of a JV; (2) The lack of time; (3) The termination of the JV when persons knowledgeable about its outcomes were not found.

In order to increase the response rate, the researcher personally interviewed 6 companies that had been included in the survey. Surprisingly, this process of the empirical work revealed that in some cases it was easier to make an appointment with a responsible manager than persuade him / her to complete the questionnaire. These interviews allowed a deeper understanding of the questions asked in the questionnaires to be gained as well as addressing additional questions related to the research topic.

In total, 25 questionnaires were completed by JV parent firms; 13 questionnaires were received from Russian JV parents, and 12 from western JV parents. One interesting observation is that in many cases either both or none of the partners responded. In this regard 7 responses were received from both JV parents. A possible explanation for this observation could be that partner firms followed the code of conduct in respect of external relations that was agreed when they establishing the JV.

3.3.3. Pilot survey data analysis

Due to the small number of returned questionnaires, data analysis was conducted without use of statistical software. The respondents' answers were summarized in an Excel table and analysis was conducted in several stages. First, the structure of JVs of the participating firms was

examined using the data from both the Russian and western parents. Second, the contributions, learning intent and outcomes of Russian and western parent firms were assessed separately. Finally, I analyzed the perceptions of the Russian and western JV parent firms that concerned their views of the other firms' contributions relating to learning intent and outcomes. The interview data with survey respondents was incorporated into this analysis and enriched the survey findings. Chapter 4 presents the summary of the survey data and survey findings.

3.4. Case study research

3.4.1. Objectives of the research

The qualitative multiple case study is the third and main element of the empirical research design. In other words, this method has a dominant role in the research design. A case study approach is understood here as 'a research strategy that examines, through the use of a variety of data sources, a phenomenon in its naturalistic context, with the purpose of 'confronting theory with the empirical world' (Piekkari et al., 2009). The preference for its choice stems from the theoretical objective of the research, which is to enrich and extend the scholarly understanding of JV learning as it is suggested in the literature (Eisenhardt, 1989; Yin, 2003; Eisenhardt and Graebner, 2007). Evidence from cases was used to develop empirically grounded propositions that generate further insights into the implications of learning through JVs outcomes for parent firms. Also, the case study methodology has been recognized as a best strategy for enhancing managerial knowledge, which is an important goal of this research (Leonard-Barton, 1990; Amabile et al., 2001).

In this research, a Russian parent firm is considered as a single case and three companies (cases) were selected for the in-depth analysis. Moreover, as two of case firms had established two JVs each, I distinguished the sub-unit of analysis, which is the Russian parent–JV relationship. Hence, there are 5 sub-units of analysis in this study. The main objective at this stage of the

research was to examine, in-depth and in detail, the learning outcomes of the Russian parent firms that were achieved through each JV. Specifically, the case data was used to examine the influence of learning from JVs on the building of technological capabilities, modernization, restructuring and long-term development, as well as how organizational and external constraints limited the extent of the benefits of learning. Therefore, the purpose of this method within the entire research design can be defined as ‘topic-related’.

Logic behind a multiple case study research

The choice of multiple case studies, as opposed to single case study or pure quantitative methods, can be supported by the theoretical and practical considerations. On the one hand, a pure quantitative methodology does not permit the capture of all the insights relating to learning through JVs, and the effect of such learning on building capabilities and the long-term development of partner firms. Also, taking into account practical obstacles, it is very difficult to investigate thoroughly such sensitive issues by survey. On the other hand, a single case study will not provide the understanding of the phenomenon to the extent that it permits drawing more general implications. An in-depth investigation of several cases enables understanding in detail of both ‘how’ and ‘what’ outcomes the Russian parents gained from JV learning, which, in turn, provides a solid ground for drawing theoretical and managerial implications.

3.4.2. Case selection criteria

The technique of purposeful sampling was applied to the case selection; this implies the choice of information-rich cases and achieving variation across the cases (Patton, 2002; Fletcher and Plakoyiannaki, forthcoming). According to the theoretical objectives, the ‘case’ in this study is a Russian JV parent firm. The concept of ‘information-rich’ case and variation was defined on the basis of several criteria. First, it implied the presence of cooperation in JVs established by ‘case’ firms and the active participation in JV management. Second, the number of JVs established by potential ‘case’ parent firms was considered when the preference was made regarding the issue

of which firms cooperated with more than one western firm. Third, variation was achieved by including cases from different industries. In this situation the choice was made in favor of those industries with the largest JV percentage reported in the full dataset. Thus, the objective was to select cases where each could potentially add some new dimensions to the research findings.

The knowledge accumulated during the previous research phases enabled three Russian JV parent firms (cases) to be identified within the criteria mentioned above. These cases operated in the aircraft engine building, automotive and auto component industries. The case from the aircraft engine building industry had established one JV, whereas the parents from the automotive and auto component industries had each established two JVs. A noteworthy issue is that in the automotive parent firm both JVs were of a similar nature and remained operational, however the auto component case firm has already terminated one of its JVs, labeling it as a 'negative' experience, whereas their other JV was operational and perceived as a 'positive' experience. Chapter 5 presents in detail the description of case companies and their JVs.

The practical considerations relating to negotiating access to the companies also influenced the choice of case companies to a certain degree. Problems with access to companies have been reported in other studies examining transition economies, and indeed, it was a serious issue in conducting this research. The majority of Russian firms that were approached during the implementation of the survey and asked to participate in the in-depth investigation refused to grant further access. The most common reasons for not participating in the study were: (1) Lack of managerial time; (2) Negative experience in JVs, and (3) Confidentiality considerations. Lastly, the geographical location was considered when selecting cases. This was because some of the companies were located in very remote areas of Russia.

3.4.3. Data collection

Data collection was carried out by (1) conducting personal interviews with top managers in Russian parent companies and with the representatives of Russian parent firms; (2) analyzing

company internal documentation, including publication of the interviews with top managers relating to issues relevant to the current research topics. These interviews had been conducted by the companies' internal communication departments; and (3) investigating other publically available secondary data, such as industry reports. However, the major part of empirical evidence was collected by the personal interviews.

The total number of case interviews is fifteen. The number of interviews varies across case companies. I conducted six interviews in Case 1, three interviews in Case 2 and six interviews in Case 3. The interviewees were Vice presidents and senior managers in the production and R&D departments. In addition, the JV presidents and senior managers in production who were transferred to JVs from Russian parent firms were selected as informants for two important reasons. The first is that, in most of cases, these managers had been employed by Russian parent company for a long period and therefore were well aware of both the activities of JV itself and the incentives of the Russian parent company to partake in the JV. In other words, these managers were at the interface between the JV and the Russian parent, and were thus knowledgeable about the JV–parent relationship and its outcomes. The second reason relates to practical considerations. It was easier to find a knowledgeable person in the JV rather than in the parent companies. Although these managers are officially JV employees, in practical terms the employees of the Russian parent firms still consider them to be one of their own.

Within the case companies there were also five interviews with the Presidents and Vice Presidents reported in the internal media of the companies that concerned subjects closely related to issues examined in this study. These were analyzed and considered to be valuable source of information.

I conducted all of the personal interviews. The language used was Russian, as all interviewees in this phase were Russian nationals. As Russian is my mother tongue I personally translated these interviews. The majority of the interviews were taped-recorded, however, in a few cases the interviewees objected to a recording. Several insightful conversations were initiated spontaneously when spending time at the company (e.g. while waiting for the next interviewee or

at lunch in the company canteen); on these occasions it was also not possible to record these conversations.

The interview guide was developed prior to the case investigation. The content of questions was developed on the basis of the assumptions derived from the analysis of the previous literature, the pilot interviews, and findings of the survey research. The interview guide consists of several sets of questions including general and specific questions. However, although the overall structure of the interview guides was similar for all cases and for all respondents, the focus and depth of questions differed depending on the position in the company of the interviewee. Hence, the research-led interview method was used and this enabled the collection of high-quality data.

More specifically, the interview followed the structure in which the first set of questions was related to general aspects of company development and to industry specific factors. The second set of questions asked about the JV structure, its objectives and the principles of the cooperation between partner firms. The next group of question was oriented towards gaining an in-depth understanding of the learning outcomes relating to the building of technological and managerial capabilities, modernization, restructuring and development in the Russian firms. These questions were the most detailed as this information contributed to the core findings of this research. The underlying idea here was to understand the nature and degree of improvements in capabilities, restructuring and competitiveness that could be attributed to learning through JVs. The final set of questions was related to understanding the obstacles inside Russian firms that inhibited the beneficial application of JV knowledge, as well as obstacles that originated from external environment.

When visiting the companies to undertake the interviews and to examine internal documentation, I also had an excellent opportunity to observe various artifacts that were recognized as being important in previous studies (Schein, 1985). The objective was to look for various organizational routines and practices in order to later compare them with managers' statements. Further, in the process of the case analysis, industry reports were studied to glean information regarding the market position of the enterprises and the segments of each industry.

3.4.4. Techniques for data analysis and presentation of findings

The main objective of data analysis was to examine the collected data in a comprehensive and systematic manner. This analysis was guided by theoretically developed framework of the study which suggests the important concepts and the causal relationships between them (see Chapter 2 for the theoretical framework). In order to achieve this goal, several steps in data analysis were followed. First, the entire stock of qualitative data was analyzed without the use of software and empirical manifestations of the theoretical concepts of study's framework were summarized in tables. In particular, for each of case companies the empirical evidence was placed into several groups according to the themes. In particular, this evidence aimed to illustrate how (if) learning through JVs led to upgrading of 'investment capabilities', 'production capabilities', 'linkages capabilities', 'managerial capabilities' as well as to 'modernization' 'restructuring' and 'competitiveness' in the case companies. The underlying logic in this analysis is that upgrading of capabilities was understood as changes in the systems, structures, strategy, routines and practices. Hence, empirical examples illustrating the occurrence of these changes attributable to learning through JVs were considered as indication of changes in capabilities.

In addition, the manifestation of concepts that emerged during the research process, namely 'internal obstacles' and 'external obstacles' inhibiting the beneficial application of JV knowledge, were distinguished.

At the next stage of the analysis, I conducted through analysis of the upgraded capabilities in two different ways. First, the extent of upgrading in each of the functional areas, namely investment, production, linkages and management, were analyzed. Second, the upgrading of capabilities for each of three case companies was examined. The differences in the results were then analyzed. Then, the impact of the upgrading of capabilities on the modernization, restructuring and competitiveness was examined for each of the case firms, taking into account case and industry-specific features. Finally, the evidence illustrating the existence of organizational and external constraints was distinguished by investigating case materials and analysis was conducted by combining this with the pilot survey and complementary statistical information. The results of

this analysis were used for the development of the empirical framework and, have also been summarized into eight propositions.

The discussion presents the summary of analysis in a number of separate tables illustrating the changes in functional capabilities as well as modernization, restructuring and competitiveness for each of the cases supported. This is complemented by the respondents' statements which provide concrete illustration for described findings.

3.5. The collection of complementary statistical data

As mentioned in the previous section, the emergence of important findings regarding the influence of organizational and external constraints to learning outcomes in JVs required the collection of complementary statistical data during the case data analysis.

The statistical data relating to Russian industrial development was collected in the research process mainly for the purpose of strengthening the empirical basis of the discussion. This ensured that the discussion was based on case evidence regarding the influence of external factors on the potential benefits of learning through JVs. Indeed, this data represents objective information regarding the structure of firm and non-firm sectors that supports the respondents' responses. Thus, the role of this data with regard to this research is 'topic-related' as it sheds light on the important issues originating from that external environment that had an impact on the studied phenomenon.

This data was collected from the Russian Statistics Office. The statistical yearbooks as well as other official publications were carefully analyzed. Importantly, access to the statistics on the Soviet Science and Technology system allowed the assessment of the transition process from one 'type' of system to another, and this provided a comprehensive understanding of the problems of the current Innovation System. In addition to this source, OECD publications, and other scientific articles related to this research area were used as information sources. It required several visits to

the Russian Statistics Office where a large quantity of empirical material was carefully analyzed prior to the purchase of the necessary information. Due to limited access to the information via the Internet, personal visits were necessary to collect the good quality reliable data.

3.6. Validity and reliability considerations

The construct, internal and external validity as well as considerations to reliability were carefully accounted in this study. *Construct validity* ‘refers to establishing of correct operational measures for the concepts being studied’ (Yin, 2003:34). Construct validity was one of the primary considerations of the study because the measurement of JV learning in JV parent firms in transition economies is underdeveloped. Hence, such measures were adopted from other research streams and operationalized to take into account the specificity of the research setting. The relevance of the constructs was verified during the pilot stages of the research. In addition, multiple sources of evidence such as personal interview data, company internal documentation and publicly available documentation were used to ensure the validity of the constructs. The triangulation also increased the confidence of the findings, ensured that all factors had been taken into consideration, and that the choice of the concepts had not been made randomly, but rather according to strict theoretical and empirical guidelines.

Internal validity ‘implies the establishment a casual relationship’ (Yin, 2003:34). The internal validity in this research was firstly ensured by the development of a theoretical framework based on the critical analysis of several streams of the literature that propose causal relationships to explain that learning from JV influences the upgrading of local parent firm technological and managerial capabilities, and which, in turn, affects the improvements in restructuring and competitiveness of the parent firm. Secondly, when analyzing empirical data, the results were compared and discussed in the light of theoretical argument in the development of the empirical framework supported by eight propositions.

External validity refers ‘to establishing the domain to which a study’s findings can be generalized’ (Yin, 2003:34). External validity was achieved, to a certain degree, by including three Russian JV parent firms in the case research and, in order to achieve variation in cases, employing a purposeful sampling technique for their selection. This design allows the implementation of cross-case analysis, which provided a good ground for the development of propositions. However, by its nature, this study is context and timing specific and provides evidence collected from a single country and from in a particular period of time, and hence, the generalizability of the findings beyond Russian context cannot be claimed. Although this may be the case, the context specificity of the findings is considered to be an important advance of the previous knowledge of the international business field and can be used for further comparative research across different national contexts.

Finally, *reliability* refers to ‘demonstrating that the operations of a study – such as the data collection procedures – can be repeated, with the same result’ (Yin, 2003:34). This was achieved by careful documentation of the procedures during the whole research process and providing straightforward arguments for the methodology choices; this has been the case throughout this research process. Furthermore, the stage-based research design, which actions at the subsequent stages were guided by the findings achieved in previous stages, was developed in order to enhance the reliability of this study.

3.7. Stock of the empirical data of the research

The objective of this chapter was to describe the methodological process of the empirical research and explain in detail how, why and what data were collected. As the different types of data have been acquired at different stages of the research process, it is useful to present a summary; such a summary is presented in Table 3.1.

Table 3.1 Summary of empirical data

Interviews	Number	Survey responses	Number
Pilot interviews	2	Foreign partner firms	12
Survey	6	Russian partner firms	13
Case research	15	<i>7 JVs with responses from both parents</i>	
Total interviews	23	Total questionnaires	25

In addition, as the research includes several stages of data collection, I find it helpful to provide a timetable of the overall research process. Table 3.2 presents the timing schedule of the collection of different types of empirical data.

Table 3.2 Time-table of data collection

Autumn 2006	Winter 2007	Spring 2007	Autumn 2007	Winter 2008	Spring 2008	Autumn 2008
Initial case research preparation						
	Pilot interviews					
		Pilot survey preparation: creation of JV dataset				
			Pilot survey	Pilot survey	Pilot survey	
				Statistical data collection	Statistical data collection	
					Case research	Case research

Chapter 4 Russian–Western manufacturing JVs

This chapter provides background detail of the Russian context and presents findings of a pilot survey of Russian–Western JVs. I commence with a short overview describing the course of economic reforms and their implications for industrial enterprises in Russia. I then discuss the industrial distribution of Russian–Western manufacturing JVs using the JV dataset created for the purpose of the pilot survey. Finally, I present the results of the pilot survey illustrating the scope of Russian–Western JVs as well as the parent organizations’ learning objectives and outcomes.

4.1. Russian context

In recent years Russia has undergone considerable institutional and economic reforms that commenced in early 1990s. The reforms took a path of so-called ‘shock therapy’; the objective was to rapidly replace the system of central planning with market-based mechanisms (). Local actors have been exposed to radical institutional upheaval, which has required the radical change of the ‘template-in-use’ (Roth and Kostova, 2003).

Amongst the main features of the reforms was the centralized voucher privatization of state owned enterprises in order to achieve a rapid switch to private ownership (Filatotchev et al., 1996; Fabry and Zeghni, 2002). The idea behind this privatization was to distribute vouchers to managers and other employees and to exclude the State from active participation in the industry (Filatotchev et al., 1996). However, the government poorly planned the implementation of the privatization process and this resulted in many negative consequences for Russian enterprises. Most importantly, the privatization failed to generate the technological and financial resources needed for the restructuring of enterprises (Fabry and Zeghni, 2002). Indeed, prior the start of the reforms Russian enterprises had outdated production sites, excessive numbers of employees, and incompetent management (Wright et al., 1998; Liuhto, 2001). In addition, most of the Russian former state-owned enterprises were large and vertically integrated and unsuitable for efficient functioning in new market conditions. Furthermore, at the state level, the development of market

institution was particularly slow and policies were inconsistent and inefficient (Narula and Jormanainen, 2009).

The transformation process of industrial enterprises in Russia has been influenced by three factors: (1) the legacies of the past, embodied in the continuing influence of the state redistributive system, (2) the realities of the emerging markets, with their forces of legitimating and competition, and (3) the intra-organizational processes affecting the propensity of an organization to change (Suhomlinova, 1999). Industrial enterprises have had to adopt resources and capabilities that allow them to operate effectively under central planning to new conditions of market economy (Newman, 2000). However, as resources and capabilities that were valuable under a former institutional regime become less valuable under more market-oriented institutions, local firms faced resource scarcities (Wright et. al., 2005). Furthermore, new capabilities had to be developed such as an efficiency orientation, strategic thinking, and systems and processes that would encourage individual initiative and a willingness to take risks (Newman, 2000).

Another important feature of the transition period is the introduction of policies welcoming foreign direct investment (FDI) that was expected to contribute to the economic growth and development. However, despite the effort, the level of FDI in Russia has been low in comparison with other transition economies (Buck et al., 2000; Melentieva, 2000). Foreign firms perceive the Russian investment climate as extremely risky, and thus, Russia's aggregate inflow of foreign capital has been less than other transition economies (Buck et al., 2000). Bevan et al. (2004) argue that the institutional environment greatly influences the choice of location of foreign investors and that the stability and predictability of external environment plays an important role in foreign firms' investment preferences. As Michailova (2000:99) explains, Russia has a reputation as 'a country with paradoxical realities and shocking experiences, a country that is in a systematic collapse and general chaos, and is one of the most difficult markets to enter'.

Amongst all types of FDI, joint ventures were long perceived as the most beneficial for local firms. Scholars studying the organizational transformation in Russian have raised the question of whether JVs are able to generate the necessary restructuring of Russian enterprises (Wright et al.,

1998). However, in their recent study, Javorcik and Spatareanu (2008) report that although the requirements for domestic equity ownership used to be extensively utilized by governments in developing countries, their incidence has sharply declined in recent years. Increasingly the competitive environment for FDI and the need to comply with international commitments have put pressure on governments to relax restrictions on foreign entrants. Further, previous research also argues that the popularity of JVs varies across transition economies; for example, drawing on the evidence of World Bank and UNCTAD reports, Buck et al. (2000) find that JVs in Russia are significantly smaller in scale than in China.

Overall, this discussion illustrates that there is a need for a better understanding about the scale of JVs in Russia, their nature and, most importantly, their influence on the development and growth of local firms. The next section presents findings of the pilot survey.

4.2. Russian–Western JVs

The discussion in this section is based on the analysis of a dataset created for the purpose of a pilot survey. It includes 180 manufacturing Russian–Western JVs established between 1998 and 2006. Table 4.1 presents the industrial distribution of the Russian–Western manufacturing JVs.

Table 4.1 Industrial distribution of manufacturing Russian-Western JVs from the pilot survey dataset

Manufacturing sectors	Number of JVs
Machinery	45
Chemical	41
Automotive	39
Food/beverage/tobacco	18
Electronics	15
Consumer products	8
Paper/packaging	6
Pharmaceutical	6
Clothing/footwear	2
Total:	180

Table 4.1 illustrates that three sectors, namely the machinery, chemical, and automotive sectors account for the majority of JVs, these number 45, 41 and 39 respectively. The next largest groups of Russian manufacturing industries that attracted the attention of foreign investors were the food and the electronics sectors where 18 and 15 JVs respectively were established. Other industries such as consumer products, paper/packaging, pharmaceuticals and clothing/footwear have not witnessed a considerable number of JVs. A fact worth of emphasizing here, is that 125 out of 180 JVs have been established in technology and capital-intensive sectors including machinery, automotive and chemicals. In general, these industries traditionally represent an area of comparative advantage for Central and Eastern European countries as reflected in the Revealed Technology Advantage indices (see Radosevic and Kutlaca, 1999). Hence, a possible explanation that these three sectors account for the majority of JVs is that foreign investors seek cooperation in those industries where Russians have the complementary resources in terms of technology and capital. Despite that it is well known that the majority of Russian industrial sectors need investment and modernization, it appears that they are still attractive partners for foreign MNEs.

In order to comprehend more deeply the rationales behind JVs in Russia and the objectives and presence of learning intent and outcomes of parent firms, I next present the findings of pilot survey.

4.3. Cooperation and learning in Russian-Western JVs: survey findings

4.3.1. The pilot survey data

The questionnaire was sent to Russian and western JV parents and, as reported in Chapter 3, 25 questionnaires were completed by JV parents. More precisely, 13 were completed by Russian parents, and 12 by Western parents. Tables 4.2 and 4.3 show the industrial distribution of firms

participated in the survey. Although not all of these companies are matching JV parents, there are 7 JVs where a questionnaire was received from both JV parents.

Table 4.2 Distribution of Russian JV parent firms participated in the survey

Industrial sector of JV parent firm	Number of firms
Machinery	3
Automotive	4
Chemical	2
Food, beverage & tobacco	2
Electronics	1
Clothing	1
Total:	13

Table 4.3 Distribution of Western JV parent firms participated in the survey

Industrial sector of JV parent firm	Number of firms
Machinery	5
Chemical	2
Automotive	5
Total	12

The survey questions were developed to capture the opinion of parent firms about their own motivations for establishing a JV, as well as their expectations relating to learning intent and outcomes. Further, the parent firms reflected upon their perceptions of their parents' motivations, contributions, learning intent and outcomes (see Appendix 1). In addition to questionnaire data, six personal interviews were conducted to clarify any controversial aspects appearing in respondents' replies.

4.3.2. Basis and objectives for cooperation

The important feature of Russian–Western JVs is that they are organized within the production sites of Russian parents in workshops that are fully modernized and equipped with advanced

machinery. In practical terms, JV operations are set up in a workshop situated either in a separate building from the other workshops of Russian parents or in the same building. However, the JV activities are clearly separated from Russian parents' own activities. Legally these facilities may or may not be named as a separate entity. JV operations are organized mutually by both parents, and both parties are closely involved in JV management and contribute vital resources to the success of the JV. Hence, the important aspect of Russian–Western JVs is a deep immersion of Russian parents into JV activities and their close proximity to JV sites.

The main objective for cooperation is to join forces for the manufacture of new high quality products for the Russian market. Only a small number of JVs export their products to the CIS or to developed countries. These results can be explained by the fact that the Russian market has a huge demand for quality products that cannot yet be fully satisfied by local enterprises. One of the important rationales for insufficient supply is that industrial enterprises lack their own resources and technological expertise to develop new products and to organize production, which requires an extensive modernization of production sites.

For western parent firms the market looks particularly attractive. However, as the building of production sites from scratch can be costly and time consuming, one of the most important reasons for cooperation in JVs for western firms is access to the manufacturing infrastructure. In addition, foreign firms admit that their Russian partners have a sufficiently high threshold of R&D and marketing capabilities and the presence of these capabilities was pointed out to be important criteria for the choice of partner for cooperation in a JV. For example, 7 out of 12 foreign JV parent firms stated that access to marketing channels is the important objective for a JV. As the president in the Russian Head Office of a US MNE stated:

It is not about operations, it is about the market. You do not establish JVs unless the other partner has something to give, to contribute...The ventures are partnerships- where you build on the strength of two organizations.

In terms of the financial contribution of parent firms, the majority of JVs were established on parity, either 50/50 or 49/51 basis. Moreover, the results indicate that for all of the JVs that

participated in the survey the initial structure has not been changed since the initial period of partnership.

Furthermore, in terms of JV management, in most JVs the managerial teams were formed from Russian parent managerial personnel. Less often, new management staff was hired. This shows that the presence of foreign parent managers in JVs was not large on average less than 10% of managers are representative of a foreign parent. As indicated by survey respondents, the non-managerial JV employees were either from Russian parent firms or newly hired from the outside by the Russian parent. One of the important reasons for Russian parents to hire new people for JVs, rather than the transferring of their own employees, is the shortage of employees in Russian parent firms, especially in technical areas. The western parents do not send their own employees to the venture.

With regard to the relationships between parent firms in JVs, competitor firms established approximately half of JVs, and the other half were agreed between vertically related firms (e.g. customer–supplier).

Finally, the degree of satisfaction relating to how JVs met their objectives was assessed on the scale from one to five, which corresponded to ‘not satisfied at all’ – ‘absolutely satisfied’. The results show that 6 out of 13 Russian parent firms were ‘absolutely satisfied’ (‘5’), and by 6 as ‘relatively highly satisfied’ (‘4’). Interestingly, only 3 of 12 foreign JV parents evaluated their JVs to have absolutely satisfied the objectives (‘5’) and 8 evaluated that JVs’ objectives were ‘relatively highly satisfied’ (‘4’). Overall, it shows that absolute majority of both Russian and western parent firms reported a high degree of satisfaction with their JVs.

4.3.3. Motivation for JVs' establishment

Western parent

The survey results show that several factors influenced the decision of Western parents to enter JVs. The most important factor for the majority of respondents is the strengthening of a long-term strategic position. Indeed, the survey results show that 11 out of 12 western parent firms marked this criterion as being highly important, and therefore one of the main objectives of JVs is related to the strategic goals and enhancement of competitive advantage. Amongst other reasons mostly strongly emphasized by respondents are an access to marketing channels (6 out of 12 firms) and value chain optimization (5 out of 12 firms). Not surprisingly, incentives such as access to product or process technology and financial resources were not found to be very important for western parent firms.

Russian parent

The motivation to establish a JV with a western partner was strongly driven by a strategic motivation and 9 of 13 respondents said that strengthening their strategic position was one of the most important reasons for entering into a partnership. Russian firms strongly recognized a JV as an important tool to achieve long-term strategic plans. In addition, Russian parents recognized that access to product and process technology as well as financial resources is an important reason for cooperation with foreign firms. Indeed, these motives were pointed by 7, 11 and 5 firms out of 13 Russian parent firms respectively. It is worthy of note that the acquisition of knowledge in the area of process technology was perceived as more important incentive than in the area of product technology knowledge. Other incentives such as access to marketing channels, economies of scale and value chain optimization were reported by Russian parents to be of the less importance.

4.3.4. The contributions of parent firms and the criteria for parent choice

Western parent

In this research the contributions of the parents have been assessed in two ways. First, parent firms were asked to describe their own contributions, and second, they were asked to evaluate their parent's contributions. This approach allowed a better understanding of how parent firms perceive each other and whether their perceptions correspond with the actual contributions (see Appendix 1).

From the western parents own point of view, their contribution to JVs was important in all areas. Of 12 organizations that participated in the survey firms 11 reported that they brought substantial knowledge in product technology to their JVs; 9 firms reported a major contribution of knowledge to process technology; 10 firms - to manufacturing support and management; and 7 – to marketing. In addition, 7 firms reported that they contributed to a large extent by financial resources.

Overall, Russian parents' perception of the western parent contribution corresponds with that expressed by western parents themselves. Hence, 11 out of 13 Russian parent firms perceived that foreign parents contributed to a large extent to product and process technology, 10 - to manufacturing support; 7 - to management knowledge, and 7 to financial resources. However, only 3 Russian parent firms admitted that the input of western firms in terms of marketing knowledge was important for JVs operations.

Further, in terms of JV partner choice, 6 of the 12 western parents emphasized that the level technological knowledge of Russian parents greatly influenced their choice. Although these findings might be surprising given that western firms do contribute to JVs by technological knowledge, insights revealed during interviews provided clarity to this aspect. In particular, as Russian parents are closely involved in operational aspects of JV activities, they have to possess a threshold level of technological knowledge in order to be able to master technologies

introduced by a western parent and implement minor process and product adaptations. Hence, the presence of the technological competences of a Russian parent was reported by many respondents to be a very important criterion for the establishment of JVs. In addition, in the 12 foreign parent firms, criteria such as distribution channels, and access to major suppliers were reported to be important by 7 and 5 firms respectively. Relational aspects such as reputation of the Russian parent firm and the trust between management teams influenced the thinking to a large extent in 8 western parent firms.

Russian parent

From the perspective of Russian firms, their most important contribution was in the areas of Russian business knowledge as reported by 10 out of 13 respondents; marketing knowledge was reported by 10 respondents, and financial resources by 5 respondents. Furthermore, 8, 10 and 9 Russian firms think that their contribution in terms of product, process technology, and manufacturing support respectively was *moderately* important.

If one compares the survey responses with regard to the perception of western parents regarding Russian parents' contributions in these areas, some interesting findings appear. First, the overall appreciation of the importance of Russian parents' contribution in respect of technological knowledge is smaller. Indeed, of 12 foreign parent firms, only 4 and 3 think that Russian parents contribute to a *moderate* extent to product and to process technology respectively, acknowledging, however, the input in the area of manufacturing support (10 of the 12 respondents). However, despite the differences in degree of importance regarding technological contribution, western firms fully appreciate the input of Russian firms in terms of Russian business knowledge, marketing knowledge and financial resources.

The criteria for western parent choice reported by Russian firms correspond well with their expectations regarding western parents' contributions. The most important of the criteria for the choice of western parents were the presence of technological knowledge which was reported by 12 of the 13 Russian parent firms, managerial knowledge which being reported by 11 firms and financial resources, reported by 6 firms. Interestingly, criteria such as reputation and brand name also represent a high importance; these items were recognized by 11 and 12 Russian firms

respectively. Lastly, access to major suppliers of a western parent was considered as important by 6 of the participating Russian parent firms.

4.3.5. Learning objectives of parent firms.

Western parent

The learning objectives of parent firms were examined in the similar way as the contributions. In other words, parent firms were asked to provide information about their own learning objectives and report their opinion regarding their parents' learning objectives.

Overall, this study revealed that Russian–Western manufacturing JVs are not ‘learning’ but ‘co-specialization’ JVs (Khanna et al., 1998; Grant and Baden-Fuller, 2002). In other words, learning is not primarily an explicit objective for the establishment of a JV, but it takes place as cooperation within JVs evolves. The learning objective was only reported to be highly important by foreign firms in respect of acquisition of Russian business knowledge (10 of the 12 firms). The second important area for learning was manufacturing support; this was emphasized by 5 firms. However, it is noteworthy that *moderate learning* took place in the areas of sales and marketing (6 firms); HR management (5 firms) and accounting (6 firms). In addition, enhancement of cooperation skills was reported by 8 foreign parents to be an objective to a *moderate extent*.

The perceptions of foreign parents regarding the learning objectives of Russian firms were close to those described by the Russian firms themselves. Specifically, foreign firms reported that from their perspective Russian parents aimed to acquire knowledge in the areas of product and process technology, manufacturing support and quality control. However, 5 of the 12 firms perceived that Russian firms also have the incentives to learn in the areas of HR management and information systems. *Moderate learning* intent in respect of cooperation skills was reported by 9 foreign firms.

Russian parent

All Russian parent firms reported that they achieved learning objectives to a large or moderate extent in the areas of product, process technology, manufacturing support and quality control. Furthermore, 6 firms acknowledged the importance of learning of cooperation skills.

