OIL EXTRACTION
IN EXTREME REMOTENESS

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MATTIAS SPIES

OIL EXTRACTION IN EXTREME REMOTENESS

THE ORGANISATION OF WORK AND LONG-DISTANCE COMMUTING IN RUSSIA'S NORTHERN RESOURCE PERIPHERIES

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ABSTRACT

Mattias Spies

OIL EXTRACTION IN EXTREME REMOTENESS

The organisation of work and long-distance commuting in Russia's northern resource peripheries

Keywords: Long-distance commuting, resource periphery, organisations, labour, Russia, Russian North, oil industry

The post-Soviet Russian North is characterised by very heterogeneous developments. In some northern peripheries, while the prominent resource industries create a substantial share of their revenues and generate local growth stimuli, other areas face post-Soviet decay. This thesis examines employee mobility in the form of long-distance commuting as an option for dealing with this challenge for regional and local development and analyses its offerings to stakeholders in the region under consideration of its historical legacies and present contingencies.

The chosen approach to the research issue places individual employees at the centre of analysis and deals with stances and perceptions of labour. The applied relational understanding of social structures sees any economic processes as necessarily embedded in context and evolving due to past developments. Therefore, a concept of organisations and the management of work is developed that is sensitive to the particularities of long-distance commuting as used in northern Russia and the perceptions and preferences of the individuals involved. The data used in the analyses was acquired from a case study of a Russian oil company and a questionnaire survey.

The respondents' views do not reveal any general rejection of long-distance commuting as an alternative employment pattern. Furthermore, its acceptance can be enhanced by listening to the voices of those directly involved. Long-distance commuting is therefore available as a tool for dealing with the limiting geographical characteristics of the Russian North, its Soviet legacies and for efficiently capitalising on its economic potentials.

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Kouvola, September 2009

Mattias Spies

PREFACE

This dissertation consists of four sections: the first part consists of a main discussion paper and is followed by three scientific articles. The first part contextualises and supports the insights and results from the articles, but is nevertheless an independent paper and not a mere summary of the earlier publications.

Article I (Spies 2006):	Spies, Mattias (2006): Distance between home and workplace as a factor for job satisfaction in the North-West Russian oil industry. Fennia 184: 2, 133-149. © Geographical Society of Finland.
Article II (Spies 2008):	Spies, Mattias (2008): Shift-work employment and labour relations on a remote oil field in the Russian North. In Rautio, Vesa & Tykkyläinen, Markku (eds): Russia's northern regions on the edge: communities, industries and populations from Murmansk to Magadan, 73-90. Kikimora. Helsinki.
Article III (Spies 2009):	Spies, Mattias (2009): Potentials for migration and mobility among oil workers in the Russian North. Geografiska Annaler Series B, Human Geography 91: 3, 257-273. © Wiley-Blackwell and Swedish Society of Anthropology and Geography.

TABLE OF CONTENT

FIGURES AND TABLES

FIGURES

TABLES

1 INTRODUCTION

The Russian North (Figure 1), which contains the majority of the resource peripheries, is of outstanding importance for the whole country in terms of economic potentials, wealth creation, and was one of the main driving forces behind Russia's recent economic development. It is here that 90% of Russia's natural gas, 75% of oil, 80% of gold, 90% of the nickel and copper are extracted from the earth (Barentsobserver 2006). Consequently, the revenues created by the resource industries in the Russian North substantiate multifaceted leverages into the Russian society, reaching far beyond the region's borders. A long period of high resource prices on the world markets led to a stable inflow of wind-fall profits that have fuelled Russian growth. Nevertheless, the plunge of commodity markets starting at the end of 2008 showed that this tie between the resource periphery and the country as a whole is also problematic. Russian decision makers have neglected the opportunities for using the income created by high resource prices for developing a less resource dependent economy (Tykkyläinen 2008a). Therefore, Russia is still strongly reliant on revenues from its resource peripheries and on intrinsically unstable international resource markets (Gaddy and Ickes 2008).

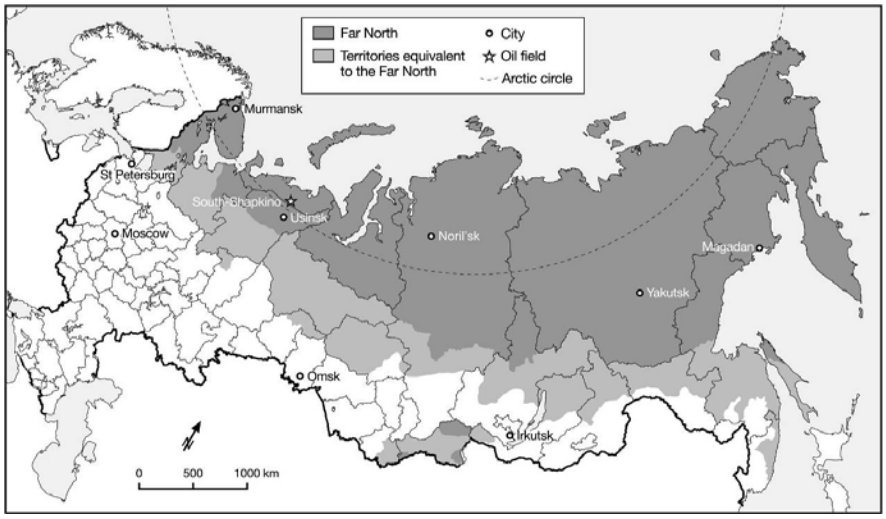

Figure 1. The Russian North (Spies 2009, 259)

The Russian North and its resource sectors are of outstanding economic significance, but pose a challenge for the country in many other respects. The region is still strongly shaped by its Soviet history and development schemes that followed the rationales set by the Communist Party. In order to access the natural resources found in the soil of the Russian North, Soviet leaders developed the region intensively through an active settlement policy (Logunov 1999). As a consequence, the region has a population density that is very high for northern latitudes and without parallels in the Circumpolar North (Göler 2005; Blakkisrud 2006). Since the end of the Soviet command economy and the

introduction of market based principles, this high population has proved to be far too expensive to maintain without adjustments. Therefore, the post-Soviet Russian North has witnessed intensive transition efforts, including an outflow of the population (Heleniak 2008; Spies 2009).

In spite of the transition efforts and the resulting altered regional structures, the present situation of the Russian North is still characterised by a relatively dense population in a circumpolar context and a settlement structure that is based on large single industry resource towns. Russia has to further shrink its permanent geographical reach in the area (Round 2005). Nevertheless, during the economic boom of recent years, places with strong ties to successful resource industries have developed very prosperously. Elsewhere in Russia the introduction of the market economy has led to a steady decay. The regional structures of the Russian North are therefore at present strongly heterogeneous, and sporadic development is a distinct feature of post-Soviet transition (Tykkyläinen 2008a). One outcome of this development path is the overpopulation in some places and a shortage of labour in other places (Heleniak 2007; Spies 2009). Consequently, there is a need for concepts for the future development