The perception of western parents' learning objectives held by Russian parents differs from that of western parents themselves in several respects. First, 4 and 6 Russian parents respectively assume that foreign firms aim to learn, *to a moderate extent*, product and process technology. Second, 8 of the Russian firms think that learning in sales and marketing is highly important for the western firms. Third, accounting, from the point of view of Russian parent, does not represent any interest to the foreign firms. However, there were also some similarities in evaluation of learning objectives. The main similarity is concerns the acquisition of Russian business knowledge, which was reported as important for the western parents by 10 Russian firms.

4.3.6. Learning outcomes of parent firms

Western parent perspective

As in the previous sections, learning outcomes are studied on the basis of the direct responses from parent firms regarding their own outcomes and their perceptions regarding their partners' outcomes.

Western firms did not report important learning outcomes in either of the functional areas. However, there were some learning implications at a *moderate degree* in such functional areas as product technology and process technology reported by 4 of the 12 firms; in manufacturing support and sales and marketing reported by 7 firms; purchasing and HR management reported by 6 firms and accounting reported by 4 firms. However, the outcomes of learning of Russian business knowledge and cooperation skills were assessed as highly important by 6 respondents and moderately important by 2 of the firms.

The study revealed that the expectations of Western parent firms regarding the learning outcomes of their Russian colleagues were slightly less optimistic than those assessed by Russian parents themselves. However, foreign parent managers assumed that the Russian partner had learnt in all functional areas to *a moderate* extent. The most important outcomes were in the area of product and process technology reported by 7 and 8 firms respectively; in manufacturing support, and in quality control reported by 8 and 6 firms; and in cooperation skills reported by 8 firms. The top manager of foreign parent firm interviewed as part of the pilot study illustrated well the findings described above:

There was a lot of learning in the venture. I was on the board of directors, and there was learning of financial discipline, there was learning within the board of directors of what a JV's structure is really like. I think our partners learned the best west practices. Management practices, discipline... They certainly leaned, learned what it takes to build a plant, partners could see that this is not a facility which is build not as Russian facilities... So they learned about the type of equipment we use, what metals we prefer, what types of containers, what safety checks are needed in the plant. So, we did not pass on the technology of our products, we did not have to do it, but I think they learnt a lot about manufacturing discipline.

Russian parent perspective

The survey results reveal that Russian firms assess their own learning outcomes to be high. Specifically, 6, 7 and 7 of the 13 Russian firms think that they have learnt to a large extent in the areas of product, and process technology, and quality control respectively. Further, 9 firms reported the presence of important learning outcomes relating to manufacturing support; 4 firms in relating to sales and marketing, and purchasing; and 7 to cooperation skills. In addition, moderate learning was reported in the areas of product and process technology as well as quality control by 5 firms; in manufacturing support by 2 firms, in purchasing by 5 firms, in HR management by 6 firms, in accounting by 3 firms, and in cooperation skills by 4 firms. Overall, this means that all firms benefited from JV learning either to a large or moderate degree.

Of interest is that Russian parents evaluate learning outcomes of their foreign parents realistically and they are in agreement that there are no important learning outcomes for western firms arising from JV cooperation in any of functional areas, except for Russian business knowledge.

Nevertheless, they also report the moderate learning outcomes in product and process technology as well as sales and marketing.

Implications of JVs for overall competitiveness

The survey revealed that all Russian and foreign parent firms that participated in the survey reported that JVs have enhanced their competitiveness. This is an important finding in that this is one of the most important motivations for both Russian and foreign parent firms to strengthen their strategic positioning through a joint venture.

4.4. Summary

This chapter provides an illustration of the scale of JV activities in Russian manufacturing sector and presents the empirical findings of a pilot survey that examines the nature of cooperation and learning in these JVs. Overall, the number of JVs which are separate entities from the parents is relatively small and the majority of these JVs are concentrated in a few capital and technology intensive sectors. However, a partial acquisition mode of operation in which foreign firms gradually acquire the local firms has been observed more frequently.

The analysis of the pilot survey data shows that there is synergy in the contributions of Russian and foreign parent firms; both parents allocate various resources to JVs, and these resources are vital for their success. Russian–Western JVs are, in most cases, established on a basis of parity in that both parents have clear strategic goals. Russian parents contribute to JVs by providing production infrastructure and manufacturing support, R&D expertise, managerial and technical personnel, marketing and local business expertise, whereas foreign parents mainly contribute by providing product and process technology, and manufacturing support. These JVs are not ‘learning race’ establishments, but co-specialization JVs where the strategic motivation to join resources to achieve long-term objectives is the strongest incentive of both Russian and foreign parents. However, although parent firms do not recognize learning as the primary reason for JV

establishment, they assess learning through JVs to be highly beneficial to the improvement of their operations outside JVs. This study finds that Russian parent firms' learning outcomes are better than those of western parents and that these occur in the areas of product and process technology, quality control, manufacturing support and cooperation skills. Western parents' learning outcomes are moderate and, to a large extent, related to learning about Russian business knowledge and cooperation skills.

Once again, it is important to clarify the extent of Russian parent contribution in technological terms that have not been clearly understood in the previous studies. In particular, the '*moderate*' extent of the contribution through product and process technology as well as manufacturing support means that although process and product technology is brought in by a western parent, Russian parents provide valuable knowledge and technical assistance for the adaptation of the western products to Russian conditions. The findings show that this was described as crucial for the success of JVs. Further, the presence of the high levels of engineering skills of Russian employees that are needed for the successful operation of JV facilities was often emphasized by foreign firms. As one of the western parent firm's manager stated:

That was our imposed technology, but certainly in the design of the plant, we had our ideas, but we also got assistance from Russian engineers and designers.

Moreover, in terms of manufacturing support Russian parents provide to the venture access to their own production infrastructure, operated by their Russian employees. As the size of JVs is relatively small compared to the main operations of parent firms, there is a strong economic rationale for foreign parents to locate their JVs in close proximity of the industrial infrastructure of Russian parents.

Another important finding from the pilot survey is that Russian parents contribute to JVs by marketing knowledge to a larger extent than the foreign parents. This finding is contrary to the argument presented in previous studies that suggest that marketing expertise belong to the area of contribution of foreign parents in JVs (e.g. Lyles and Salk, 1996; Peng, 2000). Indeed, in the majority of cases JV products were produced for the Russian market where Russian parents

already have well-established marketing channels and the appropriate marketing expertise. Furthermore, this study illustrates that in the area of logistics Russian parent firms contribute through their knowledge when the issue concerns domestic suppliers, whereas foreign parent contribute with knowledge about suppliers from abroad. Management knowledge is brought to the venture by both parents. In this respect, foreign parents emphasized the importance of the Russian business knowledge held by local parent for JV success. Furthermore, the business relationships of Russian parent with other economic actors are a valuable asset not only for JV, but also individually to the foreign parent.

To summarize, the cooperation in Russian manufacturing JVs takes place on a basis of parity in which both local and foreign parents contribute resources to JVs and participate in its management. As it was often noted by one of Russian firms:

Naturally, the important criterion for the partner choice was the presence of their motivation for the mutual cooperation in the venture. Here we are looking for the balance of interests.

In the similar vein, one of the foreign parents' respondents explained:

We found everything in Russia. We cannot find the expertise in many countries. We do not simply manufacture in the country, we manufacture in the country because there is some market for our product. And the supply chain coming from other manufacturers is adequate for supply. Local content is important. ...we are not in the business where we just develop manufacturing facilities everywhere.

To conclude, the pilot survey has provided a good understanding of the main features of Russian–Western JVs. This is extremely useful and practical to the more informed interpretation of main findings based. Those based on evidence from three selected case studies. The next chapter describes these case firms and in the subsequent chapters the main results are presented.

Chapter 5 Case description

This chapter describes in detail the three Russian JV parent firms that participated in this study, data from which provided the main source of empirical evidence. The case description includes a brief overview of the industrial sectors of the Russian JV parent firms, the nature of their operations and their development path, as well as the scope of the JVs established with western firms. The first case company is an Aircraft engine building company, hereafter referred to as the ‘Aircraft engine case’, the second case is a Truck manufacturing company referred to as the ‘Truck case’ and the third case is an Auto component company referred to as the ‘Auto component case’.

5.1. Aircraft Engine Case

5.1.1. Aircraft engine building industry

An aircraft engine building industry is a knowledge and technologically intensive industry in which the development and manufacture of new product require a high level of technological and managerial competences and expertise. The product itself, an aircraft engine, is one of the most technologically complex products. The aircraft building industry is an oligopolistic sector, and worldwide there are few companies possessing the required level of technological capabilities needed for the development of competitive products. Moreover, this industry is also extremely capital intensive and new product development and production organization requires a large amount of financial resources. In addition, the process of new product development is extremely time consuming and includes product development, testing, and certification stages. The time frame for new product development is usually between 5 and 15 years. Hence, in the engine building industry the investment pay-back period is long and investment risks are high. As R&D activities are costly, the achievement of economic efficiency requires an organization with large-scale manufacturing which, in turn, means that companies should be sufficiently competitive in

one or several markets in order to sell their products in large volumes. These specific features of the sector motivate companies to join forces in both technological and financial terms for the development of the new products required by the market, and to expand into new geographical markets and market niches.

The other important feature which greatly influences the companies' operations is that this sector is under a strict national and international state regulation. In Russia, the government usually provides direct financial support to companies for the implementation of large projects. In the case of international cooperation, agreements at government levels are necessary in order to approve the launch of large cooperation projects. Furthermore, the engine has to receive numerous certificates approved by the professional industrial organizations in Europe, the USA or Russia depending on the target markets. It is particularly time consuming and tedious process when companies have to deliver extensive documentation to various organizations.

The development of the sector worldwide has been moving towards an increasing number of partnerships and alliances for new and more technologically sophisticated product development. In the Russian context, discussions about the development of the sector are particularly interesting. In Soviet times, when both R&D and enterprise sectors were financed and controlled by the national state, the aircraft engine-building industry was a focus of Communist party attention and received significant financial support. The structure of the industry represented a network of R&D and production units, in which a large number of design bureaus and research institutes were involved in civil and military engines development, and experimental plants implemented the testing functions. Engine building manufacturers relied on close cooperation with external R&D organizations and focused on implementing their main function, which was a mass production. Technologically, the Soviet school of engine building was one of the most technologically advanced in the world.

However, after the start of economic reforms the situation in the industry changed dramatically. During the first stage of transition all industrial sectors experienced significant reductions in government financial support, which resulted in the closing down of R&D units, the loss of personnel and lack of funds for the organization of production. These reforms caused the

disintegration of the Russian aircraft engine manufacturing industry. At the same time, by the second half of the 1990s, the production volume of the Russian aerospace industry had dropped significantly compared to 1990, and this drop has resulted in decreases in revenues. Hence, in the post-reforms period engine manufacturers lost the source of both innovation and finance, and it has been recognized that none have the sufficient financial and technological resources to independently undertake projects for the design of engines for military or commercial applications. Importantly, one of the most negative consequences of reforms was the fact that between the end of the 1980s – start of 1990s neither the scientific nor technological work had been accomplished to pave the way for a new generation of military and commercial aircraft engines. Currently, the Russian aviation industry is engaged in manufacturing aircraft engines that were designed in the 1970s and 1980s. Although for military aircraft and helicopters, the Russian engines currently produced are still sufficiently competitive, in the civil sector, they lag behind western rivals, and Russian manufactures face serious problems due to the tightening of the requirements for aircraft engines noise and emission levels that have been implemented by the International Civil Aviation Organization (ICAO).

In recent years, due to growing domestic demand and higher volumes of aviation exports, the aircraft engine production business has demonstrated a steady growth both in Russia and the CIS countries. Moreover, government financial support has increased significantly and various means for the allocation of funds for industry development have been implemented. However, although the industry has exited the crisis of the 1990s, it has faced another problem stemming from the absence of technologically advanced aircraft to satisfy increasing demand. The main efforts of Russian aircraft engine manufacturers are focused on upgrading existing designs to bring them in line with new noise and emissions limits. In parallel, industry experts are stressing the urgent need to renovate the experimental and technological capabilities within Russia that would be required for developing and manufacturing a new generation of aircraft engines. A move toward joint programs within the Russian industry is clearly evident. All of the engines for commercial applications that have emerged in recent years are examples of joint efforts. Based on risk-sharing principles, joint projects are increasingly being launched. The urgent need to develop new regional airliners for both the domestic and international markets has led to the involvement of foreign companies in Russian projects.

Foreign involvement in this industry is significantly rarer, but with some noticeable exceptions. One of these is the JV established between the Russian case company included in this study and a French large aircraft engine manufacturer.

5.1.2. Aircraft Engine Case description

The firm in the ‘Aircraft Engine case’ is one of the leading Russian engine building companies. The Company engages in the marketing, design, production, sales and after-sales support of gas-turbine equipment in the three main directions relevant to this field: military engines, civil aircraft engines and power generation equipment. The Company’s has a total of 23.000 employees, of whom 4600 are involved in R&D activities.

Production base

The effort of the company is equally distributed between military engines, civil aircraft engines and other power generating equipment. Specifically, in the military area the range of products includes aircraft engines, engines for unmanned air vehicles and engines for marine vehicles. In the civil area, the Company manufactures new engines for transport and passenger aircraft as well as runs the modernization programs for existing engines. Lastly, the power generating equipment includes gas-turbine engines for industrial application, gas-pumping units and pipeline fittings.

A large-scale technological modernization program has been undertaken by the company in last 10 years, which required the purchasing of modern multifunctional equipment and the reconstruction of production sites. In addition, as a result of large capital investments, the Company was equipped with machinery that enables the production of complex gas-turbine components of any dimensions and mechanical characteristics, with a high degree of accuracy and in the shortest possible time. The ultimate target of technical re-equipment is to achieve technological parity with leaders in the market of gas turbines and technologies.

R&D activities

The Company possesses a solid R&D base for gas-turbine equipment development due to incorporation of the leading Russian aircraft engine design schools and that it employs highly experienced specialists in the field. The scale of research activities performed by their R&D units can be comparable with that performed by several the aircraft engine design bureaus in the former Soviet Union. The main R&D unit is located within the production site of the head engine building plant. The Company has incorporated in its structure several design and experimental bureaus equipped by well-developed pilot production and testing facilities. The experimental facilities include benches for testing engines as well as units for testing and developing engine components. These design and experiment facilities are closely interconnected with the Company's production plants Overall, the R&D base enables the implementation of a full cycle of new product creation, starting from calculation and analysis through to the manufacture of prototypes, and also carries out government certification tests.

The complex application of information technologies (IT) has been implemented at all stages of the product life cycle, beginning with marketing research and designing through to servicing. The IT Department supports all stages of the aircraft engine life cycle: development, production and servicing. Furthermore, in cooperation with another research institute the Company implements a joint program for the introduction of nanotechnologies in the development of new gas turbines and special-purpose tools with a view to the reduction of cost, increases in engine life cycle, an increase of strength and reliability, as well as the reduction of aircraft visibility by radars.

5.1.3. Aircraft Engine Case development path

The history of the Company dates back to 1920s when the government made a decision to establish the aircraft engine building plant. Between the 1930 and 1960s several design and experimental bureaus were established in close connection to the Engine-Building plant in order to carry out the developmental and experimental activities of military and civil engines produced by the Engine-Building Plant.

In 1992 the Engine-Building Plant was restructured to form the motors open joint-stock company. The early 1990s were extremely difficult years in the Company's history. It has fully experienced the negative consequences of reforms when many of the design and experiment bureaus that cooperated with the Engine Building plant in the Soviet time were closed or changed the focus of their activities due to the lack of financial support from the state. Furthermore, as demand for the products had fallen, production volumes from the Engine Building plant drastically decreased. During the transition period production capabilities weakened because the machinery and technologies were not been renovated. However, R&D capabilities were preserved to a larger extent due to the strong base developed in the Soviet era. During the first period of reforms, one of the most important sources of income that was vital to the survival of the Company was the revenues from after sale services of the existing aircraft park. Also, as related during the interviews, the highly professional actions of the new management team resulted in the gradual recovery of the Company.

The recovery strategy implemented by the Company since mid 90s was based on the establishment of cooperative links with other engine building plants and to actors in the R&D sector in order to strengthen their R&D and production capabilities. As a result of this strategy, the Company merged with a number of Russian engine building plants and design bureaus. Hence, at the time of the study the Company structure included five R&D units and five production sites in addition to the main production and R&D facilities of the head engine building plant.

Furthermore, the strategy of a step-by-step modernization of the core engine building plant allowed old machinery to be replaced by new technologically advanced production lines. As a result of these strategic actions, in early 2000 the Company became the prime manufacturer of the fifth-generation aircraft engines, and implemented the development, serial production and overhaul of all the ship-based gas-turbine engines and propulsion units of the Russian Navy. To successfully realize the development strategy, the company actively established cooperation with local and foreign firms and non-firm organizations, and continuously acquired knowledge and expertise from external sources such as industrial consultant agencies, research institutes, and foreign partners. Specifically, one of the most important partnerships initiated in 2003 was the

establishment of a JV on an equity parity basis for the development of a new engine for a civil regional aeroplane. This is discussed in greater detail in the next sections.

The overall strategic objective of the Company is to enhance the competitiveness of Russian engines in foreign markets and to integrate the firm into the world engine building industry. To achieve this goal, the Company actively implemented various activities oriented towards the development of new products and the modernization of old products, an extensive modernization of the production base, and the implementation of human resources development programs. The large financial resources accumulated internally and through government support were invested as a means to implement these activities.

5.1.4. Joint Venture with a western firm

JV description

In 2003 an equity JV with a foreign partner was set up in order to develop and manufacture a civil regional aircraft engine. It is noteworthy that the idea of partnership was developed gradually between parent companies. In the late 1980s the two companies had cooperated on small technical programs including a sub-contracting agreement for the production of engine spare parts for an engine produced by the foreign parent. Although the manufacturing of these parts did not require advanced technological capabilities, the successful implementation of this agreement indicated the ability of the Russian company to cooperate and induced further interest for additional projects. In addition, the western parent firm realized that presence of the technological potential of the Russian company for the development and manufacturing of technologically sophisticated products.

The established JV was the first large-scale international cooperation project undertaken by the Company, which brought about multi-faceted collaboration for the creation of highly technologically complex product that satisfied Russian and European standards. This JV was organized on the principles of sharing technology, risk and capital, in a manner that was similar

to those of other international JVs in the engine building industry. Hence, the underlying rationale of this JV was to combine technological and financial resources for the development and production of a new civil aircraft engine. This engine was a completely new product planned to be developed from the scratch as opposed to other engines that were modified from the old models; this added to the challenge. The overall objective of JV was to produce a new technologically sophisticated product.

In terms of finance the Russian and foreign parents contributed to the venture on a 50/50 basis. In addition, tasks were equally divided between parent firms, whereby the Russian firm was responsible for development of the cold part of the engine and experiment activities, and the foreign parent was responsible for the development of the hot part of the engine and integration. As one of the respondents remarked:

“Two companies have joined forces to develop the joint product on a parity basis. They combined efforts in order to develop the product in a shorter period of time and introduce it to the market”.

The engine development activities were organized in the R&D units of the parent companies. Specifically, the Russian parent has designated a separate area (unit) in the R&D department of its own head engine building plant for new engine development activities. Because development required intense cooperation between both parents' engineers, meetings and team assignments were also organized in this unit. Of note is that the development of the new engine is on the border of scientific discovery and requires a significant quantity of all types of resources.

The production unit was established in the production site of the main engine building plant of the Russian parent as a result of the modernization of a workshop that was physically located in a separate building. However, numerous parts of JV activities are located in other workshops and units at the main plant, and, as pointed out by the interviewees, 7-8000 of the 15000 employees that work for the main enterprise are involved in JV activities in various guises. This stresses the fact that the personnel employed by the Russian company are involved simultaneously in the JV

and the company's other operations, and this provides an excellent opportunity for the application of knowledge acquired while working on JV tasks to other non-JV related activities.

The JV product was initially planned to be sold for use in Russian aircraft. However, in the long-term, as the engine has a European certificate, the markets of Europe and North America will be targeted for engine sales.

Parent firms' objectives and learning intent

In terms of the overall objectives of JV parents, both firms pursued an economic rationale which was to merge the financial and technological resources and share the risks of development and manufacturing of the new innovative product, and a strategic rationale which was to strengthen their position by introducing a new product to the market. In addition, by establishing the JV with Russian firms, foreign parent company aimed to obtain access to the Russian market where the first application of the new engine had already been agreed. Indeed, the estimated demand for the new product in Russian was high and thus, presence in the Russian market is an important objective of a western parent. As one of the Russian parent managers remarked about the objectives of their partner:

They learn to operate in the Russian market. This market is very important for them, and without cooperating with us they would not get access to the Russian, and CIS market, and East Asia, which are our traditional markets.

The criteria of foreign parent relating to the choice of a Russian parent were the presence of technological capabilities, experience in engine development, and the cooperation skills required for the creation of such a sophisticated product. As the foreign firm had a good opportunity to evaluate these aspects during the cooperation experience prior the JV, a decision to cooperate through a JV was gradually developed.

On the Russian side, in addition to the economic and strategic objectives, learning and knowledge acquisition goals were highly important when deciding to establish the JV, and an

understanding of the importance of learning and areas of knowledge acquisition were heavily emphasized during the interviews. This was clearly pointed out by one of the participants:

We are actively acquiring experience from our colleagues and knowledge they are willing to share. This takes place in our everyday life... Our relationships with the partner imply significant opportunities to acquire management practices, technological knowledge, logistic practices, and the opportunity to get access to foreign suppliers.

Russian parent –JV-Western parent interaction

The extent of interaction between JV and parents greatly influences the learning process and outcomes. As it was mentioned in Chapter 2, there are several types of interaction. First is technology sharing which indicates whether technological knowledge has been communicated within JV relationships. Second is the general inter-organizational interaction which shows whether there are attempts to understand better organizational culture and social aspects of cooperation through visits and other social events. The third interaction relates to the personnel transfer, which indicates whether the employees of parents firms are allocated to the JV and transferred back to parent firms. Finally, strategic integration refers to the presence of relatedness between JV and parent strategies.

Table 5.1 illustrates the degree of communication with reference to the types described relating to the Russian parent within the JV.

Table 5.1 Interaction between Aircraft engine company, JV and western JV parent

Means of interaction	Degree
Technology sharing Structured meetings between JV and Russian parent managers (plant managers, heads of quality control); R&D meetings; direct linkages between Russian and foreign parent firms	High
Inter-organizational interaction Tours to visually illustrate the JV operations, social means for interaction between parents	High
Personnel transfer Structured rotation between JV and the parent	High
Strategic integration Relatedness between JV and parent firm strategies	High

Indeed, the communication in this case took place at regular intervals and on a very intensive basis. For example, the sharing of technology was implemented in working groups consisting of experts from both sides. Inter-organizational interaction occurred through numerous visits by Russian parent employees to the head office of foreign the parent in France and the JV, as well as by French parent employees to sites of the Russian parent and the JV. As discussed earlier, the JV's operation also reflects extensive involvement of the employees of the Russian parent firm and the JV strategy is closely related to the strategic goals of the firm.

5.1.5. Case summary

The Aircraft engine case is a dynamically developing Russian enterprise possessing advanced technological and managerial competences in which the scientific potential and well qualified personnel have been preserved over the course of economic reforms. Although the transition period seriously distorted the functioning of the firm, it was able to recover due to a highly professional management. This is a 'new' type of Russian enterprise which was able to proceed through radical transformation and has undertaken a number of activities to restore its

competitiveness. The presence of capabilities influenced the attractiveness of the Company to foreign firms seeking cooperation at the high stage of the value added chain. Although the JV parents are competitors in the industry, neither perceives the JV as a competitive race. On the contrary, both parents are highly motivated to cooperate and share knowledge in order to succeed in achieving the objectives of the venture. As revealed in the interviews, the Russian firm's personnel, at all levels, have excellent opportunities for knowledge acquisition and learning-by-doing, and the scope of JV permits the deep involvement of both parents in its operations. This was pointed out by one of the respondents:

Inside the boundaries of partnership we have deep immersion in each other.

An adequate understanding of the objectives and benefits from the JV by both parent firms supports the argument that there is a lot of cooperation and openness in the venture, which ensured its success.

5.2. Truck Case

5.2.1. Automotive industry

The heavy truck industry is a capital and technology intensive industry characterized by a small number of companies. It requires the presence of large-scale production to achieve efficiency in operations and an enormous industrial infrastructure. The nature of technological innovation in the sector is connected to continuous improvements of the technical characteristics of the products and compliance with environmental and safety standards. The environmental standards EURO 3, 4 and 5 are most important to manufacturers; they need to follow these standards to operate in the international market. Unfortunately, the majority of Russian car manufactures lag behind their European rivals, and only few have reached Euro 3 level. In contrast EU producers currently adhere to Euro 4 standards, and are planning the transition to Euro 5. Although the

Russian Federal Government has approved a plan that would bring the country closer into alignment with international standards, implementation still faces many obstacles.

The truck sector is closely connected with other industries with regard to development. For example, in order for the automobile sector to implement the transformation to new environmental standards, Russia's refinery infrastructure also require upgrading so that they are able to deliver the higher-quality fuels needed for the more stringent emissions standards of Euro 4 and 5. In addition, technological upgrading of the auto component industry, aiming at manufacturing high quality components, is vital for the development of technologically advanced cars.

Furthermore, the ability of truck manufacturers to account for specific climate and geographical conditions is essential for their competitiveness in the sector. This requirement is particularly applicable to foreign companies that aim to sell their vehicles in Russia, where the climate and road conditions differ from those in Europe or the USA and, thus, products developed abroad require various adjustments in order to be competitive in Russia.

Favourable market conditions that have been driven by Russian economic expansion and the growth of capital investments have created a growing demand for heavy trucks. However, satisfying this growing demand represents a challenge for Russian truck manufactures because the production capacity of the majority of enterprises suitable for the production of technologically advanced vehicles is insufficient, and there is a need for significant investment to increase production volumes. Still, the Russian heavy truck industry faces a significant price gap between European vehicles and domestic brands, which makes this sector attractive for foreign investment. A relatively new phenomenon is the expansion of Chinese brands into the Russian market exploiting the demand for low cost trucks that cannot be satisfied locally due to limited production capacity of Russian manufactures.

These industry specific features have important implications for the decisions of foreign investors. From their perspective, first, partnering with local firms enables the financial investment to be reduced and to benefit from an existing infrastructure which is costly and time

consuming to build up from the scratch. Secondly, the marketing channels of Russian partners allow economies of scale in new operations to be achieved. Thirdly, the knowledge and technological capabilities of local firms to adapt product to the local conditions are extremely important for the success of a new product launch.

5.2.2. Truck Case description

‘Truck case’ is one of the largest truck manufactures in Russia. It is a vertical holding, and its structure includes a full range of enterprises from metallurgy to final assembly, which are all located in close proximity to each other. A united production complex of the group of companies embraces the whole technological cycle of truck production from development, production, assembly of vehicles and auto components to the marketing of finished products and service maintenance. Specifically, the Group have three main groups of activities: (1) R&D, production, line assembly, after sales service of heavy-duty trucks and small-size passenger cars, diesel engines, various parts, units and sets of a vehicle; (2) Production of tools, accessories and unique equipment, the overhaul of power units and vehicle parts; and (3) Production of iron, steel non-ferrous castings, forging and stamping. In the period leading to the time of the study the sales volumes steadily grew which enabled the implementation of an investment strategy. About 59 000 people work in departments and associated companies.

The company is the licensed supplier to the Federal Agency of Industry of the Russian Ministry of Industry and Energy.

Production

The Company positions itself in the market of trucks of 14-40 tons, and during the previous several years the range of products had considerably increased. The manufacturing of medium tonnage vehicles had started, and a family of high payload vehicles was extended. The product quality system of the Company satisfies the requirements of ISO 9001-2000 international standard and is approved by the control system certification agency – Russian Register. Several

models in the product range are already produced according to Euro-3 international ecological standards. A strict policy is followed towards suppliers; their products are carefully tested in terms of quality. The fact that the company has a high degree of vertical integration is reflected in that the major part of truck components is produced internally. Importantly, they have to satisfy the technological requirements set out in the Company strategy.

R&D activities

The company has its own R&D department which implements the major part of R&D activities in all areas of the Company operations. However, due to the large spectrum of technological areas of these operations and limited human and financial resources, the implementation of some R&D activities is outsourced to external parties such as consultant agencies, research institutes and JVs. As the strategic objective is rapid growth and integration in the world car industry, in addition to JVs, it also cooperates with foreign R&D organizations to implement activities related to new product development, the technological modernization of production sites and optimization of production processes.

5.2.3. Truck Case development path

The company was established in 1969 as a complex of plants producing heavy-duty vehicles in the Volga area. The Volga region, which is considered to be a Russian automobile cluster, and has in its proximity all necessary supporting enterprises including suppliers of raw materials, equipment, and auto components. In 1990 an open Joint-Stock Company was established as a result of the privatization of state owned enterprises, and this firm was the first joint-stock company established in the Soviet Union in the post-perestroika period.

As was the case with other industrial enterprises in the early 90s the company experienced the negative consequences of the economic transformation period when demand fell and as a result financial resources for development were almost non-existent. According to the interviewees there were two main factors that positively affected the recovery process. First was the support of

the local government, and second, the well-planned anti-crisis program developed by the company's management team. One of the major difficulties in adaptation to the market economy was the large scale of the overall Company operations and an inflexible organizational structure due to a high level of vertical integration. As one of the managers stated:

There was a need to become more adaptive and flexible, and the Company with its structure faced certain difficulties in its further development.

The Company clearly formulated a development strategy specifying several important directions. First, in terms of product strategy, the objective was to restructure the product portfolio and to improve the quality of products by developing a new component base and by modernizing the production facilities. As remarked during the interviews, the Company defined the range of core competences and products for internal development as well as those that were to be outsourced to external partners, including JVs. The second important direction was to improve the performance of its own R&D center while outsourcing some elements of design work to foreign design centers with the objective to develop engines that satisfied the Euro-3, Euro-4, and Euro-5 standards, and to receive assistance for the execution of the processes of technological optimization. The third direction, and of particular importance was dedicated to the improvement of IT system, the quality management system, and cost reduction programs such as "Lean production" and "Just-in-time" systems. Also, the Company promoted the development of a technological business park in the proximity to its main production facilities, and relationships with suppliers by offering them facilities with all energy and utility connected to their logistics. In more recent company had introduced elements of planning and material accountancy on the basis of information technologies through the application of the SAP product. A fourth direction was the reconstruction of production sites which was of the crucial importance there was a lack of facilities that satisfies the required of technical standards relating to the production of quality products.

Significant financial resources have been invested in past several years to renew the production system in order to complying with western requirements. This was complemented by the introduction of new human resource practices, e.g. wages based on production volumes. The

company was working towards increasing productivity with an aim to maintain numbers of employees at the same level. Lastly, the strategy implies a continuous development of the Company distribution and service network. The ultimate aim of this strategy was to strengthen the competitive advantages in the domestic and foreign markets. The important aspect of the strategy was to motivate changes in mentality for managers and employees.

5.2.4. Joint Ventures with western firms

The realization of the long-term objectives aimed at improvements of product quality resulted in the establishment of several strategic partnerships with European and US manufacturers of auto truck components.

JVs description

The first JV was started in 2005 when the Company signed an equity-based JV agreement with a German company for the production of a gearbox at new manufacturing facilities located within production site of the Company. This JV was their first serious experience at joint production with a foreign firm for manufacturing auto components under its trade mark. The initial capacity of the JV was 5000 gearboxes which involved 70 employees. The share of the foreign parent in the JV is 51% and the Company has the 49% balance of the shares.

In 2006 the Company established a second JV with an American partner for the manufacture of series B engines. The engines are produced in two stages to comply with Euro 2 and Euro 3 standards for diesel emissions. The shares of the founders were divided equally.

Both JVs are organized and operate according to similar principles. The Russian and foreign partners actively participate in the management of the JV and have their own representatives in the management teams. Non-managerial personnel were hired to the first JV entirely from the Russian parent company. However, 50% of second JV's employees were newly hired due to personnel shortages at the Russian Company. Furthermore, the Russian Company provides a

great deal of assistance in managing the various business relationships within the JV boundaries such as customers, suppliers and government authorities. The operational aspects of JVs' activities are mainly the responsibility of the Russian parent. The major part of the operational aspects related to quality management is implemented by the R&D unit of the Company. Foreign parents contribute through product technology and expertise in the organization of production.

The main customer of the products from both JVs is the Russian parent company itself. Also, small numbers of products are sold to other truck, bus and agricultural equipment manufacturers in Russia, Belarus and the Ukraine.

In terms of the partner selection, the criterion for the choice of the foreign firm with whom to establish the JV was related to the possession of product technology. The presence of serious cooperation initiatives and a willingness to share risks were also important aspects considered when selecting foreign partners. From the perspective of the foreign parent firms,, the presence of technological and managerial capabilities as well as the reputation of the Russian firm were particularly significant criteria for the choice of partner. In this regard, aspects such as trust between management teams were emphasized by the foreign parents as one of the crucial aspects for the initiation of cooperation.

Objectives of JV and learning intent

For the Russian Company, the overall rationale behind the establishment of the JVs was to ensure the supply of high quality components for their own trucks by using the advanced technology of the foreign firms. Investment and risk sharing was also behind the JV decision. For the foreign parents the cooperation with a large Russian company initiated strengthened strategic positions in the Russian market and thus contributed benefits from an association with this highly respected original equipment manufacturer and its extensive dealer network in the Russian market.

Furthermore, learning from the experience of the JV is a clear objective of the Russian Company. The value of the knowledge held by the western parent is well understood by managers and, as described earlier, intensive relationships within the boundaries of the JV have been established.

Moreover, learning is seen as two-way process; Russian managers transfer knowledge about the local climate, road conditions and the solutions applicable to these conditions to their western parents.

In respect of the product characteristics we transfer to the parent a large amount of knowledge about climate and road conditions in Russia, and about the means to solve issues related to adaptation to these country specific conditions

Russian parent –JV-Western parent interaction

The intensive cooperation between the Russian company, the JV and the western partners occurred with respect of technology sharing, inter-organizational interaction, personnel transfer and strategic integration. However, overall, the intensity of interaction is smaller than in ‘Aircraft engine case’. Table 5.2 illustrates the degree of each type of interaction.

Table 5.2 Interaction between Truck Company, JVs and western JV parents

Means of interaction	Degree
Technology sharing Structured meetings between JV and Russian parent managers (plant managers, heads of quality control); R&D meetings; direct linkages between Russian and foreign parent firms	Medium
Inter-organizational interaction Tours to visually illustrate the JV operations, social means for interaction between parents	High
Personnel transfer Structured rotation between JV and the parent	Medium
Strategic integration Relatedness between JV and parent firm strategies	High

First, in respect of technology sharing, only the adaptation of product technology from foreign parents to the local road and climate conditions took place in the R&D unit of the Company. However, the engineers of the both parent firms closely cooperated as a team in order to implement this task. The presence of advanced technical capabilities held by the Company

engineers ensured a high level of performance with regard to product adaptation activities and the organization of production. As one of the respondents explained:

Naturally, our experts participate in the development of the JV. Moreover, due to the close cooperation in the area of adaptation of JV products for our trucks and organization of many JV activities within our site, we conduct the development and implementation of various projects in working groups of experts from our enterprise and our partner's firm.

Second, there was intensive inter-organizational interaction. In this respect there are regular visits at all levels of employees from both parent firms and vice versa. As one of the Russian parent senior managers stated:

The visits are organized so frequently that JVs are tired of us already.

Third, in terms of personnel transfer, the practice of the Russian firm is to appoint their own employees to JV, but mainly for R&D activities. This was described as follows:

Concerning R&D activities, our and our parent engineers work together for the adaptation of these components to our trucks. Moreover, partly, the personnel responsible for these operations at our enterprise are often being sent on a permanent basis to the JV

Lastly, there is strong strategic link between JVs activities and Russian parent. This is because the JVs were established to ensure the supply of high quality components to Russian parent, which is vital to its development.

Other JVs established in 2007-2008

The successful implementation of the first two JVs illustrates the benefits of this strategic tool to the development of the Company, and has resulted in the establishment of further JVs in subsequent years. In 2007 the next JV was founded with yet another foreign firm to produce brake assemblies. This was agreed on the basis of equal shares and authorized capital between the parties. In March 2008 the Company signed a further JV agreement to produce piston

assemblies, again with equal shares between the parties. The goal here is to produce spare parts for the Company's needs which will enable mass production of engines to commence and thereby satisfying environmental standards Euro 4 and Euro 5. However, because only those JVs established in the period 1998-2006 are included in this study, a detailed investigation of learning through these recent JVs was considered outside the scope of this research.

5.2.5. Case summary

The Company is one of the most successful truck manufacturers in Russia with a highly professional management team that has been steadily growing during the decade leading up to the time of the study. It had followed an aggressive development strategy oriented towards the enhancement of overall competitiveness in the domestic and foreign markets. As the one of the respondents put it:

In our approaches to company development we follow the traditional recipes, trying to achieve efficiency in operations and to become integrated in the world automotive industry.

The JVs established over previous recent years were an important part of the development strategy. The overall objective behind these JVs was to benefit from access to the technology in the JV parent to ensure the supply of high quality auto components. All JVs were structured according to the similar principles in that new legal and physical entities were established within the Company's production site. The cooperation between JV partners occurred in different ways within the JV boundaries; e.g. the execution of product adaptation, manufacturing of other components for the needs of the JVs according to the technological specifications of the western parents. The management of the Company was satisfied with the JVs' operations and aimed to extend the scope and scale of these operations.

5.3. Auto Component Case

5.3.1. The auto component industry

The auto component industry plays an important role in industrial development as it affects the functioning of many other sectors in the economy. There are several features of this sector worthy of mention. First, it is a mass production sector where economy of scale has important implications for achieving efficiency. Second, it is technology and capital intensive industry in which manufacturers are required to master many different technologies and implement large long-term investments relating to the upgrading of technology. Third, new product development is costly and requires significant innovative capabilities. Fourth, similar to the automobile sector, the nature of technological innovation is interwoven with compliance with environmental and safety standards. Again, as in the case of the automobile industry, the majority of Russian auto component manufacturers do not manufacture products that satisfy these standards. The lack of supply of quality component creates obstacles for other actors in the economy; for example, western car assembling companies are not able to achieve the level of localization required by government, which might force them to withdraw from making investments in Russia. This example illustrates that there is a close interdependence between the automobile industry and auto component industry. If the development of car manufacturers depends on the availability of the component base, the development of auto components manufacturers relies on the nature of demand from the car manufacturer, which in turn depends on the strategic objectives of car manufacturers with regard to the production of high quality cars. Currently, Russian the passenger car sector lags behind: as one of the respondents stated:

The auto component industry in Russia is as old as our cars

Hence, the auto component and car industries are locked in to old technologies, and this represents a serious obstacle for the ability of local firms to catch up with western competitors. The Russian government does not directly support auto component manufacturers, but attempts to affect the development of the industry by indirect means; e.g. through custom taxes or

regulations relating to the level of compulsory localization for foreign car manufacturers. However, government actions have not yet resulted in significant improvements, and only a few domestic big auto component suppliers are able to offer products that satisfy European standards.

5.3.2. Auto Component Case description

The Auto component case is a large multi-functional company which works at several operational directions. The main direction of activity is the production of all kinds of plastic automotive components. The Company has a main consumer, the passenger car manufacturer, to whom it supplies 65% of its total production volume. The company manufactures products from polymeric materials and processes almost all of the polymeric and composed materials used in the automobile industry. The Company also manufactures products for the aerospace industry, the navigational and electrical engineering industry, agriculture and the construction industry. Furthermore, the Company processes recycled materials and manufactures equipment. Another important activity is the production of consumer goods, such as containers, basins and toys. At the time of the study the Company had 5500 employees.

Although the Company is officially registered as an enterprise within the chemical industry, this study positions the Company as the supplier of auto components because both of its JVs had been established to manufacture auto components manufacturing.

Production

There are four main technological areas in production: injection-molding, foamed polyurethane, galvanic metallization, and film production. This broad range of technologies permits products with applications in different industries to be produced. During the previous several years the Company implemented a modernization program aimed at purchasing new machinery and technology allowing increased productivity and quality of products. In the auto component area, the advantage of the Company is its ability to implement internally all operations at all stages of

the value chain. This provides an opportunity to offer a competitive price due to the potential for cost reduction at various production stages.

The enhancement of product quality is the main strategic goal of the Company and a number of objectives in quality management had been set up. In particular, the emphasis is on increasing product quality with simultaneous efforts for decreasing the overall production costs. Further, new products that satisfy European quality standards were being continuously developed and manufactured. In recent years the Company had built new a production site for manufacturing components for a new client, a western car manufacturer. This plant was equipped from scratch according to western standards and the technological specification received from the client. However, the main production site, where components are manufactured for its main Russian client, is still largely equipped with the machinery, a serious obstacle to the achievement of quality objectives. Due to the large size of the Company a complete modernization would be extremely costly and time consuming.

R&D activities

The Company has its own R&D department responsible for the R&D activities in all areas of its operation. At the time of the study the size of R&D unit was about 300 employees. The major part of work is conducted internally, including activities for the needs of JVs. The department is responsible for production planning, new materials development, new products development, etc. However, cooperation also takes place with external R&D organizations, primarily in Russia, on the development of new products and materials, as well as with foreign manufacturers for technological modernization and the supply of equipment. This cooperation takes place on a two-way basis and foreign partners also learn from the Company about certain technological solutions.

The Company's R&D personnel are highly qualified and have a great deal of experience in the implementation of a variety of tasks. As one of the Company managers, who had been working in the Company for many years, and was at the time a director of the JV, put it:

If there is defined task and financial support, here they can resolve any task. There are high qualified experts here, experienced people who can put everything into practice.

5.3.3. Auto Component Case development path

The Company was established in 1959 as a state owned enterprise processing plastics. Initially, the factory was planned to be a part of the space industry. The construction of the large automobile factory abruptly changed the destiny of the enterprise, and it became the supplier of components for its new model. This required the fast development of advanced technologies. In the 1960s the enterprise rapidly grew and new manufacturing capacities for injection-molding products from plastic and for processing foamed polyurethane were put into operation. In the 1970s the workshop manufacturing products for the automobile industry and manufacturing PVC covers commenced operations. In 1978 one more workshop for the galvanic metallization of products was set up. Since its early years, the enterprise had also produced consumer goods.

After the start of economic reforms the company was privatized as a Joint Stock Company. In the early 1990s the firm experienced a crisis, as did many others, but had slowly recovered by the end of the 1990s. Since that time, the Company had started to implement systematic actions towards the upgrading of technology and the development new products to meet its strategic goals and objectives. The top management continuously analyzes the quality management system to ensure it reflected its urgency and productivity, including estimating the opportunities for improvements and the need for changes. However, the large size of the enterprise and the large number of technological areas of operations represent a serious challenge for the implementation of restructuring, which requires significant financial and human resources.

An important role of the management in the recovery process during the previous decade was often emphasized in the interviews. As many top managers have a technical background and long work experience in the enterprise, their actions in the strategic and technological areas were well aligned. Moreover, the continuous training of personnel at all levels is organized, which indicates the presence of professionalism with regard to approaches to management.

5.3.4. Joint Ventures with western firms

JV description

Implementation of the strategic restructuring in the late 1990s had required new solutions, and the Company established its first JV with a large German manufacturer of auto components in 2000. The main objective of the JV was to manufacture new auto components for one of the largest Russian passenger car manufacturers, which historically, had been the main customer of the Company, through the use of the product technology of foreign parents. The Russian and foreign parents had equally contributed to the JVs in terms of financial capital. The operations of the JV were established within the main manufacturing site of the Company in a completely modernized workshop. Hence, the Russian parent provided the production site and infrastructure, and highly qualified personnel to the venture and, most importantly, the customer relationships that would provide the market for the JV products. The foreign parent contributed product and process technology. Both the parents had their own representatives within the JV management and actively participated in JV operations.

However, the cooperation in the first JV did not evolve as had been planned, which resulted in the termination of the JV in early 2000s. The main reason for JV termination was the difference in opinions between parents regarding the JV product. This was made clear in an interview:

I can say that our relationships were not continuous due to the difference of management opinions with respect to product quality. At that point of time, the matter of product quality was secondary to domestic clients. Instead, the primary consideration was the price and the frequency of supply. This matter was the reason for the termination of cooperation.

Despite the experience of the first JV, the Company has established the second in 2006 with a medium size Italian auto component manufacturer. This JV was organized according similar principles as the first. In particular, operations were located in a vacant space near the Company's main production site and its managers could easily visit the JV facilities and coordinate its operations.

The main objective of this JV was the manufacturing of wheels for passenger cars, which is one of the most complex elements of the car. The main customer, as had been the case of the first JV, was the same Russian passenger car manufacturer. The product and process technology was supplied to the JV by the foreign parent. The Russian parent provided the production site and infrastructure to the venture, and also highly qualified personnel and the customer relationships with the firm that was to purchase the production output. Both parents contributed financial resources on a 50/50 basis. Both parents had their own representatives within the JV management and actively participated in JV operations.

Objectives of JV parents and learning intent

The main objective of both foreign parents was to obtain access to the Russian market by delivering new high quality product while sharing the risks with the Russian JV partner. In particular, this applied to the foreign parent of the first JV, whose main objective was the acquisition of knowledge related to the Russian market and Russian customers.

The Russian Company had a broader range of objectives, and a more explicit learning intent. Specifically, knowledge acquisition relating to quality management, manufacturing support and HR management was reported to be the learning objectives of both JVs. One of the company's managers referred to the first JV as:

It [JV] was a great experience for us.

Russian parent –JV-Western parent interaction

The interaction between Russian parent, JVs and western parents took place to a lesser extent than in the 'Aircraft case' and 'Truck case'. Table 5.3 shows the intensity of interaction in the case.

Table 5.3 Interaction between Auto Component Company, JVs and western JV parents

Means of interaction	Degree
Technology sharing Structured meetings between JV and Russian parent managers (plant managers, heads of quality control); R&D meetings; direct linkages between Russian and foreign parent firms	Low
Inter-organizational interaction Tours to visually illustrate the JV operations, social means for interaction between parents	Medium
Personnel transfer Structured rotation between JV and the parent	Medium
Strategic integration Relatedness between JV and parent firm strategies	Medium

Technology sharing occurred to a limited extent due to the fact that technology had been readily brought to both JVs by the western parents. In respect to the inter-organizational interaction, regular visits took place in the second JV and, to a lesser extent to the first JV, at the level of president, technology director, development director, as well as the head of the departments and leading engineers. The interaction process within the second JV was described as:

Our experts visited the foreign parent firms' manufacturing sites to learn about technological process, requirements, quality system, and then here were applying this technology. Here, the relationships were developing well

Furthermore, although not extensive, the practice of personnel rotation existed between JV and Russian parent. Learning mostly took place through communication, presentations, and meetings in which managers involved in JV operations explained and demonstrated how the manufacturing process was organized in the JV, and outlined its advantages. Finally, the strategic integration between JVs and the Company took place to a medium extent because the JVs were mainly established for the purpose of joint resources for the development of new products which were demanded by the Company's main customer.

5.3.5 Case summary

The Company undertook a serious effort to develop and improve its competitive advantage in order to catch up with western rivals. One manifestation of the success in the strengthening of competitive advantage in Russian market is the fact that the Company established cooperation with a western assembly plant. Indeed, western assembly manufacturers sought to cooperate with the best local companies to ensure the appropriate quality of supply for their plants. However, despite the clear positive signs of development, the major part of the products manufactured by the Company remained behind a world class level, and Russia remained the main market for any further near future expansion.

Both JVs established by the Auto Component case were co-operative in nature; the objective was to join resources for the production of auto components for the Company's principal customer. Although the first of the established JVs was terminated after a few years of operations due to management differences, there was the interest to establish the second JV which at the time of the study operated successfully and satisfied its objectives. Both JVs were described as being a valuable experience for Auto Component case company.

5.4. Summary of case companies

The description of the industry features, current operations, and development paths of the case companies prior to and after the reforms and the established JVs permits a more informed interpretation of the research findings. For this reason it useful to summarize the main points of this description in a table and illustrate the similarities and difference amongst cases. Table 5.4 presents the main features of case companies.

Table 5.4 Summary of case companies

JV features/ Cases	Industry	Size	JV objective	JV's prod. market	Parents fin. stake	Parents' relations
Case 1 'Aircraft engine case'	Aircraft engine building	Large, former state owned enterprise	Development, manufacturing, and sale of new aircraft engine	Russia, Europe	50/50	Rivals
Case 2 'Truck case'	Automotive	Large, former state owned enterprise	JV 1: Manufacturing of high quality component for own trucks	Russia (own trucks), CIS	49/51	Customer-Supplier
			JV 2: Adaptation and manufacturing of high quality component for own trucks	Russia (own trucks), CIS	49/51	Rivals
Case 3 'Auto component case'	Auto component	Large, former state owned enterprise	JV 1: Adaptation and manufacturing of auto components	Russia	50/50	Rivals
			JV 2: Manufacturing of auto components	Russia	50/50	Rivals

As shown in Table 5.4 all three companies are large former state-owned enterprises that operate in capital and technology intensive sectors, and their JVs were established on the basis of financial equality. However, there are several important differences amongst case companies with regard to the scope of operations in the JVs. First, the 'Truck case' and 'Auto component case' established more than one JV of a relatively small scale, whereas the 'Aircraft engine case' cooperated in one JV which, however, was a large-scale long-term project. Second, the JV of the 'Aircraft engine case' includes cooperation between parent firms in the full range of activities, including product development, manufacturing, sales and after sale service, whereas cooperation between parents in the 'Truck case' only included product adaptation, manufacturing and sales. With regard to the 'Auto component case' the JVs only reflected cooperation in manufacturing and sales. Third, the geographical markets for sale of JV products are different. The Products of the 'Aircraft engine case' JV were planned be sold in the Russian in European markets, whereas those of the 'Truck case' JVs are oriented towards Russian and CIS markets. The products of

‘Auto component case’ JV’s are manufactured for sale only in the Russian market. Fourth, the relationships between parents are those of competitor-competitor in the ‘Aircraft engine case’ and ‘Auto Component case’, but that of supplier/ buyer in the ‘Truck case’.

As shown in the following chapters, these features have implications for the nature of outcomes of learning through JVs for the Case companies. The next two chapters describe how learning through JVs influence the upgrading of capabilities, modernization, restructuring and competitiveness in the Russian JV parent firms, and explain the rationales behind the research findings.

Chapter 6 Upgrading of capabilities in Russian JV parent firms

This chapter presents the first part of the empirical findings describing the nature and extent of the upgrading of the technological and managerial capabilities in Russian parent firms that is attributable to learning through JVs. The presentation of these findings is organized for each functional type of capability in each of the three case companies. I start with a description of the learning outcomes from the upgrading of technological capabilities for the three case companies and conclude by discussion regarding the upgrading of their managerial capabilities.

6.1. Upgrading of technological capabilities

6.1.1. Upgrading of investment capabilities

Investment capabilities are defined as ‘the skills needed to identify, prepare, obtain technology for, design, construct, equip, staff and commission new facility or expansion’ Lall (1992:168). In other words, they include the skills and routines that define the needs for the development and acquisition of new technology or production lines, for planning lay out and equipping new facilities; for making informed decisions regarding the scale of new operations and the range of products based on an estimation of optimal costs. Moreover, taking into consideration the empirical context, these capabilities are essential for the implementation of modernization within an organization.

6.1.1.1. Aircraft Engine Case

The Aircraft engine case company had a threshold level of investment capabilities prior JV establishment. Although an extensive modernization was being implemented for a number of years and new projects had been initiated in the late 1990s-early 2000s, there was a need to

upgrade investment capabilities to enable the more efficient execution of technologically advanced activities. The empirical evidence clearly illustrates that there had been several significant improvements in investment capabilities that were an outcome of JV learning.

First, the Company achieved the more efficient implementation of routines related to project scheduling and workshop layout planning. The routines relating to search, evaluation and selection of technologies were also upgraded as the knowledge about the latest technological solutions was acquired through the JV. According to the framework presented in Chapter 2, these changes relate to the upgrading of investment capabilities at the operation level, which took place to a minor extent.

Second, the upgrading of capabilities took place in the area of overall project management, such as, improved planning, monitoring, and problem-solving activities. This upgrading was considered to be important by the Company; this is because the development and manufacturing of an aircraft engine has extremely complex logistics that require the involvement of numerous firm and non-firm organizations. This represented one of the greatest challenges for the Company. Moreover, the JV clearly illustrated the need to improve further an information system for more efficient project planning and implementation, and this pushed the company into undertaking an effort to upgrade information systems. These changes are classified as a major upgrading of investment capabilities at the advanced level. This was emphasized by the one of the respondents:

When cooperating in the JV we acquired experience of the overall management of the development and production of the highly technically sophisticated product that satisfies the European standards. We had to understand sophisticated logistics practices. We are buying large quantities of steel, and spare parts from abroad, and that was the first experience for us.

Third, the most significant achievement in the Aircraft engine case was the development of investment capabilities up to the innovative level that is considered world class project management, world class engineering, and process design. The JV was the first experience of a large-scale international cooperation for the Russian parent and it provided an opportunity to learn about how to implement very complex logistics for the development and manufacturing of

world class products including, for example, capabilities for managing delivery costs and schedules with suppliers located around the world. An important matter is that the certification of the engine according to European standards required that all suppliers should have the European certificate. Thus, as only a few of the Company's traditional domestic suppliers were certificated, the implementation of world class project created the need to establish a complex network of relationships with foreign suppliers. This was the first experience of world class projects, which allowed a significant increase in the capabilities of organization logistics.

Furthermore, the need to obtain the European certificate allowed the Company to become accustomed with the legal requirements and steps which all companies in this industry need to follow when preparing the documentation for such certification. The Company had an opportunity to compare the procedures of Russian and European authorities which was very valuable experiences. This was pointed out by a senior manager of the Russian company to be an important learning outcome from the JV with the foreign parent:

In respect of the advantages from the JV, it was that during the process of engine development we compare the requirements of our [Russian] aviation authorities with those requirements existing in Europe and the United States, so as to be able in the future to develop the engine in compliance with all certificates [European and Russian].

Table 6.1 summarizes the discussion. It can be argued that the Aircraft engine case company has significantly upgraded investment capabilities at operational and advanced levels and developed them up to the innovative level.

Table 6.1 Upgrading of investment capabilities in Aircraft engine case

Level of capabilities	The degree of changes in investment capabilities
Operational	Minor upgrading = Minor adaptation and improved use E.g. project scheduling capabilities; plant/workshops lay out; choices of latest technologies and materials
Advanced	Major upgrading = Significant improvements E.g. learning about advanced practices in overall project management, use of new instruments for funding of large-scale investment projects, process coordination of project preparation, sophisticated logistics schemes.
Innovative	Developed = Substantial development E.g. world class project management; implementation of technology choice for world class production, following the process of certification according to European requirements.

It is noteworthy that the upgrading of investment capabilities was recognized as one of the most important outcome of JV learning. As one of the respondents explained:

We can compete in foreign markets only with the certified engine and at the moment it is the first product of this class. In order to develop the certified engine you need to implement its development according to international standards from the very beginning. That is why this experience is very valuable for us.

6.1.1.2. Truck Case

As in the previous case, the Company possessed a certain threshold level of investment capabilities before the foundation of its JVs. The previous ten years of active development described in Chapter 5 show the presence of the ability to implement new investment. However, there was still room for improvement and the learning acquired through the JV enabled the routines for a large-scale investment in the planning and execution of projects, the implementation of new facilities equipping decisions, and the planning of workshop lay out to be upgraded. This upgrading took place at the operational and advanced levels, but only to a minor degree.

Overall, the learning outcomes in this functional area of capabilities were not as extensive in this case as in the Aircraft engine case, and the Company did not shift to an innovative level of investment capabilities. Table 6.2 illustrates a summary of the upgrading of capabilities.

Table 6.2 Upgrading of investment capabilities in Truck case

Level of capabilities	The degree of changes in investment capabilities
Operational	Minor upgrading = Minor adaptation and improved use E.g. advanced technology choice, workshop lay out, capacity planning, modern equipment procurement
Advanced	Minor upgrading = Minor adaptation and improved use E.g. large-scale investment project planning, full monitoring of production site modernization, implementation of large-scale plant expansion and modernization.
Innovative	Not developed

Worthy of noting in this case is that the investment in upgrading capabilities through JV learning was not perceived by the Company as being particularly important. One possible explanation for this is that the Company extensively uses external consultants to assist planning and the implementation of new investment projects. Hence, there was no explicit learning intent in this area.

6.1.1.3. Auto Component Case

The technological foundations of the Company had significantly weakened during the transition period. There was a need for extensive modernization which had started in the late 1990s. Therefore, the JVs established in the early 2000s provided an excellent opportunity for upgrading investment capabilities. In particular, the most important part of those capabilities upgraded as an outcome of learning was related to the organization of the processes of quality certification. The respondents were consistent in emphasizing this issue, and one of Company's managers, who was previously involved in JV activities, stated:

The most significant thing we got from them [JV 1] was learning about how to proceed through a certification process. As all our [the Russian parent company's] products at that time were about to get a certificate, ISO 2000 and then technical standard TC60049, they taught us these practices. This we are doing here now.

ISO2000 is an internationally recognized standard for quality management systems which describes standards of quality management that address the principles and processes surrounding the development and production of products. The importance of this was emphasized by another respondent:

It was a significant growth for us. Before, such an approach was not used and the quality system did not satisfy European standards. Prior to the JV our enterprise did not comply with ISO2000. Therefore, for us it was an important experience and after the first JV the quality system was completely re-organized. It [cooperation in the JV] was a significant experience for our employees and specialists, which helped a lot for the implementation of ISO.

Although these capabilities are not considered as being advanced by western standards, they were of high importance for the Company. Hence, this finding can be argued to support the view that a major upgrading took place at the operational level.

Furthermore, in the process of cooperation in the second JV the company managed to learn how to implement localized production of spare parts for the JV product, which allowed an upgrade of the routines related to the monitoring of new facilities with advanced technologies and the systematic planning of new production sites. There is no evidence that capabilities at the innovative level have been developed. Table 6.3 summarizes the findings relevant to this case.

Table 6.3 Upgrading of investment capabilities in Auto component case

Level of capabilities	The degree of changes in investment capabilities
Operational	Major upgrading = Significant improvements E.g. planning and assessment of required parameters of TQM system; TQM system implementation, choice of advanced technologies and equipment, procurement engineering of advanced machinery.
Advanced	Minor upgrading = Minor adaptation and improved use E.g. full monitoring of new facilities with advanced technologies; holistic and systematic planning of new production sites
Innovative	Not developed

The upgrading of investment capabilities was perceived to be a very important learning outcome and there was a strong incentive for learning in this functional area.

6.1.2. Upgrading of production capabilities

This section reports the analysis of the development of production capabilities as an outcome of JV learning. As defined in Chapter 2 *Production capabilities*, according to Lall (1992:168), ‘range from basic skills such as quality control, operation, and maintenance, to more advanced ones such as adaptation, improvement, or equipment ‘stretching’, to the most demanding ones of research, design and innovation’. In other words, production capabilities refer to the skills and routines needed in the operational execution of the production process. These capabilities are fundamental to the functioning of industrial enterprise, and therefore, upgrading these capabilities represents a crucial task for managers in transition economies because production capabilities were inappropriately developed during Soviet time. In this earlier period enterprises had excessive capacity and inefficient production organization. I next analyze the changes in capabilities relating to production process and product in each of the case companies.

6.1.2.1. Aircraft Engine Case

Production capabilities were one of the weakest areas of activity prior to the formation of the JV. This particularly applies to the production process because prior to the period of transition little attention had been paid to upgrading this area. However, product related capabilities had been developed relatively well in the Soviet period and thus, required upgrading to a lesser degree. Although the management of the company had long been aware of the problem associated with a gap in capabilities relating to the production process, and was undertaking continuous efforts for their improvement, it was after the start of JV operations that the need to significantly speed up this process became extremely evident. As the president of the Company stated:

We have to radically change the system of production organization in the enterprise and to increase its efficiency.

The learning through the JV enhanced capabilities relating to the production process in several ways. First, respondents emphasized that the JV had provided the personnel, at all levels, with an excellent opportunity to observe and adopt a qualitatively different approach to the organization of the production process. In particular, the principles of the efficient organization of a production process planning system, of coordination, control, and the optimization of parameters have been absorbed from the JV experience. As an outcome of this learning the company managed to increase equipment productivity, decrease the time for processing details, and implement a strict system of production control. Labor productivity was increased due to the more efficient organization of working stations and improvements in practices relating to production logistics. The Company acquired a different approach to the division of labor when factory floor employees were assigned to narrow task specialization. As opposed to the approach inherited from the era of Soviet tradition, when each employee was responsible for the execution of several tasks in different functional areas, this practice resulted in higher labor productivity. Overall, these improvements have resulted in a decrease of total production costs.

Second, the JV experience pushed the Company into the purchase of large quantities of new machinery, which resulted in the upgrading of expertise related to their use and of their techniques in various technological processes. The Company broadened the scope of its knowledge base relating to the latest technologies, materials, and machinery through learning-by-doing by working together with the parent in the JV. It is necessary to emphasize here that it was not learning from scratch, but upgrading the spectrum of in-house technological approaches to those used in world class production. As one of the respondents put it:

It is a coordination of the same level of qualifications but from the different traditions.

From this it can be seen that, capabilities were upgraded to the level that is compatible with that of leading foreign aircraft engine manufacturers. Of importance here is that these improvements took place due to the understanding of managers that in order to be able to deliver an advanced product it is necessary to organize technologically advanced and efficient production processes. As one of the managers stated:

The objective of the company is to compete in the world market which is in direct relationship with the general policy to decrease production costs and increase automation.

Third, a western type of production culture was adopted through learning from the JV. This aspect was emphasized throughout all interviews, and was perceived as one of the most important aspects of improvements to efficiency in the organization of production. Cooperation in JV provided a good example to Company employees of western beliefs and attitudes towards product quality and responsibility. Learning-by-doing in the JV played a crucial role to the successful absorption of elements of a western production culture. Hence, to the question what have you learnt, one of the managers stated:

..their approach to responsibility...

To summarize, routines for more efficient and technologically advanced organization of production were developed as an outcome of JV learning. Such routines are required in order to be able to manufacture world class products. Of note is that this was possible because during the inter-partner interaction tacit elements of knowledge in this area were exposed and the Company's employees implemented a large number of activities together with the foreign parent.

However, product centered capabilities were not upgraded to the same extent as those for production processes. However, these improved to an innovative level as a result of JV learning because the JV product was a new innovative product at a world scale. The learning took place in terms of understanding different types of technical solutions, which had important performance implications. As mentioned earlier, this outcome can be explained by the fact that the Company possessed a certain level of capabilities prior to the cooperation and had a good record of development of engines in civil and military aviation.

Table 6.4 provides an illustration of the changes in production process and product capabilities.

Table 6.4 Upgrading of production capabilities in Aircraft engine case

Capabilities level	Production capabilities improvements	
	Process and production organization	Product centered
Operational	Major upgrading =Significant improvements E.g. improved routines for coordination of production; improved plant coordination and working place organization; decrease in norms of product processing, increased equipment and labor productivity	<i>No upgrading</i>
Advanced	Major upgrading =Significant improvements E.g. strict system of production control; JIT production logistics systems; JIT production logistics and production automation.	<i>No upgrading</i>
Innovative	Developed E.g. operation of world class production site	Developed E.g. world class new design and development

6.1.2.2. Truck Case

As in the previous case, the production capabilities in the truck case had been inappropriately developed during the era of a planned economy and further weakened during the first years of transition period. This was described as follows:

As the firm was established in the Soviet time, it was a typical mass production enterprise with a high degree of vertical integration... When the transition begun the market became more differentiated and customer oriented and the main problem we face with this historical background is that there is not enough flexibility and too large facilities that are difficult to adjust quickly to market needs.

The above illustrates that both production product and process capabilities of the Company required upgrading in order to become competitive in the new economic conditions. As described in Chapter 5, the company had strategically chosen to focus only on the development of main in-house technological areas while outsourcing others to JVs. This strategy enables the firm to decrease the degree of its integration and concentrate resources on a few main directions. Thus, because the products produced in JVs were excluded from the area of core competence, and the firm decided to rely on the foreign parent for this product development, the Company did not have the learning intent to acquire product related knowledge. A respondent stated:

The technology in the JV is completely brought in by our foreign partner. This was the idea behind the JV.

Despite limited product- related learning, the Company has enhanced its own production process capabilities. Specifically, routines related to de-bottlenecking and ‘capacity-stretching’ activities, production control, lean manufacturing practices, overall production logistics systems, production planning and automation have improved as a result of the learning at the operational and advanced levels that was acquired from the JV, albeit only to a minor degree.

Moreover, the successful functioning of the JVs resulted in an expansion of scope of cooperation between partners when the Company started the production of several other components according to the technological specifications of western parents. The provision of assistance in implementing the operations required for the production of technologically advanced products that was given by the foreign parent provided a good opportunity to develop routines in process technology which are in compliance with western standards. As one of the senior managers stated:

Part of the production is manufactured here according to their documentation, technologies, and standards. We supply about 19 products according the requirements of our partner company. Naturally, our personnel have had to learn this new knowledge, learn to work according to these requirements.

Furthermore, the learning about western production philosophy that occurred has been perceived as very important outcome. Close cooperation with western firms allows changes in attitudes of Russian employees towards a more ‘western’ approach to production culture. Indeed the lack of responsibility and loose planning was remarked as being the most important problems inherited from Soviet times that undermined successful development. The importance of the new approach was remarked upon by one of the managers as follows:

In the process of realizing the JVs we got re-assurance that this is the right approach which gives us numerous benefits, including the adaptation of western corporate culture

Table 6.5 presents the outcomes of upgrading of production capabilities.

Table 6.5 Upgrading of production capabilities in Truck case

Capabilities level	Production capabilities	
	Process and production organization	Product centered
Operational	Minor upgrading = Minor adaptation and improved use De-bottlenecking, ‘capacity-stretching’; strict system of production control; lean manufacturing practices.	No upgrading
Advanced	Minor upgrading = Minor adaptation and improved use Production logistics systems; holistic and systematic planning of new production processes; production automation.	No upgrading
Innovative	Not developed	Not developed

6.1.2.3. Auto Component Case

The historical development of the case Company, and the auto component industry as a whole, had resulted in low production capabilities in both product and process technologies. The large size of the Company and the broad spectrum of its in-house technologies did not permit the efficient upgrading in an environment of scarce financial resources during the transition period. Therefore, the acute need for the development of production capabilities stimulated the learning from JVs at operational and advanced levels.

Firstly, the most important outcome of learning from the first JV was the integration of quality management practices into the Company's operations. Prior to the JV the firm's product did not satisfy international quality standards. As one of the respondents expressed:

The role of the JV and the parent is that they taught us the procedures for the implementation of TQM in the production process.

The examples of the adoption of routines for implementing quality control of raw materials, the control of suppliers in respect of their compliance with the quality standards, and a decrease of defect rates were discussed as being important benefits of learning:

The outcome was the creation of quality system and the attitude to the product itself in terms of quality, and a decrease in defect rates. The last is also important as even when producing quality product the number of defects should continuously fall. There should be constant improvement in the system. In this aspect we have learnt a lot.

Secondly, the approaches of workshop employees towards the organization of the manufacturing process were learnt through the JV experience. Specifically, the practice of profession combination was implemented, which resulted in a productivity increase.

Lastly, a western production culture that came about through the JV was noticeable. Even minor aspects such as clean and shiny floors covered by certain types of material in the workshops were

remarked upon as noticeable aspects that were adopted from the JV. This was described during one of the interviews:

The JV improved the quality of operations of our employees, the production culture.

Product capabilities were upgraded to a minor extent at the operational level. This was because the scope of both JVs did not bring along product development activities. However, some aspects were learnt and adopted by other operations within the Company, such as material recipes and product specifications.

To summarize, the upgrading of production capabilities took place mostly in the area of the organization of the production process and were at operational level and advanced levels. As one manager stated:

We learned a lot about organization of the production process and its main principles... This was a big gain for us.

Table 6.6 depicts the outcomes of the upgrading of production capabilities that have been discussed in this section.

Table 6.6 Upgrading of production capabilities in Auto component case

Capabilities level	Production capabilities	
	Process and production organization	Product centered
Operational	Major upgrading = Significant improvements E.g. operating production according to international quality standards; improved plant coordination and working place organization; decrease in norms of product processing, increased equipment and labor productivity.	Minor upgrading= Minor adaptation and improved use E.g. replication of material recipes, improvements in product quality and specifications.
Advanced	Minor Upgrading = Minor adaptation and improved use E.g. minor optimization of production logistics systems; production control practices, production automation.	Not developed
Innovative	Not developed	Not developed

6.1.3. Upgrading of linkages capabilities

Linkages capabilities have been defined as ‘the skills needed to transmit information, skills and technology to, and receive them from, component or raw material suppliers, subcontractors, consultants, service firms, and technology institutions’ (Lall, 1992:168). In Russia, links between various economic actors were seriously distorted during the first few years of reforms, and local enterprises had to establish a new system of links with suppliers, competitors, customers, organizations of R&D and education system as well as with local and state authorities. JVs represent one of the mechanisms to upgrade this type of technological capability, and I next

present the empirical findings from case companies relating to how learning through JVs generated the upgrading of linkages capabilities.

6.1.3.1. Aircraft Engine Case

The Company had managed to overcome the negative consequences of economic reforms and had re-established some relationships with Russian R&D organizations, educational organizations, customers, suppliers and government organizations. This was described in Chapter 5. However, the JV experience revealed the fact that these relationships were not sufficient to sustain the development and expansion into foreign markets. In particular, one of the important problems limiting such development was the lack of certified domestic suppliers able to secure the supply of components and materials required for manufacturing of world class engines. Hence, the Company had a strong incentive to upgrade its linkages capabilities with the help of foreign JV parent, and to build relationships with foreign suppliers and potential customers allowing this to support its innovative activities. This was mentioned clearly during one of the interviews:

Our relationship with the parent provides unique opportunities to learn management practices and skills, technological knowledge, knowledge about engine logistics and access to foreign supply channels for the component which are not produced in Russia

A minor upgrading also took place at the advanced level of existing capabilities whereby the JV experience led to an enhancement in the scale of Company's cooperation with local firms by the introduction of new approaches and practices in various areas to local suppliers and customers. Table 6.7 presents the extent and nature of the upgrading of linkages capabilities.

Table 6.7 Upgrading of linkages capabilities in Aircraft engine case

Capability type/level	Linkages capabilities
Operational	No Upgrading
Advanced	Minor Upgrading = Minor adaptation and improved use E.g. knowledge transfer to local suppliers to increase logistics efficiency; introduction of higher quality requirements for local supply
Innovative	Minor Upgrading = Minor adaptation and improved use E.g. collaboration in technological development with foreign suppliers and potential customers

6.1.3.2. Truck Case

As described in Chapter 5, this case Company is one of the largest truck manufacturers in Russia, and is also a leading enterprise in the entire region. Historically the Company had always had strong relationships with other small and large enterprises, universities and R&D organizations, as well as with local and national authorities. Despite the numerous changes in the business and political environment in post-transition period, the Company managed to adjust existing relationships and built the new relationships necessary for functioning in a market economy. Of relevance here is that access to this strong network of relationships was one of the major incentives for foreign parents to establish JVs.

However, there were improvements in linkages capabilities due to the fact that the Company had expanded its network and established new relationships with foreign suppliers and R&D organizations. Furthermore, the JV experience in itself was one of the factors that pushed further

innovative development, which further stimulated the initiation of new projects with universities, local suppliers and R&D organizations. Table 6.8 outlines the outcomes of the upgrading of linkages capabilities mentioned above.

Table 6.8 Upgrading of linkages capabilities in Truck case

Capability type/level	Linkages capabilities
Operational	No Upgrading
Advanced	Minor Upgrading E.g. knowledge transfer to local suppliers to ensure the local supply of the components of appropriate characteristics and quality
Innovative	Minor Upgrading E.g. initiation of collaboration in technological development with foreign suppliers and R&D organizations.

6.1.3.3. Auto Component Case

The outcomes of the JV in terms of the upgrading of linkages capabilities in the Auto component case is similar to previous two cases, and took place primarily through learning about the relationships of foreign parent firms, such as suppliers and organizations of R&D sector, outside Russia. The main focus was on the establishment of cooperation with foreign R&D organizations in order to implement innovative activities for firms in the auto component sector that local research institutes were no longer able to provide at an appropriate level of quality. Indeed, Russian the R&D sector lacked the experience to work in market conditions and therefore local

firms were forced to seek cooperation abroad. Thus, JVs were an important channel for the Company to expand linkages and initiate cooperation with foreign R&D organizations in order to develop competitive products. One of the respondents stated directly:

In this respect our JV partner helped us to find foreign organizations where we can find assistance for the development of our product.

As was the case for other industrial sectors in Russian, the auto components industry was not well developed during the Soviet era and there were no significant improvements during the transition period. This resulted in a situation whereby the Company faced difficulties in finding a second-tier of component suppliers for their new products, and hence, the foreign contacts acquired through JVs were perceived to be very important for the further development of the firm.

Finally, the JV experience generated an increase in scope of cooperation with local suppliers in order to assure the supply of better quality components, and with organizations in the education sectors to stimulate educational programs in specific technical areas as there was a serious shortage of technical employees in all Russian industrial sectors.

Table 6.9 depicts the areas and levels of the upgrading of linkages capabilities in the Company.

Table 6.9 Upgrading of linkages capabilities in Auto component case

Capability type/level	Linkages capabilities
Operational	No upgrading
Advanced	<p>Minor upgrading = Minor adaptation and improved use</p> <p>Knowledge transfer to local suppliers to ensure the local supply of the components of appropriate characteristics and quality; new programs with universities for supply of graduates, in particular, of technical professions.</p>
Innovative	<p>Minor upgrading = Minor adaptation and improved use</p> <p>Initiation of collaboration in technological development with foreign suppliers and R&D organizations</p>

6.2. Upgrading of managerial capabilities

In this study *managerial capabilities* refer to the ability of the organization to integrate, build and reconfigure organizational knowledge of how to organize the structure of the organization, the planning and control systems, to determine organizational goals and incentives, coordinate different problem solving activities, allocate resources and to assign personnel. Collaborative know how is a specific type of managerial capability understood as the skills and routines required to create and sustain beneficial collaboration (Reuer et al., 2002; Zollo et al, 2002). These capabilities are relatively new for the companies which have long operated under central planning conditions. Hence, learning through JVs represents an excellent opportunity to upgrade such capabilities.

6.2.1. Aircraft Engine Case

Managerial capabilities have been enhanced in the Aircraft case company as an outcome of JV learning. One of the most significant outcomes of learning was the adoption of the management system present in the JV to other areas of the Company's operations. The respondents described this as follows:

Due to the JV experience we, for the first time, implemented the matrix system approach in management. Our classic approach was the functional distribution of activities between departments, but now we applied a cross-functional approach where all the operations are coordinated centrally by program direction. This approach has been adopted from our partner. This process allows a reduction of time for product development and introduction to the market. We are implementing this approach to other programs for military and civil engines. This experience is highly valuable for us.

Moreover, the JV experience strengthened management skills in a strategic orientation by pushing managers to face concrete challenges and tasks. A further beneficial outcome of learning is taking the entire business model of cooperation found in other partnerships and implementing this approach with local companies. This was emphasized by one of the managers:

The elements of this partnership model we have already applied in another program [partnership] with a Russian company, such as, risk sharing, the use of special engine training programs, etc.

In other words, management practices which have been brought to the JV by a foreign parent were understood, acquired and implemented in the firm's other domestic operations. This was perceived as a highly valuable outcome of cooperation in JV.

Upgrading of the qualifications of managerial personnel at different levels also took place due to extensive training organized in association with the function of the JV. Of importance here is that the foreign JV parent contributed a significant amount of time and resources to providing training of the Company's personnel. As one of the respondents evaluated:

During the last 5 years the qualification of the personnel has improved significantly due to the constant and large turnover between our Company and our parent Company.

To summarize, learning through the JV generated significant improvements at the organizational level and allowed the company to become a world class manufacturer. This was well expressed in one of the interviews:

We will create a stable financial supply for the company, will learn a lot. People will be ready for the realization of any type of program. We will seriously increase our production. It will be a new company in case of success of this program. The experience of this program we can use in other internal and external programs.

6.2.2. Truck Case

The upgrading of managerial capabilities was one of the learning objectives of the Company. As the strategic goal of this firm is to integrate into the world automotive industry, the management came to the realization that to achieve this required the presence of a highly efficient management and a western management style. Although numerous improvements were achieved over the previous several years, such as lean manufacturing, some aspects of foreign parent management practices and culture were acquired and adopted through JV learning. For example, planning practices and procedures were mentioned as one of the learning areas by one of the managers:

We aimed at improvements in the implementation in management practices, and we succeeded to some extent. I see clear benefits from more organized planning process, spontaneous planning leads to making a large number of mistakes due to the fact that there is not enough time to finish the task properly.

As in the previous case, the JV activities also, reveal the need for providing extensive personnel training to sustain the speed and quality of changes oriented towards enhancing the competitive advantages of the products and innovative development.

Furthermore, the successful implementation of the partnership has proven the success of the corporate strategy; to join forces with leading foreign enterprises for product development and manufacturing, and thereby to improve cooperative capabilities.

6.2.3. Auto Component Case

The experience of the JVs provided managers of the Company with the opportunity to observe the benefits of management practices of foreign parent that had been brought to the JV. In particular, improvements in organizational structure that resulted from learning from the JV were found to be one of the most beneficial outcomes.

What we liked there... We had in our firm before a complicated structure of control. In the JV it has been organized much more efficiently. The system did not even require as many controllers and worked efficiently due to its organization.

The JV has illustrated well the positive aspects of a western management system and practices, which were later applied in the Company's own operations. As another of the respondent remarked:

We had system where managers are reporting to the other managers, then, to the other manager, etc. and only after long time the information reaches the worker. After the JV experience we have changed our system to make it less hierarchical, where so many stages between the task distribution and implementation do not exist. It helped us a lot. Specifically, it enables workshops to make independent decisions in many aspects instead of waiting for the feedback of the general manager to solve the issue.

The integration of the knowledge acquired from the JV took place because of the rotation of the personnel, regular visits to the JV by top managers of the Company, and the resultant exchange of information. Overall, the JV was recognized as a good strategic tool for learning as it provided an opportunity for a better understanding of the benefits of knowledge, practices and routines of foreign parents that was acquired through direct observation and experience.

Chapter 7 Implications of the upgrading of capabilities for the modernization, restructuring and competitiveness of Russian JV parent firms

This chapter illustrates how technological and managerial capabilities that have been upgraded through JVs influence the modernization, restructuring and competitiveness of Russian parent firms. Indeed, previous studies recognize that JVs can be a useful tool to speed up the modernization and restructuring of Russian firms, and that this, in turn, is vital for their competitiveness (Wright et al. 1998). However, there is lack of empirical evidence shedding light on this phenomenon, and thus, I address this gap by presenting the results of the analysis of empirical data collected from three Russian JV parent firms. As in the previous chapter, the discussion is organized separately for each of these case companies.

7.1. The Aircraft Engine Case

As discussed in Chapter 6, the Aircraft engine case achieved good outcomes in the upgrading of technological capabilities in investment, production process, production product and linkages functions as well as managerial capabilities. However, capabilities on their own do not have value; rather they have to be used at the organizational level in order to achieve the company's strategic objectives. Therefore, it is important to describe the benefits attributable to the upgrading of capabilities at the organizational level. The empirical analysis shows that Aircraft engine case was able to implement several important improvements; these are discussed next in greater details.

First, the development of investment and production capabilities up to the innovative level resulted in the creation of long-term strategic plans oriented towards the initiation of new projects targeted at foreign markets in order to strengthen the competitive advantages of the Company. In particular, the acquired knowledge was invaluable for a thorough understanding of

the European industry standards and requirements with which the Company's products need to comply in the future if they are to be sold to foreign customers. The development of new products, in turn, generates additional revenues for the Company that could be further used to support development. However, it is worth noting that although learning through the JV was an important source and mean to achieve these objectives, this should be combined with a serious internal effort to implement changes in the organization and the development of complementary strategic tools. Notwithstanding this concern, the JV experience did play a crucial role for improvements in performance by providing real life examples of how a world class enterprise should operate and what types of requirements need to be met by the personnel at all levels. Indeed, the JV experience enabled the management of the Company to develop the concrete steps towards the achievement of the long-term goal – to become a world-class producer. As one of the managers stated in the interview:

...It requires a huge amount of work for the change of the production methods in general. This change is the most important task for us today. When we started this program [JV] we realized that this engine has to change us as a company. At least one reason for this is that if we can manage to produce this engine successfully we can produce anything else. We need to buy a huge amount of new equipment, conduct extensive planning of production processes, make a great effort in personnel training, and improve logistics. It is a challenge to everyone: managers, technologists, production personnel, constructors and workers. We have to clearly understand now that if we want to produce an engine of world class, we have to do it according to the standards of other developed countries in terms of quality, schedules, and costs. In order to change our company we need to make a great effort.

The second important improvement relates to the upgrading of production process capabilities. These influenced the path and speed of the course of the modernization of the company because they enable the continuous optimization of manufacturing operations, thereby enhancing productivity and decreasing overall production costs. The Company moved from a fragmented approach by replacing old machinery and technological lines, in a 'step by step' manner, to a holistic approach reflecting the systematic modernization of entire workshops and production sites. These changes became possible as a result of the new technological solutions acquired through JV learning and the enhanced qualifications of the employees. In addition, the successful functioning of the JV was beneficial because it generated the additional financial resources necessary for the implementation of modernization and restructuring. In fact, this outcome is

perceived as one of the most important JV's benefits because a lack of resources had long been the major impediment to upgrading of the Company's technology. As one of the respondents remarked:

...You earn real money which goes to production site modernization, infrastructure development, buying new technologies, program products, which stimulates long-term development and allows getting a step ahead of competitors.

Third, the upgrading of managerial capabilities had important implications for the strategic restructuring of the Company. The innovative solutions learnt through the JV were manifested in the changes to the Company structure and in the manner of organization and coordination of projects leading to increased efficiency of projects implementation. Furthermore, cooperative capabilities acquired during the JV collaboration were beneficial to Company operations and new partnerships relating to the development of civil and military engines were established with domestic companies on the same basis as the JV with the foreign partner. The JV business model was perceived as being a highly efficient and numerous elements were duplicated in the newly established partnerships. As one of the managers explained:

These elements of partnership we have transferred to the program with Ufa [Ufa Motor Building Plant], and the basic elements, such as risk sharing, is already applied in this new program. Also some elements from the special programs for engine testing were used there.

A fourth important benefit attributable to the positive experience of cooperation in the JV is the generation of further cooperation between JV partners. For example the foreign parent placed an order for the production of small details for its other engines, thereby showing that, in addition to generating additional revenue, there was the broadening of scope of the mutual activities and potential for further learning. The successful implementation of JV project also substantially improved the image of the Company in the wider international business community. This was expected to be highly useful for the future initiation of new projects with other foreign companies. As one of the managers emphasized:

The international business community is waiting now for when this plane will fly. If it will - this will be a confirmation of success. Of course, everything might happen, but we believe

that it will be a success. And after that I believe the new offers will come sooner or later. Even now, during different meetings, the discussions and contacts take place, and there are some talks in the air. But when this project will be successfully completed, other offers will definitely come from other large companies in the industry Pratt Whitney, GE, Snecma, the other manufacturers...

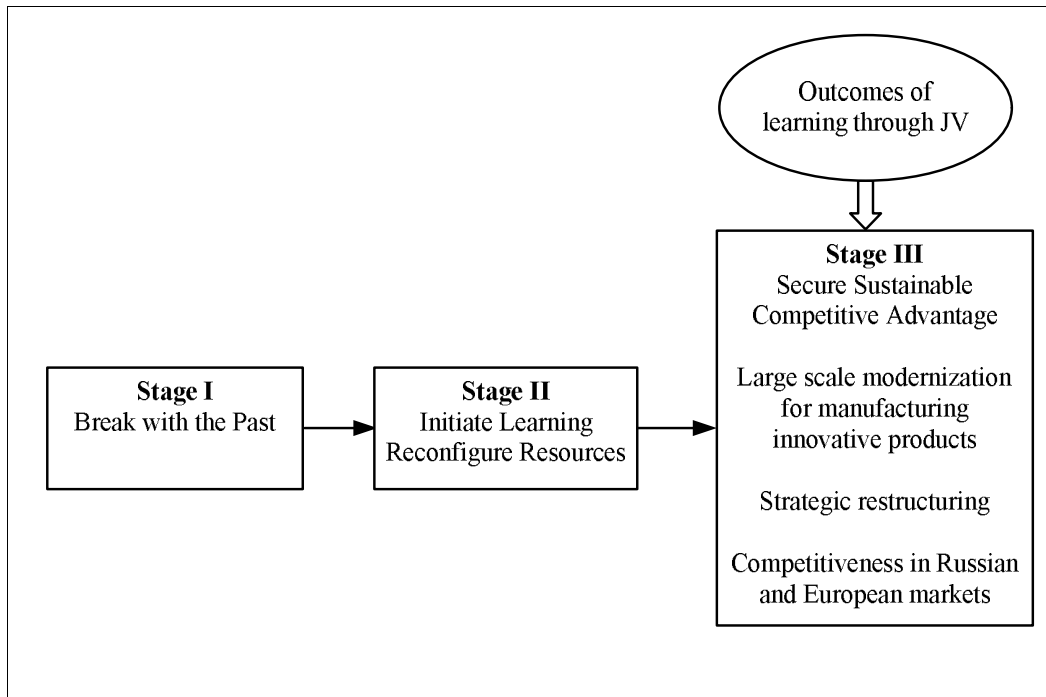
Overall, the JV experience demonstrated to the Company management that in order to be competitive there is an acute need to speed up the process of technological upgrading and develop new practices and approaches to improve manufacturing performance. The experience of development and manufacturing of world-class products was a strong motivating factor for keeping up with the pace of development.

Nevertheless, it is important to stress that learning through JV was supplemented by the continuous and consistent effort of management to be engaged in the exploitation and exploration of learning at the broad organizational level. As shown in the case description, since the mid 1990s the company succeeded in undergoing incremental changes that resulted in the development of the threshold level of operational capabilities necessary for short-term survival, and the management team was able to adapt the organization to the changing environment. When cooperating in the JV, the innovative solutions at both technical and managerial levels were heavily promoted by the management, and extensive training, personnel rotation, and JV visits were continuously organized to enhance capabilities to advanced and innovative levels, thereby allowing a sustainable competitive advantage not only in domestic, but also in foreign markets to be built. As indicated by the respondents, the strategic goal of the company in the following five years was to develop their own new products that can be sold in domestic and foreign markets independently of the JV partner. This required the further strengthening of technological and managerial capabilities as well as improvements to efficiency by decreasing the production costs, the implementation of new managerial practices, and increasing the degree of automation of production.

Hence, this discussion shows that the JV was used as a strategic tool that management applied in order to achieve the long-term goals at the final stage of organizational transformation. This equates to the notion of “Secure sustainable competitive advantage”, (Dixon, 2006) which is

discussed in Chapter 2. Figure 7.1 illustrates the argument depicted above, where the JV learning is shown as a stimulating factor influencing the Company path to achieve the development of a long-term competitive advantage.

Figure 7.1 Implications of JV learning for modernization, restructuring and competitiveness in the Aircraft Engine Case



Lastly, important benefits arising from the JV experience at the industry and country levels are worthy of mention, although their detail discussion is beyond the scope of this research. In particular, the knowledge and experience acquired through the JV will permit the initiation of integration between other leading Russian motor building enterprises. This cooperation is expected to be a catalyst for the further development of the Russian scientific school, to restore the capabilities of the scientific sector, and broaden the cooperation between Russian enterprises in the industry. This scale of international cooperation is a new experience for the Russian motor building industry.

To summarize, the benefits to the company accruing from JV learning are extensive and have positively influenced the firm's competitiveness and long-term development. This is well expressed by one of the participants:

The experience from the realization of this program (JV) leads to a substantial qualitative change for our company in all areas of operations including project management, production, testing and after sales service. The experience of this program we can use in other internal and external programs. People will be ready for the realization of any type of program. It will also create a stable financial supply for the company; we will seriously increase our production.

7.2. Truck Case

The empirical evidence from the Truck case shows that the Company had beneficially utilized capabilities that had developed through the JV. First, the improvements in production process capabilities positively influenced the manufacturing performance, which was manifested in a decrease in costs and increase in productivity. In particular, the development of routines related to lean manufacturing practices were perceived to be important because the company had started to pursue the implementation of this approach prior to the establishment of the JVs as a part of their large-scale modernization, and learning through JVs further stimulated integration into the company's operations.

Second, the upgraded managerial capabilities with regard to the adaptation of a western style and approaches had an impact on the manner of strategic planning in the Company, and the development of new managerial routines enabled increased efficiency in day-to-day management. Indeed, understanding the importance of the fact that movement to the level of a world class company required the adoption of the managerial values and practices found in other leading firms was a strong incentive for learning from the JV and applying the outcomes of this learning to a strategic end. The JV experience also provided a push for extensive internal personnel training, which resulted in improvements in the qualifications required by employees

for operating modernized facilities, and increased the total number of personnel needed for an expansion of the Company's activities. At the time of research implementation, one of the most acute problems in the Russian manufacturing sector was a shortage of technical personnel at all levels, which represented a serious obstacle for the development plans of many local firms.

Third, amongst other performance implications attributable to the JVs experience, but not however related to learning, is that the JV assured the supply of the high quality components necessary for the development of a new generation of trucks that comply with higher environmental standards. This supports the strategic goal of the Company, which was to become competitive not only in the domestic market, but also abroad. As the strategic principal of the company was to outsource the development of some technological areas to external partners, JVs provided an excellent opportunity to attract foreign firms with advanced technologies. As one of the respondents explained:

According to our possibilities and real life situation, we have defined those competences in production and engineering areas, which makes sense to develop completely internally, those which we develop with the cooperation with our technological partners. In the light of this approach we were selecting our partners.

The JV was a mechanism to achieve the strategic objective of the company, which was to establish a modern base for the auto component production of the company's trucks. In this regard, by establishing a production base for technically advanced components the Company had accomplished its objective. One of the top managers stated:

What are our advantages from cooperation? First, we were able to concentrate our resources on the development of those directions and competences which we decided to keep in-house. By resources I mean the whole range of them: intellectual, human, financial. Second, we had an opportunity to learn about modern technologies and approaches. Third, we received a very competitive product and this direction we will continue to develop. In the process of the realization of JV we have seen that this is the right approach, and it allows all these benefits to be achieved, including the adoption of western corporate culture.

Third, during the course of the JV additional technological cooperation was initiated between the partners, reflected by the manufacture of additional components according to the technological

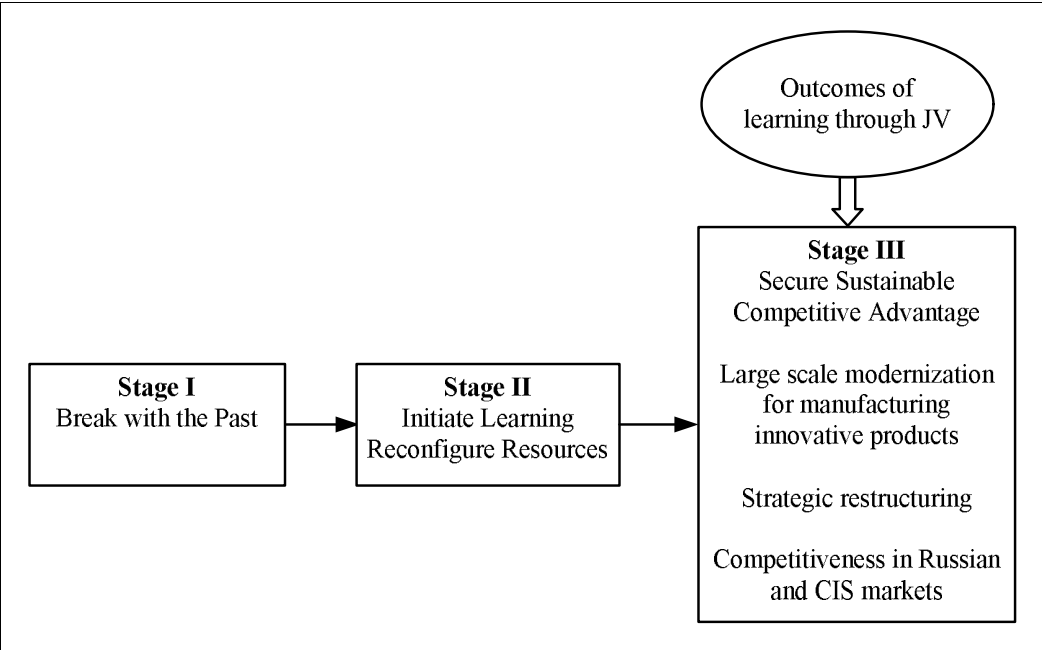
requirements of the foreign partners. Importantly, due to the fact that the foreign parents have a direct interest in the success of JV activities, they provided extensive technical assistance and training to the Company's employees, which, in turn, represented an additional opportunity for the employees to learn and acquire technological knowledge and skills. It was emphasized that, in order to ensure successful development at the corporate level, the personnel of the whole company should learn to work according to the new principals. Therefore, the large and deep scope of mutual work and cooperation developed through the JV enabled this objective to be achieved.

To summarize, the empirical evidence shows that the JV stimulated the implementation of modernization and organizational restructuring and represents an important tool in the transition to the long-term development and growth stage. As one of the managers stated:

Our internal policy has changed the direction: from the survival strategy towards the dynamic development strategy.

This discussion indicates that the JV was used as a strategic instrument that management applied to achieve the long-term goals at the final stage of organizational transformation. As described earlier in this section and discussed in Chapter 2, Dixon (2006) label this idea "Secure sustainable competitive advantage". Figure 7.1 illustrates the argument whereby the learning acquired through the JV is shown as a stimulating factor that influences the Company path towards achieving the development of a long-term competitive advantage.

Figure 7.2 Implications of JV learning for modernization, restructuring and competitiveness in Truck Case



As in the Aircraft engine case, the JV strategy was implemented to enhance the speed of strategic restructuring and resulted in enhanced efficiency of manufacturing process, and improved quality and range of company products, which is expected to support the expansion to new geographical markets. The long-term strategic goal of the Company was to strengthen the competitive advantage in Russian and CIS markets. Additional strategies to acquire the knowledge necessary to achieve strategic organizational goals are also used by the company to a large extent. Also, as in the previous case, JVs stimulated learning at the final stage of the organizational transformation. Figure 7.2 shows the implications of learning through JVs for company development. However, it is important to emphasize that the impact of the upgrading of capabilities on the Company’s development was less than in the Aircraft engine case.

Furthermore, as in the Aircraft engine case, the benefits of learning through JVs were combined with the other mechanisms of learning. For example, prior to its first JV the Company had already been implementing various programs with universities to upgrade the qualifications of employees and had been recruiting new bright graduates, engaging in technological cooperation with suppliers and other business partners for new products development, and expanding relationships with various investors. The management has clearly defined the development strategy, and this indicates its high qualification and western leadership style.

7.3. Auto Component Case

In the Auto component case, as in the two previous ones, the upgrading of capabilities through learning in a JV had beneficial outcomes for modernization, restructuring and competitiveness. First, the enhancement of technological capabilities resulted in the establishment of a long-term large-scale cooperation with a large foreign car manufacturer. The Company has signed a contract for manufacturing components in a new assembling plant in Russia, and this is one of the largest producers of passenger cars in the world. Specifically, quality management practices implemented as a result of learning from JV had a crucial impact on the decision of this foreign company when looking for an auto component supplier able to meet western standards. As one of the respondents described:

We were already prepared for manufacturing products at a level required by western standards. For example, Ford was one of the first to approach us and placed the order for its products

The overall experience of cooperation with foreign parent also added to the credibility of the Company over other domestic companies that did not have experience of working with foreigners. This is illustrated by the following quote:

The reason for the choice of our company is because we have the experience.

The project described above generated further technological development because the components in the new production facilities were produced according to specifications of the foreign car manufacturer, and this provided training in production site planning. As one of the respondents stressed:

They have high criteria and we can see how they organize production according to the highest western standards. We have taken their standards and accordingly organized new production. In terms of knowledge acquisition during the product development it was very beneficial as we could directly observe western practices in this area.

Secondly, as JVs were established within the production site of the Company, the upgraded production product capabilities were used to make improvements in the Company's other products. It is worth of noting that both JVs were established with auto component producers (as described in Chapter 5); this indicates that there was an overlap in technological terms between the JV and Company activities. As one of the interviewer reported:

The idea of the establishment of this JV is to expand the scope of the Company's activities. It is a manifestation of our general approach when we are ready to cooperate with other domestic and foreign manufacturers for the development of new products.

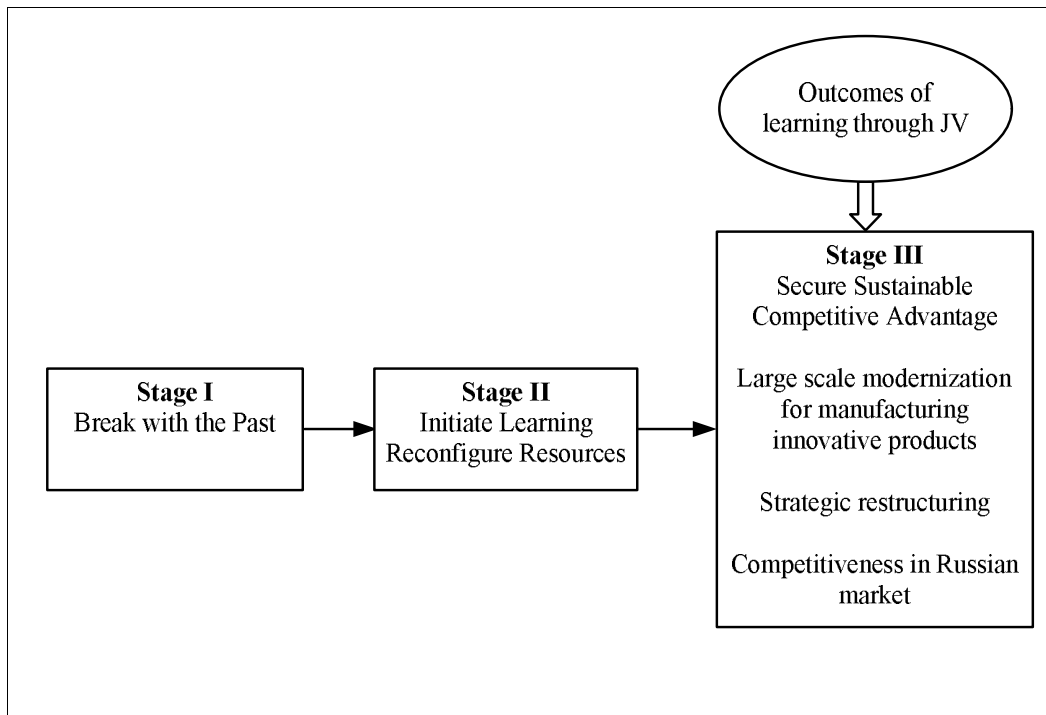
Taking into account that the source of innovation in the industry is product-related knowledge and modern machinery, the experience of manufacturing learned through this JV product can be slightly modified to make the models relevant to other clients. It was described during one of interviews:

We have a new offer from another foreign manufacturer. If they will give us their specifications, generally speaking, we can adjust to the production of another wheel within a month... Now, having this equipment we easily can adjust the proportion of components and our personnel know this technology and equipment very well, there is no problem with this.

The examples above clearly indicate that upgraded technological and managerial capabilities can potentially generate further contracts with other Russian and foreign manufacturers which, in turn, will have a positive influence on its financial performance.

Overall, in terms of the role in the restructuring process, learning through JVs assisted the company to implement large-scale strategic changes in the organization, leading to an increase in competitiveness in Russia. However, the level and scale of these changes is different from the Aircraft and Truck cases because at the company was only oriented towards the needs of Russian market. Although the Auto Component Company upgraded its capabilities, the level of its overall development did not allow it to compete internationally. This is reflected in Figure 7.3, which shows the influence of learning through JVs on the company's organizational transformation. As described earlier this leads to a 'Secure sustainable competitive advantage' Dixon (2006) but in this case only in the Russian market.

Figure 7.3 Implications of JV learning for modernization, restructuring and competitiveness in Auto Component Case



Chapter 8 Constraints of learning through JVs

This chapter discusses the emerging findings of this research which importance for the better understanding of learning through JVs became evident during the course of empirical research implementation. Specifically, it discusses the internal and external obstacles that undermine the benefits of learning through JVs for Russian parent firms. Indeed, if one aims to comprehend the nature and extent of positive outcomes, it is vital to comprehend those forces that limit these outcomes. I next discuss the underlying logic behind the constraints of learning and then elaborate in detail two main types of constraints, namely organizational and external.

8.1. Constraints of learning through JVs as an emergent finding of the empirical study

The application and integration of knowledge acquired by parent organizations through a JV is a crucial and final stage of JV learning which may or may not result in improvements in the performance of parent firms. Indeed, as Berdrow and Beamish (1999) stress, learning might not make any difference to performance if a firm is unable to leverage and apply quickly the acquired knowledge. When empirically examining the outcomes of JV learning for Russian parents and the attempting to comprehend the rationales behind the success or failure to achieve such outcomes, it became evident that there are *internal and external factors seriously undermining the ability of Russian firms to maximize the benefits of learning*. Hence, although the initial focus of this study was primarily on understanding the nature and extent of the implications for Russian parent firms of learning through a JV, the empirical research revealed that if one is really to understand the nature and extent of learning outcomes, the constraints to the application of JV knowledge in parent firms should be investigated. As one of the respondents from Auto component case explained:

We have started to do it [apply the knowledge] here gradually. But you need to understand that it is one thing to acquire and understand knowledge, and the other is to implement it in real life.

Another respondent, this one from the Truck case, referred to the issue of knowledge integration as:

Not everything goes smoothly in the adoption of lean manufacturing. Often, the involvement of operational level managers is limited by a mere understanding of the importance of the problem, but no actions are being undertaken.

The above illustrates that the acquisition and understanding of the value of JV knowledge appears to be an insufficient condition to achieve good performance at the parent level if these processes are not followed by the successful integration and application of this knowledge to a commercial end. Grant and Baden-Fuller, (2002:423) define knowledge integration as “the ability of productive system to access, transfer and apply multiple types of knowledge needed in the production of goods and services”, and emphasize that it is a challenge for organizations to establish mechanisms for the efficient integration of knowledge. In the given context, this translates to challenge associated with the transformation of knowledge acquired from a JV into the broad organizational knowledge base of Russian parent firms. In other words, as defined by Cohen and Levinthal (1990), the potential challenges in parent firms are associated with a lack of some elements of absorptive capacity, which is the ability to assimilate knowledge and apply it to a commercial end.

The results of empirical analysis outline the organizational and external factors affecting the success of applying JV knowledge in Russian parent firms. These are further discussed in the following sections.

8.2. Organizational constraints of learning through JVs

8.2.1. Theoretical underpinning

The integration of JV knowledge requires the implementation of organizational changes, and the adaptation of the existing knowledge base, resources and organizational routines, and structure. Moreover, the ‘unlearning’ of old routines and practices is often necessary before newly acquired ones can be initiated (Lyles and Salk, 1996; Lane et al., 2001). However, generating changes is often difficult and faces inertia, which is defined as the resistance of an object to a change of its state of motion or the amount of resistance in an object to change in velocity (Narula and Jormanainen, 2008). Firms are generally averse to radical change and they are likely to ‘stay close’ to patterns of behavior, learning and interaction which have been successful in the past (Narula and Jormanainen, 2008). This study stresses the argument that constraints to the integration of JV knowledge in Russian firms, to a very large extent, stem from the presence of organizational inertia. It, therefore, acts in an opposite direction to the processes of JV learning, which are oriented towards generating change in parent firms.

Indeed, organizational theorists define inertia as the inability to implement internal change when external change occurs (Tushman and Romanelli, 1985; Gilbert, 2005). Organizational inertia can be particularly visible in a situation of significant institutional change, such as that undertaken by the Russian government in the early 1990s, when the resources and capabilities of local firms, which reside in technologies, human resources, processes, and structures, no longer represented a basis of competitive advantage because they were solutions to past problems that were resistant to change. These resources and capabilities are embedded deeply in routine behavior, and often embody the very ideologies that are costly and time-consuming to change (Nelson & Winter, 1982; Burgelman, 1994).

Gilbert (2005) distinguishes two categories of inertia in organizations: resource rigidity, defined as the failure to change resource investment patterns, and routine rigidity, defined as the failure to change organizational processes that use those resources. The first has to do with the

willingness as well as the possibility for a firm to dedicate resources to implement required changes (ibid.). Hence, a clear strategic orientation and sufficient investment in resources are required to overcome inertia. The second element of inertia defined by Gilbert (2005) concerns the presence of inflexible routines. Gilbert (2005:742) defines the concept of routines ‘as repeated patterns or response involving independent activities that become reinforced through structural embeddedness and repeated use’. The important matter here is that routines are deeply embedded into organizational values and norms and are highly inflexible.

Specific organizational mechanisms need to be in place to decrease or eliminate inertia. Grant and Baden-Fuller (2002) point to two types of mechanisms: (1) directions whereby firms transform specialized knowledge into directives, rules and operating procedures; and (2) organizational routines which include complex patterns of coordination and enable specialists to integrate their knowledge into the production of goods and services. The firm might need to differentiate mechanisms for integration of different types of knowledge (ibid.). Moreover, Zaheer and Bell (2005) highlight the importance of organizational filters and communication structures, and mechanisms for knowledge integration. Further, the size and age of organization has an influence on its ability to change (Zaheer and Bell, 2005).

In addition to resources, motivation and mechanisms, one of the most important factors required to overcome structural inertia is the presence within an organization of an “ability to change” (Filatotchev et al., 2003). Another label for this concept is ‘dynamic capabilities’ which refer to the ability of a firm to adapt their own resource configuration according to changes in the environment (Teece et al., 1997; Eisenhardt and Martin, 2000).

There are also issues which are argued to be specific to the integration of foreign knowledge by local firms in Russia. Specifically, the drawbacks of the structure of local firms, as well as inefficient patterns in their resources and capabilities that is attributable to the Soviet administrative heritage (Dixon, 2006). Dixon (2006) suggests that organizational routines in local companies remain unchanged from the Soviet period and, the prior development path of firms constrains their future behavior. Hence, this administrative heritage impedes the integration and beneficial use of foreign knowledge into Russian firms. Further, Michailova and Husted (2003)

find that serious constraints to knowledge sharing were a 'not-invented-here syndrome' whereby there is lack of trust that knowledge possessed by foreigners is applicable to the Russian context. In addition, a lack of incentives for knowledge sharing, a departmental way of thinking, a fear of admitting mistakes, and primacy of hierarchical status undermine the successful integration of new knowledge into Russian enterprises (Husted and Michailova, 2002).

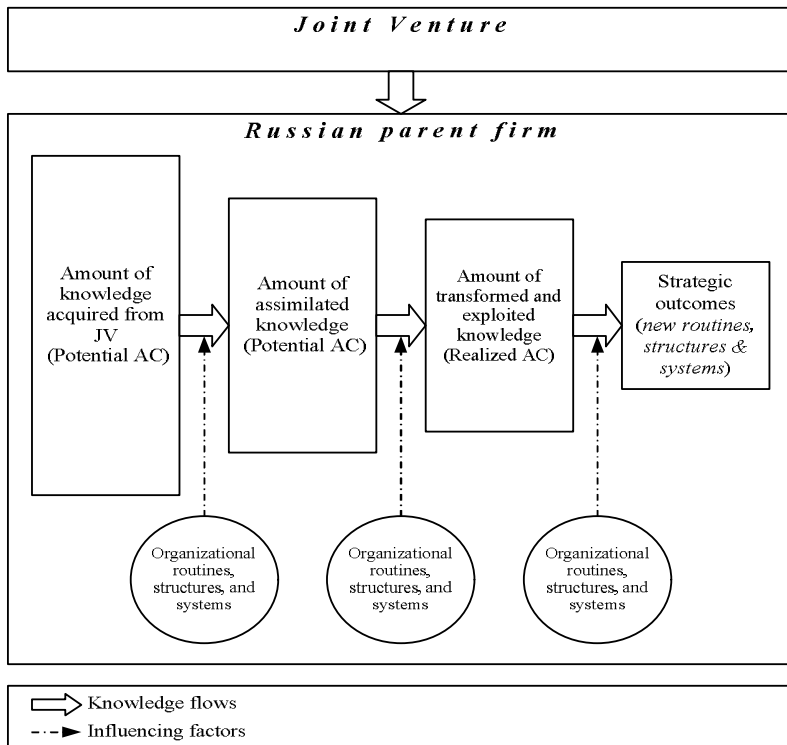
It is noteworthy that although these features are not entirely context-specific; they have been found to occur in other contexts, albeit to a different degree. For example, the 'not invented here syndrome' was found by Bedrow and Lane (2003) to prevent managers from considering the validity and usefulness of the knowledge developed in an JV. Amongst the reasons limiting learning benefits for US parents reported by Inkpen and Crossan (1995), is a lack of recognition by parent managers of the importance of new knowledge; a disbelief by the parent managers that a JV could offer any valuable lessons, and belief that the financial performance of JV is not convincing so parent managers consider there was not anything that is worth learning.

Other explanations of why firms fail to adapt to new challenges focus on the capabilities of management to implement changes in the organization. Managerial cognition influences the evolution of capabilities at industrial enterprises and forces organizational inertia to be overcome. Dixon (2006) argues that senior managers and top management teams in Russia have to take a leading role in bringing about cultural change. Again, albeit to different degrees, this problem exists in other contexts and is not specific to transition economies. Ruggles (1988) points out that the main problem of knowledge management is to achieve a change of people behavior, and the main impediment for knowledge transfer is an existing organizational culture.

Building on the premises discussed above, this study develops a conceptual framework that illustrates the process of the transformation of individual knowledge acquired through JVs into organizational knowledge of the Russian parent. Figure 8.1 presents this framework, illustrating that the integration of knowledge acquired through a JV is affected by organizational factors; namely routines, systems and structure, and results in the development of new routines, systems and structure. The framework emphasizes that, when analyzing the outcome of learning, it is important to distinguish between potential absorptive, and realized absorptive capacity. The

former is defined by Zahra and George (2002) as the ability to acquire and assimilate knowledge, and the latter as the ability to transform and exploit knowledge.

Figure 8.1 The process of JV knowledge integration and application in Russian parent firms



To summarize, an occurrence of positive performance implications from JV learning requires the presence of the appropriate organizational structure and routines in parent firms, as well as the appropriate systems and mechanisms for implementing change. This is in agreement with the argument of Tripsas and Gavetti (2000) who stress that processing change in organizations is always difficult, and even when the need for change is realized firms are unable to respond efficiently.

8.2.2. Empirical findings

This empirical research reveals that several specific organizational level constraints exist in Russian industrial enterprises that serve to inhibit the application of JV knowledge: (1) an inappropriate organizational structure preserved from the Soviet period, (2) the philosophy and attitude of employees towards responsibility and an existing production culture, and (3) the lack of well established knowledge management practices. I next examine each of these aspects in greater detail.

First, the organizational structure and routines existing in Russian industrial enterprises inherited from Soviet period were found to inhibit the beneficial application of advanced JV knowledge. In particular, large size of the firms and the dominance of old machinery slow down the process of the application of the newly acquired advanced techniques and practices. Indeed, the advanced technological knowledge learnt through JVs cannot be utilized on outdated machines. Furthermore, due to the large size of Russian firms and their limited financial resources, it is difficult to implement changes in operational production sites and to carry out an extensive modernization of workshops. Moreover, one needs to bear in mind that, from a technical perspective, the achievement of advanced production operations is not only related to equipping sites with new machines or production lines, but also with the ability to do this in a systematic manner thereby allowing the building of an integrated system. These issues were described during one of interviews conducted with a manager in the Auto Component case:

In order to achieve more efficient production organization the mere replacement of the old machinery one by one is not enough. We need to organize the whole technological process from scratch, and here we face the main problem. The existing plant with its infrastructure does not allow these changes to be implemented. And, on the one hand, we cannot destroy it all at once as it is an operational facility, on the other, the implementation of these changes bit by bit although possible, is not always efficient.

In the similar vein, another manager from the Truck case emphasized:

It is very hard to change the existent structure. When you start from zero, it is easy, but when people are used to certain type of routines, it often has little result to tell them to do things differently.

The above clearly shows that the problem of Russian industrial enterprises is their large size and the inflexible organizational structure and routines that results in a lack of the flexibility required for change and to implement the new technological solutions acquired through JVs. The aspect of size has been discussed by other scholars e.g. Christensen (1997) who found that structures in small units are more supportive of innovation activities. Furthermore, Dixon (2006) suggests that the transformation process of Russian firms is largely constrained by their administrative heritage. This structure of the local enterprises has been preserved from Soviet times but it is not longer relevant to a market economy. In this regard, one of the interviewees has provided a short but extremely revealing answer to the question about the most problematic aspect that inhibited change by simply stating:

The heritage.

A further problem associated with the implementation of changes in Russian parent firms related to the real need for these changes. This research has found that Russian firms are deeply embedded in old established routines and relationships with customers and suppliers who do not want or cannot make technological upgrading, are thus, satisfied by the existing level of products and services, and therefore do not desire to implement change. This issue is illustrated by remarks made by a respondent from the Auto component case:

In our main production site it is very difficult to launch new production according advanced western requirements. This entire site functions to produce products for the needs of local car manufacturers who are satisfied with the current level of quality. So there is no economic sense to radically change this site. However, they are not suitable for manufacturing products for western car manufacturers which are now coming to Russia.

The Second serious obstacle is the philosophy of employees with respect to work and responsibility that is preserved from Soviet times. Specifically, a big issue is the 'not-invented-here' syndrome of Russian employees. An interviewee from the Aircraft engine case said:

The French company spends lot of time and resources for our training, but not everybody is yet ready to absorb knowledge. For example, when our employees are taught what and how they need to do, they think: we are smart enough- we were doing engines here for a long time before you came.

This aspect has been revealed also in other empirical studies (Michailova and Husted, 2003) who report this problem of Russian employees. Data collected from the case companies permits this issue to be elaborated upon further. The findings show that the ‘not-invented-here syndrome’ largely exists at the levels of workshop employees and middle management, whereas at the top management level there is a good understanding and awareness about the value of new knowledge. The managerial challenge is therefore to assure a diffusion of this new attitude to all organizational levels. However, it is important to bear in mind that accounts of the presence of advanced managerial thinking were revealed in case companies that participated in this study, and companies pursuing a JV strategy are the most advanced Russian enterprises, the situation might different in other Russian enterprises.

A further issue, obstacles that blocked the integration and application of JV knowledge in the Russian parent firms were a lack of responsibility of Russian employees and a poor production culture. Indeed, there is still little understanding that every small aspect of their work influences the final outcome of the production process, product characteristics, and quality. Hence, the problem with making a cognitive change in the employees’ mindset has been described as one of the most serious issues undermining the application of advanced technological knowledge. The majority of interviewees brought up this issue, as one of the managers from the Aircraft engine case explained:

The basic problem is the change of mentality of everyone including workers and engineers regarding the degree of responsibility for the implementation of technological processes, and managers who have to adequately make decisions considering numerous factors. Russian people like inventing things, and there are moments when the effect from this attitude is opposite.

Indeed, there is a need for a significant change in production philosophy and this requires certain resources, knowledge, and managerial effort for its implementation. Even the achievement of simple changes, such as sustaining clean conditions in workshops or making employees follow the technological requirements, require the provision of extensive training.

The third serious obstacle is the absence of well established practices and traditions of knowledge management required to support the assimilation and application of new knowledge in Russian parent organizations. Indeed, knowledge management has not yet been developed in Russian enterprises and there is still a lack of managerial skills in this area. Despite the fact that the value and benefits of knowledge in both the technical and managerial areas are recognized by managers, they admitted that the practical execution of the systematic activities of managing knowledge-based resources at an organizational level represents a significant challenge. In other words, the issue here is that although knowledge is acquired at the individual level during the interaction between the employees of the Russian parent and the JV, this has to be shared within the parent organization in order to have an impact on its operations. Individual learning refers to the changes in personal knowledge of firm employees whereas organizational knowledge is the stock of knowledge that exists within a company (Bedrow and Lane, 2003). Changes in individual skills in various functional areas of Russian parent employees does not always represent the basis for development of new organizational routines or manifested in changes in organization strategy of Russian parent firms. This supports the argument of Nonaka and Takeuchi (1995) that organizational learning is not simply the sum of individual learning and it is a spiral learning process, which moves upwards from the individual to the organizational level when only some of individual knowledge is being transformed into organizational knowledge.

It is worth of noting that these results differ from the findings of other scholars who report that Russian firms do not possess the prior knowledge required to comprehend the knowledge brought by foreigners. The present study reveals that the problem with absorption of knowledge goes deeper than previously reported; it is not the understanding of knowledge, but the practical application of this knowledge that is the real issue. Although the research found the presence of successful practices of knowledge management, particularly in respect of the knowledge acquisition stage, there is lack of practices for its integration in Russian parent firms. Indeed, as

Chapter 5 describes, Russian JV parents have shown a learning intent and have implemented various knowledge management practices that support knowledge acquisition, such as visits, team work, and personnel rotation. However, there was conformity in the opinions that the beneficial application of newly acquired knowledge at the organizational level of parent firms required the implementation of various changes and this is perceived as being the most difficult aspect for Russian managers. For example, one of the managers from the Truck case stated:

People change but there is a huge challenge for management to capitalize on this change.

The aspects mentioned above manifest the general problem which is the inability of Russian firms to implement organization changes necessary for the beneficial use of knowledge acquired from a JV, and this is due to the strong organizational inertia. However, although this phenomenon has context-specific features associated with the Soviet heritage, overall, it is of similar nature to that in firms from developed countries. For example, Johnson (1994) long ago found that inertia takes place even when managers are aware of a need for change. Further, Tripsas and Gavetti (2000) stress that the implementation of changes at the organizational level is always a challenge, and even when the need for change is recognized by organizational members, firms often cannot respond efficiently. Indeed, all of the interviewed managers emphasized the existence of inefficient organizational routines, structures and practices, but remarked that they are unable to change this quickly. A respondent from the Auto component case explained:

Foreign manufacturers have low costs due to the high degree of automation of the production process. Unfortunately, due to our technological lag, we, do not have this level and need to buy all machinery from scratch to achieve that level of quality. Only this way we can catch up. At the moment our production lines are behind 5, 10, 20, and even 40 years. If we want to be a supplier for Ford, Volkswagen, Toyota, we need to buy it all from scratch.

To conclude, this discussion shows that the real utilization of JV knowledge in parent firms is extremely difficult and constrains the benefits of JV learning. This aspect of the learning process does not depend only on the characteristics of JVs, the nature of the relationships between parent firms, or the efficiency of knowledge acquisition, but most importantly, on the internal

organizational routines, systems and structure of Russian parent firms. The problem is to achieve learning at the organizational level in addition to learning at the individual level. The main reason for this is that the latter requires changes not only in the behaviour and cognition of individuals directly involved in JV learning activities, but, most importantly, the dissemination of the acquired knowledge to an organization level, which requires a change in existing structures and routines. The research finds that this problem stems from the presence of strong organizational inertia which inhibits the implementation of advanced JV knowledge. This is an important contribution to learning through JV literature which, when examining learning to date, has focused only on the knowledge acquisition aspects, without giving appropriate attention the issues of knowledge integration and application.

8.3. External constraints learning through JVs

8.3.1. Theoretical underpinning

The previous section described firm-level obstacles for the integration of knowledge. Here I discuss another type of constraint originating from external environment. It has been stressed that internal change is influenced by and tightly aligned with the external environment (Gilbert, 2005; Tripsas and Gavetti, 2000). Institutional embeddedness and core rigidities greatly influence the activity of firms. Organizational change is difficult due to the deep structural embeddedness of organizations into their external environment (Hannan and Freeman, 1984). This explains the need for the integration of organizational inertia with structural environmental inertia. The next section explains in detail the nature of influence of the external environment on the processes of the integration of JV knowledge within local parent firms operating in transition economies.

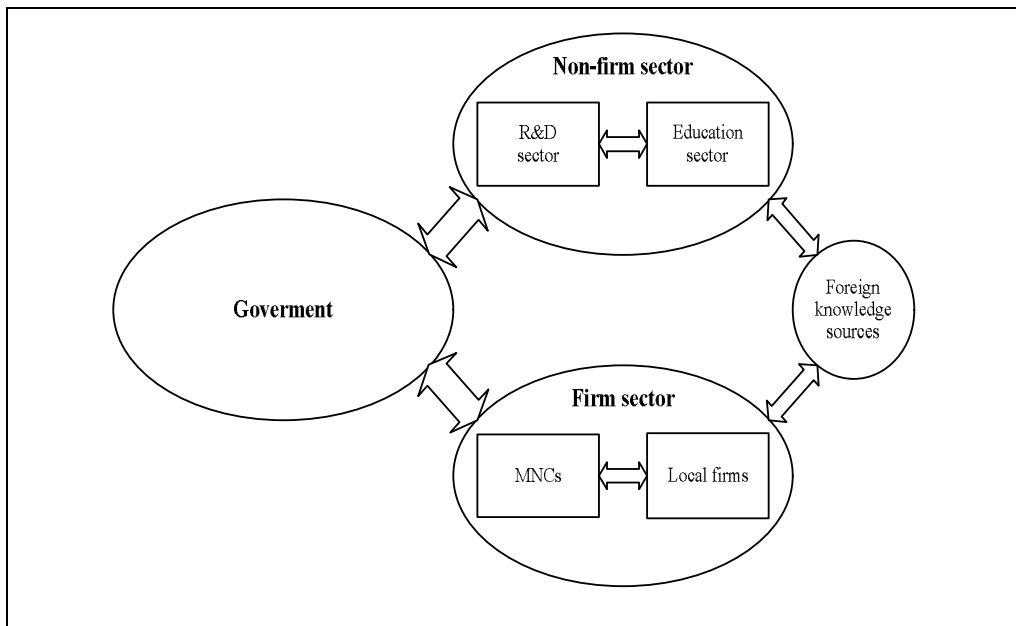
The System of Innovation (SI) approach offers good analytical tools for a better understanding of these factors. The literature on SI argues that the development of firm-level technological capabilities is the outcome of the investment undertaken by the firm in response to external and internal stimuli (Lall 1992). That is, in addition to factors that are firm-specific, there are those

that are common to firms in given countries, depending on their policy regimes, skills and endowments factor, and on institutional structures (See e.g., Lundvall, 1992; Edquist 1997). In other words, to examine the strength or weakness of firms, one must turn to understanding the underlying and complementary developments in their associated system (Criscuolo and Narula 2008). Thus, this section employs the SI approach to explain how the relationships with firm and non-firm actors in the economy affect the process of the application of JV knowledge in parent firms.

8.3.1.1. Systems of innovation and role of institutions

The processes of knowledge accumulation and building capabilities are evolutionary in nature and do not occur in a vacuum. That is, firms do not make decisions about the kinds of products they will seek to develop, nor where they intend to develop and produce these goods and services, based simply on firm-specific issues and profit maximizing motives. Firms exist as part of ‘systems’, much as individuals exist as part of society. They are embedded through historical, social, political and economic ties to other economic units. The innovation system concept suggests that there are certain structural influences (scientific, political, and socio-economic) within any nation state that help to define the pattern, nature and extent of the accumulation of knowledge within a given industry, which also define the extent and nature of industrial activities within its borders. Figure 8.2 gives an illustration of a conventional *national* innovation system.

Figure 8.2 The conventional model of an Innovation System



An SI approach essentially allows the mapping of the complex interactions between a firm and its environment. The environment consists, firstly, of interactions between firms – especially between a firm and its network of customers and suppliers. Secondly, the environment involves broader factors shaping the behavior of firms: the social, political and cultural context; the institutional and organizational framework; infrastructures; the processes which create and distribute scientific knowledge, and so on. There are two groups of economic actors in the system. The first group includes firms – private and public – engaged in innovation activity. The second group consists of the non-firm sector that determines the knowledge infrastructure that supplements and supports firm-specific innovation. The concept of ‘knowledge infrastructure’ is understood here in the sense proposed by Smith (1997) as being ‘generic, multi-user and indivisible’ and consisting of public research institutes, universities, organizations for standards, intellectual property protection, etc. that enable and promote science and technology development. For simplicity, the non-firm sector is broadly defined as consisting of (1) A public

R&D sector including various organizations conducting R&D activities; (2) An education sector consisted of universities, institutes and other organizations providing training and education.

The interactions between the various actors within a system are governed by institutions. Institutions are the 'glue' that bind the various actors together, and determine the efficacy of their interaction (or lack thereof). Institutions are taken here to be of two types, informal and formal, and are generally understood as sets of common habits, routines, established practices, rules, or laws that regulate the interaction between individuals and groups (Edquist and Johnson, 1997). Institutions create the milieu within which all economic activity is undertaken and establish the ground rules for interaction between the various actors. Formal institutions include the appropriate regime relating to intellectual property rights, competition policy, the creation of technical standards, taxation, the establishment of incentives and subsidies for innovation, the funding of education, etc. These are codified and administered by organizations that are themselves formal institutions since their existence is formally defined and their structures are designed to create and implement new and existing formal institutions. Formal institutions are generally politically defined with legally binding rules, regulations and organizations. Indeed, the political and economic spheres are rarely independent, and this is all the more so where a high degree of central planning was undertaken, such as in the former centrally planned economies. In general, the policy environment in which economic actors function has a high degree of interdependency between the economic and political spheres.

Informal institutions are rarely codified. They are necessary for creating and promoting links between various actors, are closely tied to norms and values, and represent routines that are essential to the implementation of formal institutions. The modification and development of informal institutions is a complex and slow process, particularly since they cannot be created simply by government decree. Perhaps the most important aspect of informal institutions is 'know-who' (Narula 2002). It takes considerable effort to create informal networks of government agencies, suppliers, politicians, researchers, and once created, they have a low marginal cost of maintaining.

8.3.1.2. Inertia and lock-in in System of Innovation

Innovation Systems do not always result in an efficient outcome in the sense that local firms are not always able to sustain a competitive advantage. Furthermore, systems may be ‘incomplete’ or ‘unbalanced’ because some aspects of the systems are inefficient, or simply non-existent. Interaction within an SI is a self-reinforcing mechanism which may or may not lead to *ex post* efficiency. Interactions of actors in the system are supported by specific institutions which may or may not be the most optimal set of associations. In essence, actors are structurally locked-in to specific institutions, locations, and products/technologies. Lock-in represents a self-reinforcing interaction between firms and infrastructure perpetuating the use of routines.

There is a high degree of endogeneity and interaction amongst and between institutions, science and technology infrastructure, the competitiveness of industrial enterprises and the endowments of any given economy. They may act to promote or prevent the accumulation and exploitation of knowledge by industrial enterprises. Institutions are particularly subject to inertia when political and economic regimes are reformed, and the system as a whole – through its various interactions which are held together by institutions – may experience lock-in, causing industrial enterprises to engage in routines that no longer generate a sub-optimal outcome.

Following other scholars, the argument here is that the role of institutions (see e.g., Nelson and Winter 1982, North 1990) is crucial. The absence of efficient institutions can retard the efficient accumulation and transfer of knowledge between industrial enterprises and other economic actors within their milieu, influencing growth in general (e.g., Rodrik, 1999, Rodrik et al., 2004; Meyer and Peng, 2005; Asiedu, 2006; Lall and Narula, 2006). Furthermore, a fundamental shift from one political and/or economic regime or policy stance to another represents a discontinuity or ‘shock’ to the system, and this can play havoc with both formal and informal institutions. When a large external ‘shock’ is applied – a change in the economic and political milieu, by legal and governmental decree - actors will seek, in the first instance, to continue to use the institutions and routines with which they are familiar, even where they no longer provide efficient returns. Oliver (1992) shows that even when change is recognized by firms, it may be immobilized by the

previous institutional arrangement. Thus, inertia in transition between two different economic systems implies a ‘lag’ between adapting informal institutions in response to a change in the formal institutions.

Inertia can be a pervasive phenomenon at the level of a whole economy. This is because there is often a self-reinforcing interaction between industrial enterprises, the infrastructure and politics, which perpetuate the use of specific technologies, the production of specific products, and/or through specific processes, and specific customer-supplier associations. Political reform resulting in economic reform may act as an external shock, forcing wholesale changes in the formal institutions that are incompatible with the informal institutions. The situation is exacerbated when elements of the industrial system and its associated infrastructure are either shrunk, or transferred to the control of another branch of the economy, or are obliged, for other reasons, to alter their function. Such institutional restructuring is not an instantaneous or costless process and results in inefficient outcomes.

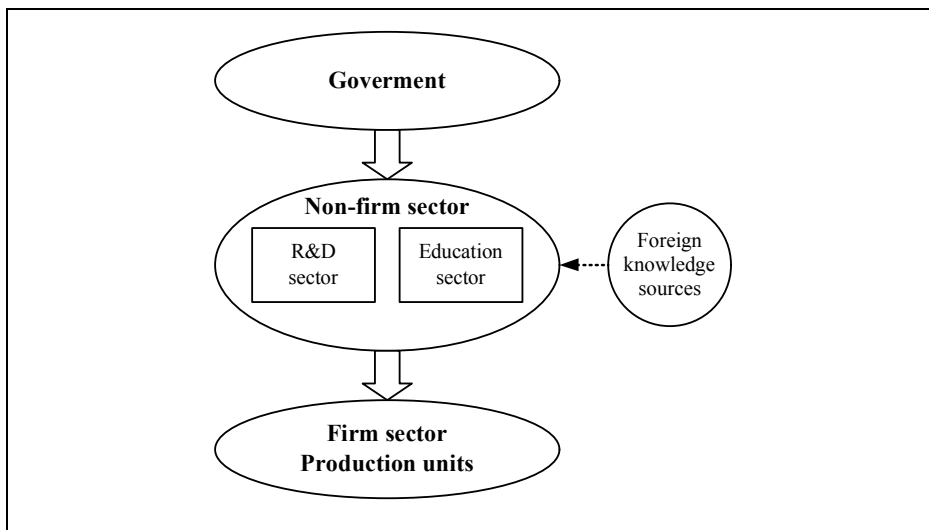
Of importance here is that institutions developed for, or specialized around, a particular economic system or industrial cluster are not efficient at responding to the needs of another. In Russia, this was on a much larger scale, covering almost all aspects of economic activity.

Lock-in (as with inertia) can be ‘positive’ if a virtuous relationship that sustains or improves the competitiveness of firms exists between parties within an SI, and when institutions develop, support and reinforce the interwoven relationship between firms and the knowledge infrastructure through positive feedback. However, a negative outcome from lock-in is also possible where there is a systemic lock-in such that the SI cannot respond to, or adapt to, external shocks due to radical shifts in the technological, economic or political paradigms.

8.3.1.3. Soviet Science and Technology system

Prior the reforms, Russian SI existed as a Science and Technology (S&T) system. It shared common features with systems in other transition economies and had been domestic insomuch as knowledge sources were determined primarily by domestic elements (Radosevic 1999, 2003). The most important feature of the Soviet S&T system was the strong role of the state in coordinating the activities of all the actors in the system (Radosevic, 2003). Figure 8.3 shows the pre-transition version of the S&T model in Russia.

Figure 8.3 The pre-transition model of Science and Technology System in Russia



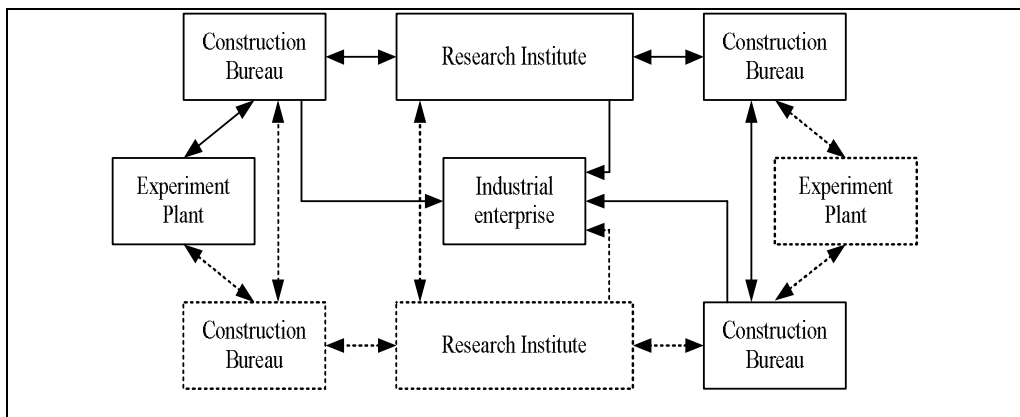
The state defined the priorities for development of science and education, allocated funds, and coordinated the implementation of the plans. Likewise, domestic governmental organizations formulated domestic industrial policy, which in turn determined domestic industrial structure. National non-firm actors also defined the kinds of skills that the local labor force needed to possess; the kinds of technologies in which these actors had an appropriate expertise; the kinds of technologies in which basic and applied research was conducted, and thereby, the industrial

specialization and competitive advantages of the firm sector. FDI was non-existent prior the transition era and any links to international sources were sporadic and state controlled.

Figure 8.3 shows that the other important feature of Soviet Science and Technology system in Russia was the extensive and pervasive coordination between actors, whereby one-way information flows in the forms of plans and directives existed between the state and the other actors of the system.

Furthermore, a distinctive feature of the Soviet Science and Technology system was that the organization of the R&D sector required a high level of coordination between the organizations involved in the project. It was not uncommon that several research institutes, construction bureaus and experimental plants might be involved in the process of the development and testing of a product. Given this, Figure 8.4 provides a graphical illustration of the intricate network of organizations involved in innovation. In particular, construction bureaus and research institutes were responsible for new product development; the experimental plants were responsible for new product standardization and test- manufacturing. Only after these steps would production be shifted to the industrial enterprises responsible for large scale production.

Figure 8.4 Typical network of co-dependent R&D organizations: the Soviet model



It is important to emphasize that industrial enterprises did not directly engage in R&D, and their activities were limited to the mass production function. They normally received the developed technological knowledge from other R&D organizations in a form suitable for the manufacture of the final products (Figure 8.4). The production process itself was organized according to five-year plans defined by the state, which clearly defined the quantity of output expected from each enterprise. Initiative at this stage was discouraged; managers were keen to avoid missing targets because they were often personally responsible for achievement of these targets. In this type of environment, industry lacked both the stimuli and the capabilities to develop new technologies and better quality products. Sales of output were also known well in advance, and were carefully matched with supply at fixed prices that were not always related to their real value. This practice further undermined the impetus to improve the quality of the products and to modernize production facilities.

The other part of the S&T system was the education sector, which was represented by the institutes providing secondary and tertiary education. They were mainly responsible for the supply of qualified graduates to all sectors of the economy, and, to some extent, performed basic research, financed entirely by the state. The Ministry of Education was in charge of all educational organizations, and was authorized to define the nomenclature of specialties according to the expected needs of the national economy. These needs were defined 5-10 years ahead, and certain quotas for new graduates were defined on the basis of the demand in each industrial sector and approved centrally. Consequently, according to those quotas, a certain number of students were accepted to educational organizations of different levels. This type of coordination allowed a balanced structure of new graduates, who were placed in the industrial enterprises of the appropriate specialization. Therefore, the Soviet system of education was able to produce a required number of specialists for all branches of the national economy. This had the advantage of stability, but it also meant that new disciplines and subject areas were not easily catered for.

To conclude, the main characteristics of the Russian S&T system were (1) a high degree of state coordination and control, which often had a political nature and was highly bureaucratic; (2) low R&D activity in industrial enterprises, (3) underdeveloped links with the western scientific

world, which slowed the pace of technical progress and the development of new advanced technologies; and a (4) balanced system of education ensuring the sufficient supply of graduates to all branches of the economy.

8.3.1.4. Transition to Russian System of Innovation

First phase of reforms, 1992-1995

The first years of transition were a very difficult time for the Russian R&D and education sectors. This was a period when state priorities were oriented towards other national needs, and these sectors faced severe competition to obtain budgeted funds. These sectors were excluded from the priorities of the government development policy because fiscal problems such as financial stabilization and inflation were the main focus of government attention. The overall negative background that was found in the national economy and a significant decline of industrial output decreased incentives to conduct R&D activities and the resources available to all actors in the economy.

Table 8.1 presents the share of industrial output in industry in 1995 as a percentage of the 1991 figure, and shows that the most significant fall in production occurred in consumer goods and the machinery building industries; the share of output in 1995 compared to that in 1991 was a mere 19 per cent and 41 per cent respectively. The energy sector was protected to a large extent, here the decrease in output was much less noteworthy, and sustained at the level of 82 per cent.

Table 8.1 The share of industrial output in 1995 (% from 1991)

Industries	%
Energy	82
Black Metallurgy	57
Chemical	46
Machine building	41
Forestry	43
Building materials	43
Consumer goods	19
Food	52

Source: Bobilev (1997)

During this turbulent time the Russian government significantly reduced its research and development (R&D) funding as part of the restructuring and downsizing of the R&D system and a reorientation towards a civilian approach R&D. This is reflected by a change in the principles of science funding: before the transition period science R&D was a high priority for state spending, whereas after the start of reforms funds to the R&D sector were limited. In 1992 financing of science by the state decreased in 2.2 times compare to 1991 (Dezhina, 1997). As Table 8.2 shows, in 1991 100% of R&D organizations were state-owned whereas in 1995 this figure had reduced to only 29.4% (Statistical yearbook of Russia, 2007). However, the overall number of these organizations decreased only by 12.4 per cent from 4564 in 1991 to 4059 in 1995, which can be explained by the fact that some large organizations such as research institutes were broken-down into smaller independent organizations that were managed by small teams of scientists.

Table 8.2 Number of R&D organizations, 1995-2006

R&D organizations		1991	1995	Absolute change 1995/1991 (%)	2000	2005	2006	Absolute change 2006/1991 (%)
R&D institutes	Total	1831	2284	19.8	2686	2115	2049	10.6
	%	40.1	56.3		65.5	59.3	56.6	
Construction bureaus	Total	930	548	-69.7	318	489	482	-92.9
	%	20.4	13.5		7.8	13.7	13.3	
Project-based organizations	Total	559	207	-170.0	85	61	58	-863.8
	%	12.2	5.1		2.1	1.7	1.6	
Experiment plants	Total	15	23	34.8	33	30	49	69.4
	%	0.3	0.6		0.8	0.8	1.4	
Organizations of high education	Total	450	395	-13.9	390	406	417	-7.9
	%	9.9	9.7		9.5	11.4	11.5	
R&D units in other organizations	Total	779	602	-29.4	587	465	567	-37.4
	%	17.1	14.8		14.3	13.0	15.7	
The total number of organizations	Total	4564	4059	-12.4	4099	3566	3622	-26.0
	%	100	100		100	100	100	
Of which state owned:	Total	4564	1193	-282.6	1247	1282	1341	-240.3
	%	100.0	29.4		30.4	36.0	37.0	

Source: Statistical yearbook of Russia (1995; 2007).

As illustrated in Table 8.2, the most extensive downsizing took place in the number of construction bureaus and project-based organizations. In 1991 construction bureaus and project-based organization represented 20.4% and 12.2% of the total number of R&D organizations respectively. By 1995 the corresponding numbers were 13.3% and 1.6%. Some of these organizations simply did not survive transition, although some were privatized and started to undertake various (non-state directed) commercial activities in order to obtain additional

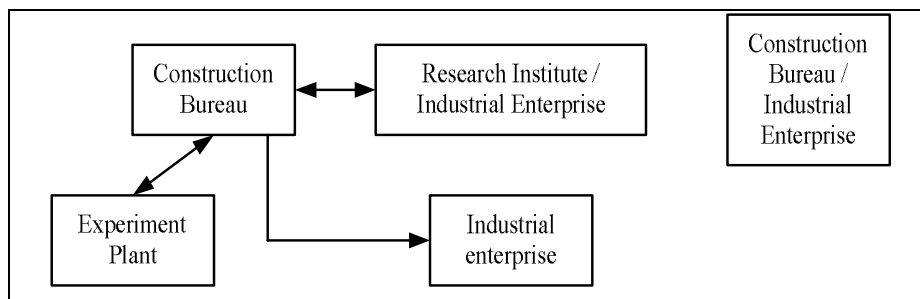
financial resources. In particular, many construction bureaus and research institutes were transformed into manufacturing units (e.g. Antonov Construction Bureau).

Overall, these processes had a strong negative influence on the innovative capabilities of Russian industrial enterprises that were closely cooperating with these organizations to develop new products. Thus, the most negative consequence of the downsizing of the S&T system on the overall innovation network was not the decrease in the number of organizations as such, but the manner in which they were eliminated, and the consequences this had on the overall innovation network. Each of the organizations had their own rather specialized functions in the coordinated state network. As a number of players were made to ‘exit’ the field, the chain of innovative activities and the consequent level of output were severely compromised. This in turn put additional pressure on the remaining organizations which were forced to perform a much wider range of activities and to establish new networks of partners. As an example of this argument one of the respondents from the Aircraft engine case stated:

In Soviet times 5-6 construction bureaus were doing the same volume which one bureau and one enterprise now do.

Following from the above, Figure 8.5 shows that many organizations and, consequently, the links between them disappeared and this resulted in the inefficient functioning of the whole R&D sector.

Figure 8.5 incomplete networks of R&D organizations after transition



The downsizing of the number of organizations in the R&D sector has also resulted in a decrease in the number of scientific staff. Table 8.3 shows that the number of researchers and scientists in 1995 decreased by 58.7 per cent compare to the level of 1991. This fact supports the point suggested previously that although the number of organizations did not change dramatically, the real scale of activities conducted in R&D sector decreased significantly.

Table 8.3 Scientific staff in R&D organizations (thousands)

Scientific staff		1991	1995	Absolute change 1995/1991 (%)	2000	2005	2006	Absolute change 2006/1991 (%)
Researchers & technicians	Total	1227	623	-97.0	500	456.1	454	-170.4
	%	63.2	58.7		56.3	56.1	56.3	
Assistants & non academic staff	Total	716	441	-62.4	387	356.1	352.1	-103.4
	%	36.8	41.6		43.6	43.8	43.6	
Total	Total	1943	1061	-83.2	888	813.2	807.1	-140.8
	%	100	100		100	100	100	

Source: Statistical yearbook of Russia (1995; 2007).

Further, according to the information provided by the Statistical Yearbook of Russia (2007), the decrease in personnel was most noticeable in the technical sciences with a much smaller decrease in the humanities and social sciences. The explanation for this is that Soviet science was technically oriented, and the humanities and social sciences were not included in the state development priorities. However, after the transition the lack of qualified staff in these areas was realized and more resources were directed to this area.

In the education sector, during first years of transition only 40 per cent of costs were covered by the state (Dezhina, 1997). For this reason, organizations gained a high degree of autonomy and were allowed to define independently their range of specialties, their numbers of students and the content of their educational programs. These changes had a strong influence on the structure of education and, to a certain extent, on its quality. Due to the fact that in the Soviet Union education was, to the large extent, technically oriented there was a lack of graduates in

humanities and social sciences, especially in economics and law. Hence, during the transition to market economy there was an acute need for specialists in such fields as management, marketing and law, as well as other services areas. Therefore, the education sector started a massive reorientation of educational programs. However, on the negative side, the growth of these new specialties often took place at the expense of technical specialties, leading to their closure. New programs in these fields were also cheaper to implement because they did not require expensive training equipment as was the case for engineering specialties, which was a serious issue in the situation of limited financial resources. This was mentioned by an interviewee:

Technical colleges were transferred to regional supervision which meant in practice that many of them re-oriented their educational programs from technical specialties requiring expensive teaching materials towards educational programs in services such as hairdressers, restaurant staff where education process is much more easy and cheaper to organize.

This statement emphasizes the fact that a mismatch had appeared between the professions taught in educational organizations and industry needs. Table 8.4 reports the change in the number of professional training graduates and supports the respondents' statement that the numbers of qualified factory floor workers decreased dramatically in the post-soviet time. In this regard, in the year 2000 the total number of graduates fell by 53.4 per cent compare to the level of 1994. Further, sectors such as machine building and metal processing experienced the most dramatic decrease; 251.3 per cent and 158.6 per cent respectively (Table 8.4).

Table 8.4 Professional training graduates in industry (thousands)

Qualified graduates in:	1994	1995	1998	2000	Absolute change in %
Metallurgy	7.5	4.6	2.9	2.9	-158.6
Chemical	10.1	10.5	6.3	7.8	-29.5
Machine building and metal processing	27.4	31	11.6	7.8	-251.3
Forestry	13.2	12.7	11.8	14.1	6.4
Building materials	1.7	1	0.9	0.8	-112.5
Consumer goods industry	98.9	99.6	77.6	70.1	-41.1
Total:	158.8	159.4	111.1	103.5	-53.4

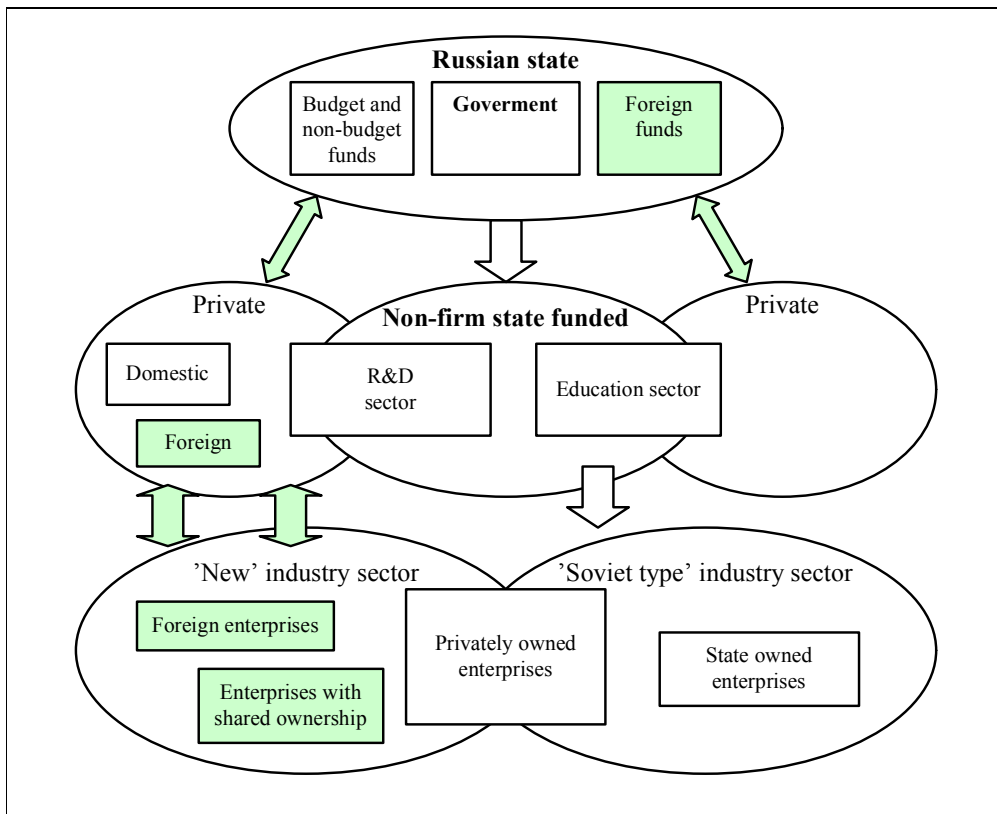
Source: Statistical yearbook of Russia (1995; 2007).

Second phase of reforms, 1995-2007: slow recovery

After the few first years of transition, the Russian government managed to undertake actions towards the stabilization of the science and technology sector and its further transformation into a conventional type of SI suitable for the market economy. However, although various changes in formal policies regulating the functioning of the SI were made, the ministerial principle concerning the coordination of SI was preserved from the pre-transition time.

Figure 8.6 presents the simplified model of the new Russian SI and illustrates the result of the transformation, and the change in the nature of the links between various actors of the SI.

Figure 8.6 Simplified mode of new Russian System of Innovation



The important feature of the new system was the establishment of new types of organizations in each of sectors of the SI, as well as new types of relationships between the actors. For the illustrative purposes, these new elements are shown in grey colour in the model (Figure 8.6). First, at the higher level, a number of budget and non-budget funds were established in order to finance the R&D and education sectors. These funds did not belong to any of the Ministries, and their resources were distributed on the basis of an open project competition. Thus, these funds represented a new form of selective state support. Further, foreign sources of capital were now available and foreign investors became increasingly interested in cooperation with Russian scientists. These various funds allocated grants for the financing of scientific projects and for the support of prospective students at leading institutes and universities.

In the R&D sector, small innovative enterprises appeared whose activities were primarily focused on the implementation of applied research and the commercialization of innovations. In addition, technology parks and science cities (*naukogrady*) that had been established in the Soviet era were reoriented and adjusted to new economic conditions. However, the number of enterprises decreased over the transition period (Dezhina, 2004). Among the major obstacles were an underdeveloped infrastructure in the area of technology commercialization; incomplete and misleading legislation; and a lack of financial resources.

In the higher education sector a large number of private universities were established whose activities were financed entirely by their own funds. Table 8.5 shows the number of higher education organizations and illustrates the rapid growth of private universities from 193 in 1995, to 430 in 2006.

Table 8.5 Organizations of Higher Education

Number of:	1991	1995	2000	2005	2006
State Universities	514	569	607	655	660
Private Universities	-	193	358	413	430
Total	514	762	965	1068	1090

Source: Statistical yearbook of Russia (1995; 2007).

Lastly, in the enterprise sector, a large number of companies with foreign (both full or partial) ownership was established during the first and second phases of transition (Figure 8.6).

It is worth emphasizing that although the nature of relationships between actors within the SI changed, it did not change completely. There have been different types of responses at the organizational level to the changing conditions of the external environment; some organizations succeeded to establish efficient bilateral links with other actors of the SI joining their efforts in the creation and development of innovations. Figure 6 shows two-way arrows indicating the close cooperation between some successful ('new' type) enterprises and organizations in the

R&D sector. However, large number of ('old' type) companies failed to re-structure their activities, or re-establish links with other actors.

Nevertheless, during this period the overall structure of innovative activities did not change significantly, and there was no noticeable increase of R&D activities performed by industry. Table 8.6 provides data of the Gross Expenditure on R&D by performer in 1995-2004, and clearly shows that the change in R&D activities conducted by industrial enterprises was marginal, from 68.5 per cent in 1995, to 69.1 per cent in 2004. Moreover, the government remained the main source of R&D funding. Table 8.7 presents the data relating to Gross Expenditure on R&D by the funding source, where the share of government remains significantly large and represents 60.6 per cent in 2004.

Table 8.6 Gross expenditure on R&D by performer, %

Years/ Researches in:	1995	1998	2002	2004
Government	26.1	53.5	24.5	25.3
Industry	68.5	69,0	69.9	69.1
Other national sources	5.4	1.2	5.4	5.5
Abroad	0.0	10.3	0.2	0.1

Source: Dezhina and Zashev (2007)

Table 8.7 Gross expenditure on R&D by funding source, %

Years/ Researches in:	1995	1998	2002	2004
Government	61.5	53.5	57.4	60.6
Industry	33.6	34.9	33.6	31.4
Other national sources	0.3	1.2	1.0	0.4
Abroad	4.6	10.3	8.0	7.6

Source: Dezhina and Zashev (2007)

The discussion here has indicated that a large part of Russian SI failed to overcome structural inertia after the start of economic reforms and to adopt new practices in their activities. The

Russian enterprise sector still faces numerous problems in promoting innovatory activities necessary for manufacturing. The point here is that in reality government tools did not work as efficiently as was expected, new practices were not adopted by the majority of actors in the SI, and the state was either unwilling or unable to implement important changes to formal institutions. Moreover, many enterprises remain lumbered with technologically and physically old equipment and production facilities which are no longer suitable or efficient. The inefficient organization of production processes increased production costs despite the fact that labor costs are still at a relatively low level. Formal policies developed over the previous two decades had, thus far, failed to create incentives to undertake innovation activities and the modernization of industrial sectors, as there is still was little to motivate industrial enterprises to make the longer-term development plans that require significant capital investments.

However, there were some positive changes and increasingly, private sources of finance from domestic and foreign investors gained in importance (Figure 8.6). In particular, indigenous companies sought various ways of cooperation with foreign investors such as joint ventures, R&D projects, etc. This cooperation was promoted by a gradual change in the attitude towards MNEs, and at a number of levels, the introduction of appropriate policies to attract MNEs and stimulate the creation of linkages with local firms, which together suggested there is potential in the future.

8.3.2. Empirical findings

This section emphasizes how the deficiencies of Soviet S&T system and its transition towards Russian SI that are discussed above undermine the extent of learning through JV benefits for Russian parent firms.

First, the obstacles to the application of advanced JV knowledge are related to the fact that Russian industry technologically lags behind other leading nations and has an inefficient structure. The most frequently described manifestation of these obstacles is the lack of high

quality domestic supply needed for the manufacturing of the innovative products. Hence, even if parent firms succeed in enhancing their knowledge base through a JV, the question of how to efficiently develop and manufacture innovative products remains. They face the challenge of finding suppliers that can guarantee the supply of appropriate quality components and materials. As one of the respondents from Aircraft engine case stated:

In order to develop an engine certified according international standards we need to have several parameters: certified production, personnel, and materials and components. Unfortunately, in Russia we have only one certified production which is the production of titanium, and this represents a serious problem for us.

In essence, the problem here is that learning through JVs is only one of the mechanisms stimulating development of innovative products in Russian companies, and their strategic restructuring. Indeed, this is complementary to other mechanisms supporting innovative activities, including those originated from the external environment. For this reason, if these other mechanisms do not function efficiently, the JV knowledge becomes obsolete for Russian parent firms. Indeed, the research finds that there is a need for a push for the development of local suppliers because it is not cost efficient to supply components for advanced products from abroad. There is should be a certain degree of localization which is not possible at the moment. Furthermore, some of the required materials are not even produced locally. The situation has been described by the majority of respondents as critical, as a manager from the Truck case explained:

The majority of suppliers are not ready to the transition to Euro 3 standard and our R&D department has to provide them with an extensive technical assistance.

Another example of a problem, specific to the automotive and auto component industry, is that although the Euro 5 standard has already been accepted in developed countries, in Russia most enterprises manufacture products according Euro 2 and Euro 3. Hence, even if some leading first-tier auto component manufacturers have the ability to develop products of European standards and have acquired advanced knowledge from foreign firms for this purpose, this process will be undermined by, on the one hand, the problems associated with finding local

suppliers producing high quality materials and components and, on the other hand, by the lack of demand due to the fact that car manufacturers are not ready to pay a higher price for those products. Often, the limited market for quality products is an obstacle for innovative developments in this sector. A manager from the Auto component case provided a good example:

The level of Russian auto industry is lagging behind significantly. For example, the Lada 2107 has being produced for several decades already... Therefore, our [auto component] enterprise and production is lagging behind to the same extent as our cars because it has been designed according to the level that existed before 1990....

Furthermore, for car manufacturers there it makes no economic sense to produce cars of Euro 5 standard when the petrol standards in Russia remain at the level of Euro 2 and Euro 3. It was pointed out by a respondent from the Auto component case that only when the product is oriented towards the need of foreign car manufacturer will there be a strong incentive to innovate and develop the high quality auto components:

If the production is oriented towards the needs of foreign company, then the acquired knowledge is useful. However, if we supply a domestic company which has not changed its own production system for years, there is also no sense for our company to implement changes. Other domestic companies are changing, but not as quickly as we would like them to change.

Second important issue inhibiting the extent of learning benefits is that the local machine-building industry lags behind in that it cannot satisfy the needs of advanced Russian enterprises which require new machinery for their own modernization and upgrading. Russian enterprises are forced to purchase the majority of expensive equipment from foreign manufacturers taking into account the scarcity of their own financial resources and limited possibilities for external finance due to the underdeveloped financial sector. It is important to understand that the advanced knowledge acquired from a JV cannot be applied to old machinery, but this kind of knowledge is a crucial element to the production processes necessary to manufacture high quality products. For this reason, if the enterprise fails to complement the JV strategy with other mechanisms supporting extensive modernization and restructuring, the acquired JV knowledge will then be of little use. One of the respondents referred to the problems associated with issue:

There are no Russian machinery producers. The system has killed them so to speak. Thus, we have to buy from abroad which is extremely expensive.

The underlying point of this discussion is that, indeed, if the complementary factors to firm-level knowledge-based resources are not in place, the application of JV knowledge is not possible. Even if the value of JV knowledge is well understood, its application is restricted by external factors. Overall, these examples provide a good illustration of the structural and technological lock-in at the industry level in Russia, where the relationships between actors and supporting institutions do not stimulate the development and innovative activities of Russian firms.

Third, the Russian R&D sector does not yet function in an efficient manner and fails to provide competent services at the competitive prices, especially in the consumer product sector. One of the managers from the Truck case explained:

Today, we cooperate a lot with suppliers and customers for new product development. If we need to develop a product for a foreign car manufacturer, there is no sense to ask assistance from our [domestic] design organizations – they are far behind. The foreign companies understand this and recommend their own R&D centers. We can place an order there, and they will immediately react. The price and time of service delivery will be optimal. They are used to work at this level whereas Russian R&D companies have fallen behind.

Fourth, another serious problem which limits the potential development and growth of Russian enterprises that is expected to be generated by learning through JVs is the lack of qualified technical personnel. The lack of qualified managerial employees has been discussed in large number of previous studies (Lyles and Salk, 1996; Peng, 2000; Lane et al., 2001). However, this research finds that this is no longer an issue in Russia. Opposite, due to the inefficient transition from Soviet S&T towards conventional type of SI described in the previous section, currently there is a huge unsatisfied demand for technical specialties. In this regard, an interviewee from a foreign JV parent interviewed for the survey stated:

It is absolutely obvious today that we face a catastrophic lack of working hands.. It is a problem to find good engineers and work floor employees...Now it is rare to meet a young technical specialist. The average age is above 40.

As a means of overcoming this problem big enterprises work with educational organizations and place orders for special educational programs. However, this approach is costly and time-consuming. Only large companies have the resources to pursue this strategy, and they have to arrange the education for the required specialties with colleges and universities.

To summarize, these examples clearly show that the inefficient functioning of the SI undermines the development of Russian enterprises. Although the 'new' types of enterprises possess advanced capabilities at the firm level, they are structurally and technologically locked-in in the system and do not get the necessary support to implement innovative activities. Despite the presence of positive outcomes from JV learning that serve to generate the development of innovative product, the extent of these outcomes can be further enhanced by the development of complementary tools, at industry and country levels, by Russian government.

Chapter 9 Propositions and empirical framework of the study

This chapter presents the results of the comprehensive analysis of the entire stock of empirical evidence. The objective here is to provide the reader with the overall conclusions which summarize the discussion of empirical analysis of evidence from case study presented in Chapter 6, Chapter 7 and Chapter 8 and from the pilot survey presented in Chapter 4. Furthermore, on the basis of these conclusions, I formulate a number of empirical propositions that aim to extend the existing scholarly knowledge on learning through JVs. Finally, an empirically grounded framework is developed in order to offer a graphical illustration of the main empirical findings of the thesis.

9.1. Development of propositions

9.1.1. Upgrading of technological capabilities through JV learning

The concept of technological capabilities has been used in this study as a mediating outcome between learning by parent firms through JVs and the performance implications that are attributable to this learning. Indeed, learning, by itself, does not result in superior performance, but must be embedded in capabilities in order that improvements in performance can occur. For this reason, this research has analyzed the change in capabilities and has taken into account that capabilities, in broad terms, consist of all types resources needed to generate change at the organizational level, including knowledge-based, physical and financial resources. The focus of the research was not on examining the process of building capabilities in the case companies, but to concentrate on understanding how capabilities were upgraded through JV learning. Indeed, during the empirical research the primary concern was to identify how different elements underlying capabilities changed after the Russian parent firms have cooperated in JVs with foreign firms.

The upgrading of technological capabilities was assessed in three main functional areas, as defined by Lall (1992), namely investment, production and linkages, and at three levels of difficulty, which are operational, advanced and innovative. This conceptualization represents a good tool for a detailed explanation of the nature of the technological upgrading in concrete terms, and enables a comparative analysis of differences in the upgrading across case companies to be conducted. Also of importance is it allows the literature relating to knowledge of JV learning, which does not distinguish between different types of technological capabilities and hence, does not elaborate on important nuances of their upgrading through JV learning, to be extended.

Table 9.1 presents a summary of the upgrading of capabilities relating to investment, production and linkages, across the three cases.

Table 9.1 Summary of the upgrading of technological capabilities across cases

TC/ Levels of TC/ cases	Investment			Production						Linkages		
				Pr-s	Pr-t	Pr-s	Pr-t	Pr-s	Pr-t			
	Case 1	Case 2	Case 3	Case 1	Case 1	Case 2	Case 2	Case 3	Case 3	Case 1	Case 2	Case 3
Adaptive	Mi/U	Mi/U	Mi/U	MI/U	N/U	Mi/U	N/U	Mj/U	N/U	N/U	N/U	N/U
Advanced	Mj/U	Mi/U	Mi/U	Mj/U	N/U	Mi/U	N/U	Mi/U	N/U	Mi/U	Mi/U	Mi/U
Innovative	DEV	N/D	N/D	DEV	DEV	N/D	N/D	N/D	N/D	Mi/U	Mi/U	Mi/U

N/U – No upgrading

Mi/U – Minor upgrading

Mj/U – Major upgrading

DEV –Developed (not existed prior JV)

N/D – Not developed

Table 9.1 clearly shows that technological capabilities have been upgraded in all functional areas in all case companies. Moreover, this outcome is supported by the pilot survey findings indicating that Russian parent firms learnt in the areas of product and process technology, as well as manufacturing support. Drawing on these findings, I suggest:

Proposition 1 Learning through JVs generates an upgrading of capabilities relating to investment, production and linkages functions in Russian JV parent firms.

However, Table 9.1 also indicates that the extent of this upgrading varies across cases and capabilities types. Of importance here is that the in-depth investigation of three case companies and personal interviews conducted for survey purpose enabled a critical assessment of the differences in upgrading of the different types of technological capabilities, and provided a comprehensive explanation for these differences both across functional types and across case companies. I next discuss how the capabilities related to investment, production and linkages functions were upgraded in Russian JV parent firms as a result of the learning through a JV.

9.1.1.1. Cross-functional analysis of the upgrading of technological capabilities

Upgrading of investment capabilities

The empirical findings show that investment capabilities were extensively upgraded as a result of the learning through a JV. Table 9.2 presents the level that capabilities were upgraded in three case companies.

Table 9.2 Cross-case summary of the upgrading of investment capabilities

Case/ capabilities level	Aircraft engine case	Truck case	Auto component case
Operational	Minor upgrading	Minor upgrading	Major upgrading
Advanced	Major upgrading	Minor upgrading	Minor upgrading
Innovative	Developed	Not developed	Not developed

In particular, the Aircraft engine case has upgraded its investment capabilities at the operational and advanced levels. In addition, innovative capabilities that permit the implementation of world-class projects have been developed. In the Truck case capabilities at operational and advanced levels have been only upgraded to a minor extent. Finally, the Auto component case has mainly upgraded investment capabilities at the operational level, and to a minor extent at the advanced level. Hence, it can be argued that Aircraft engine case and Auto component cases have upgraded their capabilities most extensively, but at the different levels, namely the advanced and innovative levels in former case and operational in latter case. Upgrading of investment capabilities in the Truck case took place to a lesser extent.

Overall, when assessing the upgrading of capabilities across the cases, the most important results occurred at the operational and advanced levels. The upgrading of these types of technological capabilities has been perceived as one of the most important outcome of JV learning by all Russian JV parent firms. The most typical examples of the upgrading of investment capabilities were routines related to the integration of quality standards, more efficient planning of plant and workshop lay out, equipment procurement, search and assessment of latest technologies, project scheduling, and large-scale plant expansion.

Upgrading of production capabilities

The upgrading of production capabilities was the most important outcome of JV learning for all case companies. Table 9.3 presents the comparative analysis of how production capabilities were developed in the Aircraft engine, Truck and Auto component case companies.

Table 9.3 Cross-case summary of the upgrading of production capabilities

Production capabilities/ Capabilities level	Aircraft engine case		Truck case		Auto component case	
	Process and production organization	Product-centered	Process and production organization	Product-centered	Process and production organization	Product-centered
Operational	Major upgrading	No upgrading	Minor upgrading	No upgrading	Major upgrading	Minor upgrading
Advanced	Major upgrading	Minor upgrading	Minor upgrading	No upgrading	Minor upgrading	No upgrading
Innovative	Developed	Developed	No upgrading	No upgrading	No upgrading	No upgrading

As Table 9.3 illustrates, the most extensive upgrading took place in production process capabilities. These were upgraded in all three cases at the operational and advanced level to minor/ major extents, and developed up to the innovative level in the Aircraft engine case. In contrast, product-centered capabilities were upgraded to a considerably lesser extent in all three cases. The most typical examples of upgraded production process capabilities were routines in the area of quality management, production scheduling, the organization of production lines, planning and control systems design and implementation, production logistics, and production automation. In all case companies the respondents emphasized the significance of improvements in production culture achieved through JV learning. Examples of upgraded product-centered capabilities were improvements in recipes for materials and some elements of product design.

It is particularly important to discuss the rationales behind the differences in the upgrading of process and product capabilities. Indeed, the learning intent and outcomes in process-related capabilities were significantly stronger in all case companies as well as for those who were interviewed for survey purposes. There are several reasons for this. First, production process capabilities are the weakest area of Russian JV parent firms because they were poorly developed during the Soviet era when all industrial enterprises suffered from excessive capacity and highly inefficient organization of production. Moreover, after the start of the reforms, scarcity of resources in Russian enterprises did not allow technologies to upgrade and the modernization of

production sites. For this reason, there was a crucial need for improvements in this functional area, and the JV provided a good opportunity to stimulate its upgrading.

Second, the knowledge related to the optimization of the production process was not of a strategic nature for the foreign JV parents, and thus, was readily shared within the JV relationship. Furthermore, foreign parents often initiated the provision of training relating to the manufacturing process for Russian parent employees as they aimed to ensure the capability of Russian parents to implement JV operations at the required level. Thus, learning in respect of production process capabilities took place to a larger extent compared to other functional areas of capabilities, and took place at all levels, including operational, advanced and innovative.

Third, the scope of all JVs has implied a production operation that, consequently, provided excellent opportunities for learning about process manufacturing technology. However, only a few JVs, including the Aircraft engine case, were also established for the purpose of mutual product development. The findings of the pilot survey and case investigation clearly show that in a majority of JVs the foreign parent contributed product technology, and therefore the product-related knowledge did not spill over to Russian parent. Indeed, as it has been previously discussed, it was only in the Aircraft engine case that product-related capabilities improved at advanced and innovative levels. In the Truck and the Auto component cases the production product capabilities in JV product were not significantly upgraded because the scope of JV did not include product development activities.

Moreover, it is important to point to the fact that product-related capabilities can be enhanced through improvements in process-related capabilities. Indeed, the upgrading of production process capabilities that are manifested in more efficient production organization lead to the enhancement of product quality and a decrease of production cost which, in turn, increases the competitiveness of the Russian parent firms' products. This observation explains the findings of the pilot survey that show that a majority of respondents reported that an upgrading of product capabilities took place, but to a lesser extent than production process capabilities. However, the case investigation allowed the underlying logic behind these results to be revealed, which is an important contribution to complement existing knowledge.

Upgrading of linkages capabilities upgrading

This research finds that the upgrading of linkages capabilities took place in a similar manner in all Russian JV parent firms and was related to the expansion of their net relationships by building new linkages with foreign actors, such as suppliers, R&D organizations, and customers. Indeed, these linkages were perceived as being important by Russian firms as they enabled their development to be supported by assuring the supply of high quality components and materials, as well as receiving assistance for the development of innovative products. Moreover, to a minor extent, the JV experience pushed Russian JV parents to expand the scope of cooperation with local actors and initiate more close cooperation with suppliers and customers for the development of quality products. Table 9.4 clearly shows that the level of upgrading of linkages capabilities is similar across cases.

Table 9.4 Cross-case summary of the upgrading of linkages capabilities

Capability type/level	Aircraft engine case	Truck case	Auto component case
Operational	No upgrading	No upgrading	No upgrading
Advanced	Minor upgrading	Minor upgrading	Minor upgrading
Innovative	Minor upgrading	Minor upgrading	Minor upgrading

There are several reasons for these results that are worthy of mention. The first is related to the fact that linkages capabilities on a domestic scale were relatively well developed in the Russian parent firms prior to the JV being established. Indeed, these capabilities were essential for the functioning of enterprise in Soviet times because firms were highly dependent on other actors for the implementation of innovative activities (see Chapter 8). Despite the fact that after the start of reforms many of the existing relationships either disappeared or changed their nature, Russian JV parent firms were able to re-establish relationships with local actors as the capability and traditions to establish relationships were preserved from the Soviet era. However, despite the existence of linkages with local actors, they were not sufficient to support the innovative activities of Russian JV parent firms. In particular, a lack of high quality suppliers and R&D organizations capable of providing assistance in product and process development activities

represented an obstacle to Russian parent firms operating in the new market conditions. For this reason, learning about foreign linkages was highly valuable for Russian parent firms as a means to achieve their development goals, and JVs were considered an excellent source for the acquisition of this type of knowledge. Indeed, it was essential for Russian firms to interact with other economic actors outside their national boundaries, and learning through JVs allowed them to access 'know-who' from developed countries.

The second reason for the successful upgrading of linkage capabilities is, as described in the previous case, by nature this is non strategic knowledge that foreign parents are freely willing to share. In addition, the scope of activities in JV implies the sharing of knowledge about the networks of JV partners, and as the survey results also reveal, the aim of the Russian parents was to learn about foreign parent linkages abroad, whereas foreign parents valued Russian parent relationships with local suppliers, customers and authorities.

Summary of the upgrading of technological capabilities

The detailed analysis of the upgrading of capabilities in different functional areas shows that the most extensive and important outcome is the upgrading of production process and investment capabilities. The upgrading of linkages capabilities, although perceived as important, took place in a narrower sense. All respondents, including those interviewed for the purposes of the survey, continuously emphasized the value of these improvements. It is noteworthy that these outcomes are similar to those reported by Inkpen, (1996) and Inkpen and Crossan, (1995) relating to a GM-Toyota JV, which stress that there is some degree of similarity in learning outcomes despite the difference in national context.

This discussion outlined above provides an answer to the first research sub-question regarding the nature of upgrading of technological capabilities as an outcome of JV learning and supports the formulation of the second proposition as follows:

Proposition 1A: The upgrading of capabilities relating to investment and to production process are perceived as the most important outcome of JV learning by Russian parent firms, and occur to the largest extent.

The differences as well as similarities in upgrading across functional types of capabilities are attributable to three main causes. First, all Russian enterprises have inherited similar problems from the Soviet time, namely inefficient organization of production, a poor production culture, and weak linkages with foreign actors. Thus, they have similar upgrading needs, which explains the logic behind the similar manner of upgrading in investment, production process and linkages capabilities across all the companies that participated in the research. Second, foreign parent firms have strong incentives to share knowledge that generates these types of upgrading of capabilities because it directly influences the way JVs are operated by Russian parents. Lastly, the scope of JV operations implies mutual cooperation regarding the organization of production, which provides a good platform for learning-by-doing the ways to build and operate advanced production facilities.

9.1.1.2. Cross case analysis of the upgrading of technological capabilities

It is also of interest to discuss the main rationales behind the differences in the extent of upgraded capabilities across the case companies.

As shown in Table 9.1, upgrading took place mainly at the adaptive and advanced level, and only the Aircraft Engine case was able to enhance further its capabilities up to the innovative level, thereby permitting the development and manufacture of world-class products. The rationale for these results is similar to those discussed in the previous sections that explain the cross-functional differences in the upgrading of capabilities. First, one of the important influencing factors is the JV scope when JV of Aircraft Engine case has been organized for the implementation of world class product development and manufacturing whereas JVs of Truck

and Auto component case companies implied only product adaptation (Truck case) and manufacturing activities (Truck case and Auto component case) of products for domestic and CIS markets. The scope of the venture defines which operations are implemented together by parent firms and, most importantly, nature of learning opportunities (Jormanainen, 2008). Moreover, the scope defines the intensity of the interaction between the parents and the JV and the degree of strategic integration between JV and parents. For example, as table 5.1 illustrates, the Aircraft engine case shows the presence of the most intense and deep cooperation, which resulted in good learning outcomes.

Second, the threshold level of capabilities existing in the Russian firms prior to the JV influenced the level at which capabilities are upgraded through JV learning. For example, the success of the Aircraft engine case took place due to the fact that the Company had relatively well developed capabilities prior the JV, which in turn, resulted in cooperation at the innovative level for the development of a world class product. This level of development is attributable, partly, to the fact that the aviation industry was well developed in the Soviet period. Indeed, this study finds that the development of this industrial sector was the priority of the Soviet government and significant resources were allocated to support innovative activities. In other words, the Aircraft engine case had a higher absorptive capacity, which allowed the initiation of the JV to take place on a parity basis and thereby provided a broad scope of learning opportunities. The Aircraft Engine case had also successfully undergone the first phases of restructuring during the first years after transition. At the same time, the Auto component case, although classified as successful enterprise that recovered well from the negative consequences of reform, did not yet have top class capabilities, and could not cooperate with a foreign partner at the same level. Indeed, the car industry received significantly less attention in Soviet times when Soviet enterprises produced few world-class innovations.

Third, the presence and extent of learning outcomes are influenced by the fact that the cooperation in JVs provided a good opportunity for learning-by-doing through various means such as visits to JV sites, working in teams, and personnel rotation. The parent firms acquired knowledge by implementing new practices together with the partner, and by being involved in new ways of organizing production. They had an opportunity to clearly see the benefits from the

application of knowledge being brought in by the parent, which motivated them to transfer and apply the same practices to their own enterprises. The important value of ‘learning-by-doing’ was to overcome the psychological resistance to change and to new practices that were different from those that had existed for decades. As an example, a respondent from the Auto component case emphasized:

When implementing ISO standards, the employees who saw how it has been done in the JV, were involved. The direct experience from the JV has greatly assisted a better understanding of the new process, new quality system.

Another respondent also from the Auto component case remarked:

When you are looking at the practical solution of a problem, you understand them much quicker.

Therefore, the JV represented a good opportunity for the Russian JV firms to upgrade their technological capabilities. However, there are important precondition such as a threshold level of capabilities in order to be able to understand and adopt quickly the acquired advanced knowledge, the scope of the JV with regard to the opportunity to learning in various fields, and the intensity of interaction. This enriches the answer to the first sub-question and supports the formulation of the third proposition as follows:

Proposition 1B: The extent and manner of the upgrading of technological capabilities depends largely on the scope of JV activities, the level of the Russian JV parent firms’ development both prior to and after the transition period, as well as the intensity of interaction between the parents and JV.

9.1.2. Upgrading of managerial capabilities

Managerial capabilities were upgraded in all case companies in a similar manner. Upgrading was related to an increase in efficiency of management routines needed for the optimization of

organizational structure, planning processes, personnel practices, and organization control. Most importantly, the research reveals that learning intent in this area was closely aligned with the strategic objectives of all three cases companies, which was to become competitive, and this required the development of a flexible organizational structure and efficient internal coordination between departments in order to ensure successful development. However, the learning in this area was initiated only in the process of cooperation rather than being the explicit objective prior to establishing the JV. This was particularly applicable to the development of cooperative capabilities relating to ways to better manage partnership with foreign firms. Hence, it can be argued that managerial capabilities were upgraded to lesser extent than technological capabilities, but the improvements were perceived as important by managers in Russian parent firms. Therefore, I formulate the following proposition which is the answer for the second research sub-question as:

Proposition 1C: Upgrading of managerial capabilities takes place to a moderate extent in Russian JV parent firms and primarily in the area of strategic management.

The findings provide an opportunity to reflect upon previous studies that argue that local firms learn how to operate in market economies, such as e.g. importance of marketing or strategic planning through the JVs. Indeed, successful development in the case companies and the presence of a clear strategic motivation behind the JV in both the case and pilot survey firms shows that Russian parents have developed the managerial capabilities necessary to operate under new economic conditions. As one of the respondents remarked:

We use the same approaches to management as the rest of the world.

Indeed, in none of the Russian parent firms were learning outcomes related to marketing. Moreover, the survey results indicate that the presence of marketing competences held by the Russian parent was one of the important partner selection criteria for foreign firms. Importantly, this argument also demonstrates the value of conducting research during the latest stage of reforms as it enables changes that took place in the course of transition to be illustrated.

As mentioned earlier, the upgrading of capabilities is not yet a final outcome of learning and, hence, I next discuss how Russian parent firms benefited from upgraded capabilities in terms of the modernization, restructuring and competitiveness.

9.1.3. Implications of the upgrading of capabilities for the modernization, restructuring and competitiveness of Russian parent firms

The empirical evidence shows that in all three cases the parent firms consciously sought to capitalize on the capabilities improved through JV in various ways. The assessment of results relating to these efforts across cases reveals several common types of beneficial outcomes.

First, the upgrading of production process and investment capabilities generated improvements in manufacturing performance; these were manifested, for example, in more efficient capacity utilization, reduced inventory and manufacturing cycle times, decreased defect rates, which, in turn, is resulted in increased labor and capital productivities, lower overall production costs and increased product quality. These improvements underlie the process of modernization and enhance its speed and scale. Moreover, they are tightly aligned to strategic objectives relating to improved competitiveness by offering higher quality products at lower costs. Also, in those cases where there was the technological overlap between the scope of JV and Russian parent firms operations (as in the case of Aircraft engine case and the Auto component case), the benefits arose from the application of product-related knowledge concerning the development of similar types of products developed independently from the foreign parent.

Second, there were benefits from the upgrading of linkages capabilities, which related to access to R&D services and high quality supply not available in Russia for the product development and production. The offering to the market of new high quality products had a direct impact on the competitiveness of Russian parent firms, and also, enhanced the revenues, which in turn allowed further improvements to be implemented and innovative activities to be conducted.

Third, the upgrading of managerial capabilities enabled to increase the efficiency of the system of management operations and to optimize the organizational structure and processes which were vital to the implementation of organizational restructuring. These improvements enabled fixed non-production costs to be decreased and a greater spend on resources for development. Moreover, the development of cooperative capabilities stimulated the initiation of new partnerships with other local and foreign firms for cooperation relating to new product development and production on the principles of sharing various resources and risks. Again, these activities have direct implications for the competitiveness, growth and revenue generation of Russian parent firms. Hence, I propose that:

Proposition 2 The upgrading of technological and managerial capabilities through JV learning stimulates large-scale modernization and strategic restructuring of Russian JV parent firms.

However, despite the upgrading of capabilities through JVs, at present, they are only sufficient to enhance the competitiveness of Russian parent firms in the Russian and CIS market. Indeed, the product and process technologies used in JVs, although advanced, in the majority of cases have not yet achieved world-class level. Furthermore, the level of technological development of the majority of Russian firms, with notable exceptions such as the Aircraft engine case, still lags behind their western rivals. This conclusion is consistent with the survey results in which the majority of participants responded that JV products are oriented towards domestic and CIS markets. Therefore,

Proposition 3 The upgrading of technological and managerial capabilities through JV learning enhances the competitiveness of Russian JV parent firms in the Russian and CIS markets.

Following from the above, the research finds that learning through JVs has important performance implications for Russian parent firms and this learning is used as a strategic tool to implement modernization, restructuring and the sustainable competitive advantage used by Russian parent firm at the latest stage of organizational transformation. However, it is important to stress that this tool is complementary to the other strategies developed by Russian parent firms

to accomplish their organizational objectives. Moreover, from the strategy perspective, the financial benefits arising from cooperation in a JV are also important outcome because they allow further development plans requiring large investment to be implemented and, thus, they are complementary to the learning benefits. It has been argued that in order to develop a competitive advantage firm needs to accumulate all types of various resources including financial, technological, physical and knowledge-based, and each of these types of resources complements the others (Teece, 1998).

To summarize, this section outlines the concrete implications of JV learning for Russian parent firms, and provides a good illustration of the wide spectrum of these implications. These were captured due to the methodological approach applied to this research. It can be said that learning through JV increases the innovativeness of Russian parent firms because, as argued elsewhere, even small changes to process and product technologies as well as to organizational structures could be considered as innovation (Lall, 1992)

This research also reveals that learning through JVs is seriously undermined by organizational and external factors. I next summarize the research findings regarding constraints to JV learning.

9.1.4. Organizational and external obstacles to learning through JVs

An important finding is that the extent of beneficial outcomes resulting from JV learning is constrained by two types of obstacle. Interestingly, there was conformity in the opinions amongst respondents in regard to the presence and nature of these obstacles. The first type of obstacle originates from organizational factors relating to the Russian parent that serve to inhibit the integration and application of knowledge acquired through the JV. In other words, although acquisition and transfer take place at the top management level, and the value of JV knowledge is understood at the individual level, the problem arises with the integration of this knowledge into the firm's operations. The most important factors influencing knowledge integration are rigid organizational structure, routines, and an organizational culture inherited from Soviet period,

each of which do not support the implementation of the changes required for new knowledge to be applied. In addition, a lack of knowledge management mechanisms inhibits the efficient diffusion of knowledge and its application at the broad organizational level. Hence, this research argues that Russian parent firms face serious organizational inertia that undermines the implementation of changes associated with the integration of processes of new knowledge and its beneficial application. In theoretical terms, although the potential absorptive capacity is relatively well-developed, Russian parent firms have not yet developed the absorptive capacity that permits the benefits of learning through a JV to be maximized. Following this argument I propose:

Proposition 4: The extent of the integration and beneficial application of knowledge acquired by Russian firms through a JV is seriously constrained by internal organizational factors inherited from the Soviet period.

These findings lead to the important conclusion that the strategies of Russian parent firms relating to the acquisition of JV knowledge should be supported by an internal effort oriented towards improvements in organizational structure, mechanisms and routines that, in turn, support the conversion of individual learning into organizational learning.

The second type of obstacle that serves to constrain the benefits of JV learning for Russian parent firms is rooted in the external environment. This study argues that the System of Innovation approach is particularly suitable for explaining the influence of these factors as it allows a holistic understanding of how firms interact with their environment, and to understand the forces that have an impact on their operations. Formal and informal institutions have not efficiently implemented the transition from a Soviet Science and Technology (S&T) System to a conventional System of Innovation (SI) that is suitable for supporting growth and innovativeness in a market economy. Specifically, the empirical evidence shows that there are two main problems associated with the Russian SI. The first is that each individual sector of SI does not function efficiently. In particular, the R&D sector fails to provide competitive services that support the innovation activities of Russian enterprises, the education sector does not provide a sufficient supply of graduates, especially in technical specialties, and finally, the industrial sector technologically lags behind western level and local suppliers cannot guarantee high quality

materials for the manufacture of innovative products. Second, after the transformation of a S&T system into a Russian SI a serious distortion of the linkages between R&D, education and firm sectors occurred. This resulted in a situation whereby local enterprises were locked-in to outdated technologies and could not find sufficient support for their development from other economic actors. Thus, although advanced knowledge has been acquired by Russian parent firms through JVs, this often has limited application to the firm due to the influence of macro-level factors constraining the development of their innovation. Following this argument, I propose:

Proposition 5: The extent of the beneficial application of knowledge acquired by Russian firms through a JV is seriously constrained by external factors associated with the inefficient functioning of the Russian Innovation System.

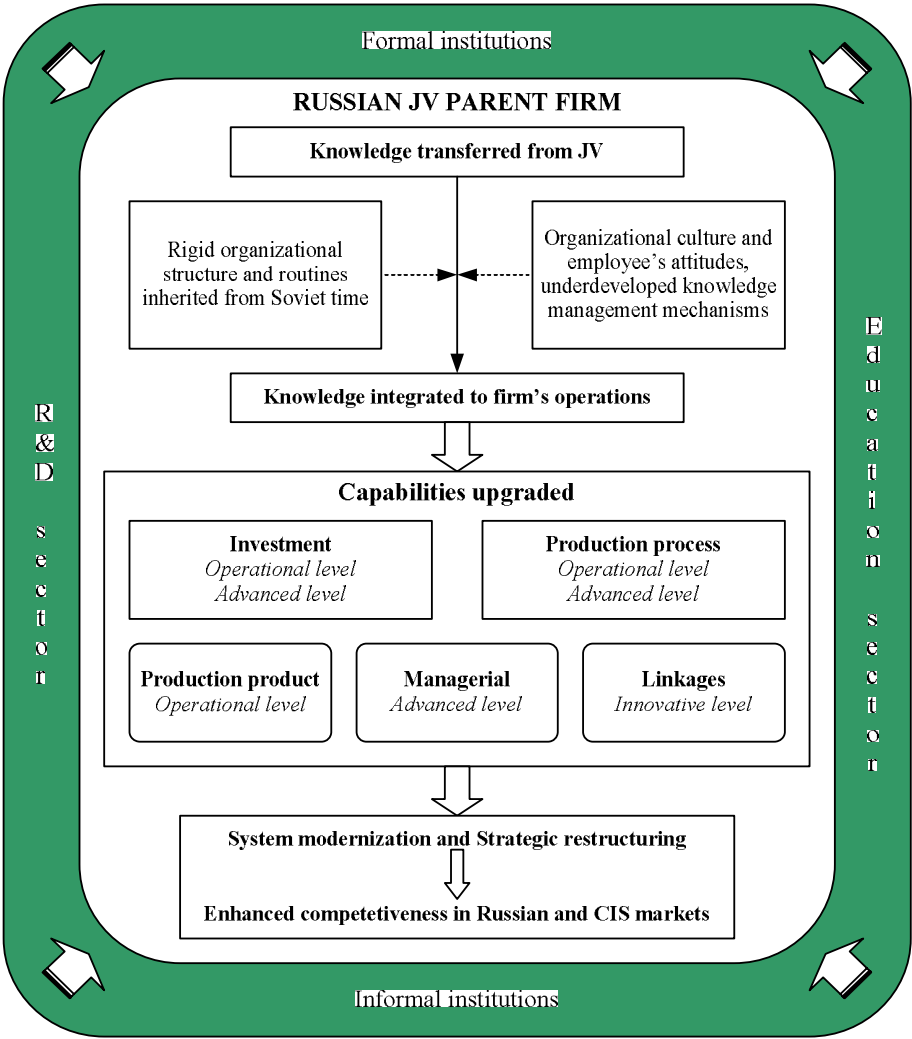
To address the problem described above local government need to develop consistent domestic policies supporting industrial development and complement these with additional policies promoting FDI. Indeed, FDI policies alone are not sufficient to generate domestic development, and this study clearly illustrates how the benefits arising from partnering with foreign firms are undermined by a lack of domestic mechanisms that support the maximization of these benefits.

9.2. Empirically grounded framework of the study

The detailed discussion about empirical findings and formulated propositions provide evidence that learning through JVs has many different implications for Russian parent firms and represents a strategic tool for the achievement of development goals. Furthermore, the findings show that there are organizational and macro-level factors that have a strong impact on the extent of the learning benefits. An important issue is that these findings stress that learning through JVs is a complex and multi-level phenomenon and a thorough understanding of this phenomenon requires the integration of several organizational and macro-level theoretical perspective as well as a combination of several types of empirical research methods for data collection. Thus, it is useful and important to illustrate through graphical means the results of the study in the form of an

empirical framework. Figure 9.1 presents the framework; it presents the main findings that have been summarized in eight propositions and presented in this chapter.

Figure 9.1 Empirically grounded framework of the study



Chapter 10 Conclusions

This chapter presents the main conclusions, contributions, and limitations of the thesis. In the final section, the implications for future research are discussed.

10.1. Main conclusions of the research

Learning in international JVs has long been a popular topic in academic research and studied from different perspectives and in different national contexts. Further, the transition economies in Central and Eastern Europe have gained significant attention during last two decades because they represent a good opportunity for the testing theories developed in western context (Meyer and Peng, 2005). However, the majority of empirical studies have been conducted using evidence collected in the early stages of transition, whereas in the past several years, coinciding with a decrease in research of transition economies, relatively few studies have investigated the processes that took place at the latest stage of economic transformation. Hence, this research presents the evidence of outcomes of learning through JVs, at the parent firm level, using recently acquired empirical data from Russia, and highlights the novel elements attributable to the progress in the implementation of transition.

The data collection process was guided by theoretical assumptions derived by the integration of premises from the organizational and inter-organizational learning, capability, innovation, and strategy perspectives, which resulted in the development of an empirically grounded framework indicating the main research findings. The application of an innovative research design combining a pilot survey of JV parent firms (supplemented by interviews and documents) and an in-depth examination of three Russian JV parents from the aircraft engine building, automotive and auto component sectors allowed a detailed and holistic examination of Russian parent firms' learning outcomes acquired through a JV, as well as for the better understanding of the nature of JV operations in Russia during the latest stage of the transition period.

The thesis argues that the application of comprehensive measurements for the assessment of learning outcomes beyond financial or productivity measures enables a vast variety of existing outcomes to be grasped. Indeed, the examination of the implications of learning through a JV in terms of upgrading of investment, production, linkages and managerial capabilities, and the influence of this upgrading on modernization, restructuring and the competitiveness of Russian parent firms provides a thorough understanding of the value of this kind of learning for Russian parent firms.

In particular, the research finds that the most extensive outcomes from JV learning occurred in the upgrading of capabilities of Russian parent firms relating to the production process and investment, and these results were perceived as one the most important benefits of learning through JVs. The upgrading of linkages capabilities were also considered a highly beneficial outcome, but this took place to a somewhat lesser extent and was related to the expansion of business relationships by building links with foreign suppliers, R&D organizations and customers. Managerial capabilities, including cooperation were also upgraded in the area of strategic management, but were perceived to be less important than the upgrading of technological capabilities. Product-centered capabilities were not extensively upgraded through JV learning. However, the upgrading in product qualities and characteristics took place through improvements in production processes.

The research suggests there were several rationales behind the differences in the upgrading of capabilities. First, the Russian firms undertook conscious effort to upgrade those capabilities which are the most underdeveloped, but vitally required for modernization, restructuring and long-term competitiveness. Currently, an increase in efficiency of manufacturing process and enhancement of product quality is the main strategic objective of Russian parent firms and this explains the importance of the upgrading of production processes and investment capabilities in the participating firms. Second, as a JV offered close access to the knowledge held by a foreign parent and an opportunity for learning-by-doing, it represented the best source for knowledge acquisition in the area of production processes and investment capabilities, which to a large extent is tacit in nature. Third, the scope of JVs and the activities mutually implemented by parents influenced the nature of learning outcomes. Indeed, as the level of technologies used in

JVs was often not at the world leading level, and product technology was readily brought in by foreign parents, there was only a minor upgrading in the area of product technology. However, the capabilities related to the organization of efficient operation and production were extensively upgraded because, on one hand, this was the area that foreign parents were interested in sharing knowledge and, on the other, was perceived as highly valuable for the Russian parent firms due to the fact that these capabilities were poorly developed during Soviet time and further eroded in the course of the transition period.

Furthermore, the research specifies the long-term implications attributable to the each type of upgrading of capability. In particular, capabilities in the area of production process and investment functions generated improvements in manufacturing performance manifested in increased labor and capital productivity, lower overall production cost as well as the implementation of large-scale modernization of production facilities. Improvements in manufacturing performance were aligned to the strategic objectives to speed up the restructuring process and sustainable competitive advantage, which represents the final stage of organizational transformation. Further, improved linkages capabilities were recognized as being highly useful for the development of new products by Russian parent companies, thus requiring the ensured supply of high quality components from foreign and domestic suppliers as well as assistance in the product development from foreign R&D organizations. The manufacturing of new high quality products, in turn, enabled the competitive advantage in Russian and CIS markets to be strengthened. Lastly, the upgrading of managerial capabilities increased the efficiency of management system operations and improvements in the organizational structure, which represented an important part of strategic restructuring. This also resulted in the more efficient overall organization of Russian parent firms operations and in decreased fixed non-production costs.

The explorative approach in data collection enabled important factors inhibiting the extent of learning outcomes that originated from inside and outside Russian parent firms to be discovered. Organizational constraints were connected with the inertia manifested in slow and costly changes of rigid organizational culture, mechanisms and structure that the Russian parent firms inherited from Soviet times, which inhibited the implementation of changes supporting the integration and

application of new skills and routines acquired through JV learning. Indeed, the advanced techniques and systems learnt through JVs could not be applied in old workshops by the employees who did not have a good understanding about, for example, quality management practices. As most of the Russian parent firms were large vertical holdings, often the application of knowledge took place only in new organizational units; here everything is built from scratch. The JV experience, however, represented an efficient means to enhance absorptive capacity and overcome the inertia. The new practices and attitudes exhibited in the JV to the employees of parent firms enabled these employees to comprehend better their meaning and application. Importantly, the research finds many cases in which foreign knowledge and experience were highly appreciated by the employees of Russian parent firms, who perceived this as a good source of learning.

In addition to the above strong negative factors rooted in the external environment negatively influenced the extent of the beneficial outcomes from JV learning. These factors are attributable to the inefficient functioning of the Russian Innovation System that failed to support sustainable industrial development in all branches and sectors of economies after the start of reforms. The transition from a Soviet S&T system did not result in a well functioning western type of System of Innovation, but rather a hybrid system lacking strong links between various actors and not properly stimulating the development of technological capabilities in local firms. Although, in general, some Russian companies have succeeded in undergoing processes of technological upgrading using various mechanisms, including JVs, and aim at building their competitive strength, they have not received sufficient support for their development from other economic actors. The most serious problems relate to the shortage of high quality suppliers, the inability of R&D organizations to provide services in a cost/time efficient manner, and lack of technical personnel at all levels. This study stresses that although the functions and roles of all actors in System of Innovation were defined by formal rules and policies after the start of reforms, informal institutions have taken considerably longer to change, and in many instances these have not been adapted in an efficient manner.

Overall, the study argues that the Russian parent firms used learning through a JV as a strategic tool to achieve long-term development and a sustainable competitive advantage. However, it is

important to emphasize that this strategic tool was not the only mechanism; this was complemented by other strategies to accomplish the organizational objectives to achieve long-term competitiveness and growth.

10.2. Contributions

10.2.1. Theoretical contributions

This study has broad implications for International Business (IB) research: it examines issues that have long been in the focus of IB scholars, but does so by addressing issues that were absent in previous studies. The main theoretical contribution stems from the fact that the study provides a thorough understanding of learning outcomes achieved through a JV for local JV parent firms in Russia. In doing so it utilizes concepts developed by bridging several streams of relevant literature and conceptualizing these in the operational terms applicable to the context of the Russian economy. Previous studies examining learning in JVs in transition economies have mainly focused on an examination of the outcomes of learning at a JV level (Lyles and Salk, 1996; Tsang et al., 2004), or at the foreign parent level (Li, 2006), however this research extends the existing knowledge by concerning the implications of learning through JVs at the parent firm level. It illustrates the comprehensive application of subjective measures for capturing the short- and long-term implications and shows that assessing a change in specific types of capabilities of JV parents and the impact of this change on their strategic development and competitiveness enable the nature and extent of learning through JV outcomes to be properly comprehended. Moreover, the thesis illustrates the application of this framework in the Russian context and provides a detailed understanding of the outcomes of learning through JVs at the local parent firm level by developing an empirically grounded framework.

Furthermore, this thesis reveals the importance of the incorporation of different levels of analysis in JV learning research by illustrating the strong influence of organizational and macro-level factors on learning outcomes for JV parent firms. The study stresses that even when Russian

parent firms succeed in successfully acquiring knowledge through a JV, there it is a huge challenge to integrate and apply this knowledge in their own organization. In other words, although the potential absorptive capacity is present and knowledge is acquired from JVs, the important problem is that the absorptive capacity is yet not appropriately developed in parent firms and the integration of acquired knowledge does not take place efficiently (Zahra and George, 2002).

In addition to the above, the research enhances knowledge on FDI spillovers by illustrating the concrete outcomes that local firms in Russia gain by learning from their foreign partners. The results of studies on FDI spillovers to date are inconclusive and the impact of learning from foreign firms has been measured by changes of productivity (Blomström and Sjöholm, 1999; Yudaeva et al., 2003; Javorcik and Spatareanu, 2008). This research provides evidence that changes in productivity do not shed light on the full spectrum of outcomes of learning by Russian parent firms from their partners, and therefore cannot capture either the intermediate improvements taking place in different organization units or the strategic implications for the long-term development of Russian firms. Indeed, the findings of this study show that the acquired knowledge is applied gradually in the local firms, which results in significant changes in some units, but this is less extensive at an organization level.

The study enriches the strategy research by the examining how the strategy of partnering with foreign firms is used as a strategic tool by local firms in Russia for the achievement of their own strategic goals and objectives oriented towards the upgrading of their technological base, and the enhancement of their overall competitiveness (Hamel et al., 1989; Hamel, 1991; Dussauge et al., 2000).

Last, but not the least, this research improves the knowledge about the nature of JVs in Russia. It finds that Russian JVs are mostly of the co-specialization type, in which the most important reason for establishing the JV is the strengthening of the long-term competitive advantages of parent firms by sharing resources and risks. Hence, the study argues that in transition economies 'learning' JVs are not as popular as it is believed (Khanna et al., 1998; Grant and Baden-Fuller, 2002). However, although learning is not an implicit objective for establishing JVs, Russian

parent firms learn through the JV experience and gain a number of important benefits. Importantly, this study reveals that most Russian firms that initiate JVs with foreign firms are the most successful Russian industrial enterprises possessing a relatively high threshold of technological capabilities. The presence of technological capabilities in Russian firms was found as being the important criteria for selection of partner by foreign firms, and the incentive for establishing cooperation on a basis of parity.

Of note, is that the upgrading of managerial and marketing capabilities was not perceived as being important by Russian parents, which contradicts previous findings that argue that managerial and marketing skills and qualifications represent a problem in transition economies in general, and in Russia in particular (Lyles and Salk, 1996; Peng, 2000; Lane et al., 2001; Dixon, 2006), and that there is a need for managerial training through the assistance of foreign firms (Child and Markoczy, 1993). Indeed, this study illustrates that those Russian enterprises entering JVs have a clear strategic orientation and professional managerial teams that have the skills and knowledge to operate in the market economy. The very fact that companies use JVs as a strategic tool indicates the presence of managerial competences. Moreover, the pilot survey results show that marketing channels and expertise are one of the major attractive assets of local firms, representing an incentive for foreign firms to establish JVs. This difference in the results between this study and prior research is likely to be attributable to at least two factors. One reason is that the study is conducted at the latest phase of transition, by which time local companies have had the time and opportunity to accumulate the competences needed for operating in the market economy. The other reason stems from fact that the JVs established with local firms are the most advanced JV and represent the ‘new’ sector of Russian industry.

10.2.2. Methodological contribution

This study makes an important methodological contribution to IB research. Contrary to the main body of literature in this field, this research takes a multiple-stage methodological approach using a combination of quantitative and qualitative methods (Hurmerinta-Peltomäki and Nummela,

2004; Marschan-Piekkari and Welch, 2004). The application of this research design enabled methodological and contextual challenges to be overcome and the collection of rich empirical data for a thorough and valid explanation of the implications of learning through a JV for Russian parent firms. Indeed, the information gathered at each stage of the research contributed to the cumulative understanding of the phenomenon studied, and also to the knowledge of which measurements should be applied in order that the topic is investigated in the rigorous manner. Of importance is that the empirical approach provided the flexibility to discover relevant issues that were not initially included in the original, research design, but which then permitted these issues to emerge and make a good contribution to the previous literature on JV learning.

Overall, this study shows that mixed methods are particularly suitable for conducting research on transition economies, where information accessible to the researchers is often incomplete and ambiguous. The research well illustrates how the different data collection methods can be applied and emphasizes their value to the overall research findings. This extends the scholarly understanding and awareness of the methodological options that are available to conduct better quality research, and to address those gaps in the previous studies that are due to methodological shortcomings.

10.2.3. Managerial contributions

This work examines the issues that are of high interest to managers who aim to properly comprehend the outcomes of the use of strategic tools. Joint Ventures have long been assumed to be a potential source of various types of knowledge not available to parent firms by other means, and this study yields some new empirically based conclusions for firms that are already engaged in JVs or only planning to form JVs.

Specifically, the thesis provides Russian managers with a better understanding that learning from foreign firms through JVs represents an important source for the acquisition of the advanced knowledge necessary for the upgrading and development of Russian firms. The results outline, in

specific and operational terms, how various types of benefits can be accrued and emphasize the value of these benefits for their long-term growth. The emphasis on capabilities building as an outcome of learning enables Russian managers to develop more focused and concrete strategic tools that are oriented towards their maximization throughout the course of cooperation with foreign firms in JVs.

Furthermore, because this research sheds light on the constraints of the integration and application of JV knowledge that seriously limits the extent of the outcomes from JV learning, this understanding permits the managers to develop appropriate strategies that enable them to overcome some of these constraints. Also of importance, is that the findings of this study draw attention to the value of a holistic approach to organizational development. In this regard the findings show that, even if the strategy of knowledge acquisition through JVs and its transfer back to the parent firms is implemented successfully at the individual level of parent firm managers involved in JV operations, this might not result in the positive outcome at the parent organization level due to the absence of organizational mechanisms and structures supporting knowledge integration and application. Perhaps, there needs to be a greater recognition of the benefits of knowledge management and its role in organizational development. The core of the argument here is that managers should undertake a consistent approach towards knowledge management, thereby ensuring the presence of the tools necessary for successful implementation of all stages of the learning process, including knowledge acquisition, transfer, assimilation and application. Managers should have a clear understanding of the obstacles undermining successful learning at the beginning of JV formation in order to achieve goals and fulfill the expectations attached to learning through JVs possibilities.

This thesis also offers some valuable insights to western managers working with Russian companies in JVs. In particular, the findings illustrate the implications of sharing knowledge with local rivals which allows for more informed decisions regarding the extent and nature of cooperation which will be beneficial for their long-term competitiveness in the Russian market. It provides western managers with an understanding of the difficulties their partners encounter in the learning process.

10.2.4. Policy contributions

The research also has significant policy contributions. First, it enhances the understanding of policy makers regarding the scale of JVs in manufacturing sectors in Russia, the rationales for their establishment and their long-term benefits for the competitiveness and growth of Russian firms. This is particularly useful for the development of domestic and FDI policies. Indeed, previous studies, e.g. Wright et. al. (1998), suggest that a JV might represent a useful tool for restructuring and this study empirically illustrates the concrete outcomes of JVs in terms of the impact on the technological upgrading, modernization and restructuring of Russian firms.

Second, the study emphasizes that the inefficient functioning of the System of Innovation seriously limits the benefits that accrue through the implementation of a JV. Specifically, Russian firms referred to issues such as, the lack of high quality supply of raw materials and components, a weak R&D sector and the lack of technical personnel, as serious obstacles to building on the knowledge of foreign firms as a means for their own development, and the manufacture of world class products. This conclusion points to the existence of important problems in the Russian System of Innovation that served to erode the potential benefits of FDI. The study illustrates that certain domestic economic conditions need to exist in order to promote and support learning from foreign firms. In essence, local enterprises actors are structurally locked-in to inefficient institutions and outdated technologies that undermine their innovative activities. In order to address this problem, government has to develop a consistent approach to the development of domestic policies in addition to FDI policies that are able to support local companies' innovative development and long-term growth. Most importantly, the accurate implementation of this approach has to be ensured at all levels.

Finally, the study finds that the level of technological competences of local firms influences the scope of the established JVs and the extent of outcomes they are able to accrue from cooperation with foreign firms. This confirms the argument that the presence of local capabilities is crucial for the establishment of advanced operations with foreign investors. The implication of this argument for policy-makers is that in order to stimulate the establishment of the types of JV that

generate extensive benefits for local firms, efforts should be undertaken to create the appropriate conditions for the development of technological capabilities in local firms. Hence, it needs to be well understood that JVs represent only a complementary tool to the other domestic mechanisms that aim to strengthen the technological competences of local firms and industrial sectors.

10.3. Limitations

This study has several limitations. Firstly, this research bridges several streams of literature to achieve a comprehensive understanding of the research phenomenon. Therefore the depth of elaboration with regard to all of these streams varies, and for this reason may not cover every aspect within each of the approaches. The guiding principle in the theoretical development was to cover and explain the aspects of the theories that are most directly related to the studied phenomenon, and represent useful tools for their thorough understanding.

Secondly, this work uses subjective measurements for the evaluation of learning outcomes at the parent level, and does not provide support for the findings through objective means. Although this is considered as a drawback of academic research in the business field, where objectively measured outcomes are accepted to be of primary value, the analysis of the empirical evidence clearly shows that the use of the objective tools would not allow the capture of the full range of the learning benefits and shed light on for the constraints of these benefits in a Russian empirical context.

Third, although the concept of capability used in this work is also widely used in a variety of contexts, scholars have defined the existence of many types of capabilities. However, I focus only on several specific types of capabilities that appear to be the most important and appropriate for the given research setting. Furthermore participants were able to describe those capabilities that they believed to be important, and therefore further important items would have emerged from the interview data.

10.4. Future research

The conduct of the theoretical and empirical work has revealed very interesting avenues that scholars can follow in the future in order to enhance the knowledge in this research area. Indeed, the analysis of the JV literature clearly illustrated that JV learning outcomes are not yet well understood at the parent level firm. Hence this suggests several directions for the focus of further studies and Figure 2.3 provides an illustration of the potential areas for further research contributions.

First, the examination of the benefits of JV learning in both developed countries and transition economies using the objective measurements and large scale-survey could provide a better understanding of the general trends and patterns of learning outcomes at the parent firm level.

Second, there is room for cross-cultural studies where evidence can be collected from several transition economies as well as from a number of developed economies. Although the results of such studies might not be compatible between these two groups, such a broader empirical setting within each of them individually would be of high value. The implementation of research in different contextual settings allows a better understanding of the underlying rationales for the diversity in findings that are attributable to a specific context.

Third, overall, further work is needed to develop more comprehensive measurements for different national /industrial settings. The range of empirical concepts is still quite narrow and, as this study has revealed, other streams of the literature can offer a number of suitable concepts that are relevant for this area of research.

Fourth, although this study has attempted to collect evidence during the pilot survey stage from both JV parents, the purpose was primarily to acquire the underlying knowledge that supported preliminary idea behind JV activities. More critical analysis of the learning acquired through JVs with reference to both JV parent firms would be particularly interesting direction for further investigation.

Finally, it would be highly beneficial for researchers from the strategy field to implement a joint effort with scholars working in the fields of organizational learning and innovation in order to unlock the existing riddles that lay behind the competitive advantage of firms in transition economies. This offers a means for the further development of this topic.

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Appendix 1 Pilot survey questionnaire (Russian and Western parent versions)



HELSINGIN KAUPPAKORKEAKOULU
HELSINKI SCHOOL OF ECONOMICS

Высшая бизнес школа г. Хельсинки

Кафедра Международного Бизнеса

Название вашего предприятия
Размер предприятия (количество сотрудников)
Ваше имя
Номер телефона
Email
Почтовый адрес

Вы желаете получить отчет о результатах исследования? ☐ Да ☐ Нет

Пожалуйста отошлите заполненную анкету:

Irina.Jormanainen@hse.fi

Field Code

или по факсу: +358 9 431 38 880

- Целью исследования является изучить характер сотрудничества и перенятия знаний между партнерами в Российско-иностраных совместных предприятиях (СП). Наиболее важным аспектом данной работы является попытка получить ответ на вопрос о том, как перенятие знаний и навыков в процессе сотрудничества в СП повлияло на повышение конкурентоспособности фирм партнеров за пределами СП.
- Обзор охватывает Совместные Предприятия учрежденные между Российскими предприятиями и западными компаниями в производственных отраслях.
- Обзор охватывает СП основанные как на базе собственности, так и на контрактной основе. Главным критерием для включения СП в данное исследование является стратегический характер сотрудничества между партнерами, когда и Российская и западная фирмы вносят различного рода ресурсы необходимые для успешной деятельности СП и участвуют в управлении его деятельностью.
- Пожалуйста, заполняя анкету, ссылайтесь на СП учрежденное Вашей фирмой подходящее под вышеуказанные критерии.
- Ответы респондентов будут сохранены **в строгой конфиденциальности** и будут использованы только для целей данного исследования. **Индивидуальная информация не будет отражена в отчете исследования.**
- Анкета должна быть заполнена старшим ответственным лицом в Вашей фирме отвечающим за деятельность СП.
- Анкета состоит из 4-х страниц, и ее заполнение займет не более 15 минут вашего времени!

1. Общая информация о Совместном Предприятии (СП)

2. Цели Совместного Предприятия

1	2	3	4	5
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3. Цели для создания Совместного Предприятия

3.1. В какой степени нижеперечисленные факторы оказали влияние на решение создать СП:

	не оказало влияния	в малой степени	в умеренной степени	в значит. степени	абсолютно
Доступ к знаниям о технологиях по изготовлению товаров	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Доступ к знаниям о технологических процессах	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Доступ к финансовым ресурсам	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Доступ к каналам маркетинга или бренду	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Экономия масштаба	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Оптимизация цепи добавленной стоимости	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Укрепление стратегических позиций	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Другое, уточните	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.2. В какой степени Ваша фирма преследовала цель приобретения новых знаний и навыков в процессе сотрудничества в СП?

Знания и навыки вашего партнера в ниже перечисленных областях:	не оказало влияния	в малой степени	в умеренной степени	в значит. степени	абсолютно
Технологии по изготовлению товаров	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Технологические процессы	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Организация производства	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Контроль качества	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Продажи и маркетинг	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Снабжение	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Управление персоналом	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Бухгалтерский учет	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Информационные системы	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Навыки взаимсотрудничества в СП	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Наша компания не ставила задачи приобретения знаний	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.3. В какой степени по Вашему мнению фирма Вашего западного партнера преследовала цель приобретения новых знаний и навыков в процессе сотрудничества в СП?

Знания и навыки Вашего партнера в ниже перечисленных областях:	не оказало влияния	в малой степени	в умеренной степени	в значит. степени	абсолютно
Технологии по изготовлению товаров	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Технологические процессы	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Организация производства	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Контроль качества	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Продажи и маркетинг	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Снабжение	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Управление персоналом	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Бухгалтерский учет	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Информационные системы	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Знания о правилах ведения бизнеса в России	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Навыки взаимсотрудничества в СП	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Фирма Вашего партнера не ставила задачи приобретения знаний	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Информация касающаяся фирм партнеров Совместного Предприятия

4.1. Опишите пожалуйста в какой степени Ваша фирма внесла вклад в СП ниже перечисленными ресурсами:

	не оказало влияния	в малой степени	в умеренной степени	в значит. степени	абсолютно
Знания о технологиях по изготовлению товаров	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Знания о технологических процессах	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Финансовые ресурсы	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Знания в области организации производства	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Знания в области менеджмента	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Знания в области маркетинга	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Знания о правилах ведения бизнеса в России	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Другое, уточните	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.2. Опишите пожалуйста в какой степени фирма Вашего западного партнера внесла вклад в СП нижеперечисленными ресурсами:

	не оказало влияния	в малой степени	в умеренной степени	в значит. степени	абсолютно
Знания о технологиях по изготовлению товаров	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Знания о технологических процессах	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Финансовые ресурсы	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Знания в области организации производства	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Знания в области менеджмента	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Знания в области маркетинга	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Другое, уточните	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.3. В каких отношениях Ваша фирма находилась с фирмой Вашего западного партнера до создания СП?

- ☐ Не в конкурентных отношениях:
- ☐ Покупатель-продавец
 - ☐ В разных сферах бизнеса
- ☐ В конкурентных отношениях

4.4. В какой степени следующие критерии повлияли на выбор фирмы партнера в СП?

Обладание потенциальным партером ресурсами в ниже перечисленных областях:	не оказало влияния	в малой степени	в умеренной степени	в значит. степени	абсолютно
Знания в области технологий	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Знания в области менеджмента	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Финансовый капитал	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Бренд	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Каналы сбыта	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Доступ к основным поставщикам	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Репутация	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Предыдущий опыт сотрудничества	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Доверие между менеджерами ваших фирм	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Другое, укажите	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Результаты сотрудничества для деятельности фирм партнеров за пределами СП

5.1. В результате взаимосотрудничества и приобретения новых знаний в СП в какой степени Ваша фирма улучшила собственную деятельность в ниже перечисленных областях:

Знания и навыки Вашей фирмы в ниже перечисленных областях:	не оказало влияния	в малой степени	в умеренной степени	в значит. степени	абсолютно
Технологии по изготовлению товаров	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Технологические процессы	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Организация производства	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Контроль качества	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Продажи и маркетинг	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Снабжение	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Управление персоналом	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Бухгалтерский учет	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Информационные системы	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Навыки взаимосотрудничества в СП	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ваша фирма не приобрела в процессе сотрудничества в СП знаний полезных в собственной деятельности	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5.2. В результате взаимосотрудничества и приобретения новых знаний в СП в какой степени, по Вашему мнению, фирма Вашего западного партнера улучшила собственную деятельность в ниже перечисленных областях:

Знания и навыки фирмы Вашего партнера ниже перечисленных областях:	не оказало влияния	в малой степени	в умеренной степени	в значит. степени	абсолютно
Технологии по изготовлению товаров	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Технологические процессы	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Организация производства	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Контроль качества	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Продажи и маркетинг	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Снабжение	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Управление персоналом	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Бухгалтерский учет	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Информационные системы	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Знания о правилах ведения бизнеса в России	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Навыки взаимосотрудничества в СП	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Фирма Вашего партнера не приобрела в процессе сотрудничества в СП знаний полезных в ее собственной деятельности	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5.3. По Вашему мнению, знания, приобретенные в процессе сотрудничества в СП, позитивно отразились на конкурентноспособности Вашей фирмы?

- ☐ Да
☐ Нет

Спасибо за сотрудничество!

На основе результатов данного опроса несколько компаний будут выбраны для дальнейшего исследования.

☐ Пожалуйста, отметьте здесь, если Ваша фирма не желает принять участие в дальнейшем исследовании.



HELSINGIN KAUPPAKORKEAKOULU
HELSINKI SCHOOL OF ECONOMICS

Helsinki School of Economics

Department of International Business

Name of the firm
Size of the firm (employees)
Your name
Phone
Email
Postal address

Would you like to receive a summary of the results?

☐

Yes

☐

No

Please send your replies to:

Irina Jormanainen

Fax: **+358 9 431 38 880**

Email address: Irina.Jormanainen@hse.fi

Survey guidelines

- The aim of this survey is to investigate the nature of cooperation and learning processes in Russian-Western manufacturing Joint Ventures (JVs), and the impact of these processes on the partner firms' competitiveness and growth outside the JV.
- The survey covers JVs established between Russian and Western companies in manufacturing industries.
- The survey covers equity and non-equity JVs. The main criterion for the selection of JVs for the purpose of this study is the presence of strategic intent for cooperation in a JV when both Russian and Western partners contribute various resources necessary for the success of JV and participate in its management.
- When completing the questionnaire, please refer to a JV between your company and a Russian company that suits the above definition.
- Answers provided by respondents will be kept ***completely confidential*** and only be used for the purpose of this research. No individual firm's information will be presented in the results. **The data received from the survey will be available to the researcher only.**
- The questionnaire should be completed by the senior manager in your company responsible for the JV's operations.
- The length of the questionnaire is 4 pages and it will require ***15 minutes*** of your time to complete!

<p>1. Structural information of the Joint Venture (JV)</p>

- 1.8.** What was the equity structure of/ structure of financial contribution to, the JV when it was established?

<p>2. Objectives of the Joint Venture</p>
--

- 1- JV has not met the objectives
5- JV has met objectives

1.....2.....3.....4.....5

3. Motivation for establishment of the Joint Venture

3.1. To what extent did the following objectives influence the decision to establish the JV?

	not at all	to a minor extent	to a moderate extent	to a major extent	completely
Access to the product technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to the process technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to financial resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to the marketing channels or brand name	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Economies of scale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Value chain optimization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strengthening strategic positioning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, <i>please specify</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.2. To what extent is *your firm* pursuing the following *learning objectives* in the JV?

Specific skills and competences held by your Russian partner in:	not at all	to a minor extent	to a moderate extent	to a major extent	completely
Product technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Process technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturing support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sales and marketing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Purchasing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Human resource management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accounting and finance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Information systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Knowledge about local business and institutional environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Collaborative skills for running partnerships	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our company has no learning objectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.3. From your point of view to what extent is *your Russian partner* pursuing the following *learning objectives*?

Specific skills and competences held by your firm in:	not at all	to a minor extent	to a moderate extent	to a major extent	completely
Product technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Process technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturing support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sales and marketing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Purchasing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Human resource management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accounting and finance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Information systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Collaborative skills for running partnerships	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your partner has no learning objectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Parent aspects

4.1. Please describe the extent of your firm's contribution to the JV:

	not at all	to a minor extent	to a moderate extent	to a major extent	completely
Product technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Process technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturing support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Management competences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marketing competences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, <i>please specify</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.2. Please describe the extent of your Russian partner firm's contribution to the JV:

	not at all	to a minor extent	to a moderate extent	to a major extent	completely
Product technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Process technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturing support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Management competences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marketing competences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Knowledge about local business and institutional environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, <i>please specify</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.3. What was the relationship between your firm and your Russian partner prior the establishment of the JV?

- ☐ Non-competing firms:
- ☐ Buyer-supplier relationships
 - ☐ Firms in unrelated businesses
- ☐ Competing firms

4.4. To what extent did the following criteria influence the choice of your Russian partner?

	not at all	to a minor extent	to a moderate extent	to a major extent	completely
Complementary resources in terms of:					
Technological knowledge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Managerial knowledge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial capital	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brand name	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Distribution channels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to major suppliers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reputation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Previous cooperation experience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trust between top management teams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, <i>please specify</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Outcomes of the Joint Venture

5.1. To what extent has your firm improved its own operations in the following areas as an outcome of learning in the JV?

Specific skills and competences in the following areas:	not at all	to a minor extent	to a moderate extent	to a major extent	completely
Product technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Process technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturing support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sales and marketing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Purchasing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Human resource management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accounting and finance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Information systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Knowledge about local business and institutional environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Collaborative skills for running partnerships	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our company has not learned anything	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5.2. To what extent, from your perspective, has your Russian partner firm improved its own operations in the following areas as an outcome of learning in the JV?

Specific skills and competences in the following areas:	not at all	to a minor extent	to a moderate extent	to a major extent	completely
Product technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Process technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturing support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sales and marketing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Purchasing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Human resource management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accounting and finance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Information systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Collaborative skills for running partnerships	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your Russian partner has not learned anything	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5.3. Do you feel that participation in the JV has improved the competitiveness and performance of your own firm?

- ☐ Yes
☐ No

Thank you for your cooperation!

On the basis of the survey results several companies will be selected for further in-depth investigation, which will be comprised of personal interviews and secondary data analysis

☐ Please tick this box if your firm does not wish to participate in the follow-up study

Appendix 2 Cover letter for pilot survey (Russian and Western parent versions)



HELSINGIN KAUPPAKORKEAKOULU
HELSINKI SCHOOL OF ECONOMICS

Уважаемые Господа,

Высшая Бизнес школа г.Хельсинки проводит исследование на тему «Сотрудничество и перенятие знаний в Российско-Иностранных Совместных Предприятиях (СП)», и для его успешного осуществления нам необходима Ваша помощь в получении практических сведений о деятельности СП учрежденного Вашей фирмой с западным партнером. **Мы будем вам очень признательны, если Вы заполните приложенную анкету.**

Все ответы респондентов будут сохранены **в строгой конфиденциальности** и будут использованы только для целей данного исследования. Индивидуальная информация не будет отражена в отчете исследования.

Целью работы является изучить характер сотрудничества между партнерами в Российско-Иностранных СП учрежденных в производственных отраслях. Основное внимание будет уделено исследованию процесса перенятия знаний и навыков в различных сферах деятельности СП от изготовления продукции до методов ведения бизнеса. *Наиболее важным аспектом данной работы является понимание того, как знание приобретенные в Российско-иностранных СП влияют на повышение конкурентоспособности фирм партнеров за пределами СП.*

Отчет исследования будет содержать анализ информации касающейся:

- Тенденций учреждения Российско-Иностранных СП в различных отраслях промышленности;
- Мотивов для сотрудничества и перенятия знаний в СП учрежденных в разных отраслях промышленности;
- Практических результатов сотрудничества в СП для конкурентоспособности фирм партнеров;
- Воспримовосприятия фирмами-партнерами подходов к сотрудничеству и перенятию знаний.

Отчет исследования будет предложен в пользование компаний принявших участие в опросе.

С уважением,

Ирина Йорманайнен
Кандидат Экономических Наук
Высшая Экономическая Школа г.Хельсинки



HELSINGIN KAUPPAKORKEAKOULU
HELSINKI SCHOOL OF ECONOMICS

Dear Sir/Madam,

We are currently undertaking research at the Helsinki School of Economics entitled '*Outcomes of cooperation and learning in Russian-Western Joint Ventures (JVs)*' and we are seeking input from the business community. As such, I would be extremely grateful if you would dedicate a few moments **to complete the enclosed questionnaire**.

All replies will be treated in **strict confidence** and the analysis will be carried out in such a way as to ensure complete **anonymity for all the participants**.

The purpose of this research is to investigate the implications of cooperation and learning in JVs for parent firms' competitiveness and growth outside the JV. The study aims to accommodate responses from both Russian and Western parent companies which allows for an understanding of the *actual benefits* arising from cooperation experience for parent firms' outside the JV.

The research report will include a thorough analysis of survey findings and will provide an understanding of the following aspects:

- Industrial break-down of existing Russian-Western manufacturing JVs;
- The nature of cooperation and learning processes in different types of Russian-Western manufacturing JVs;
- The actual benefits that have arisen from cooperation and learning for both parent firms' activities outside JV;
- The partners' perceptions of each other's objectives for, and benefits from, cooperation.

Summary of the research findings will be sent to companies who have participated in the research.

Your cooperation in this research would be much appreciated.

Sincerely,

Irina Jormanainen,

Ph.D. Candidate, Department of International Business

Helsinki School of Economics

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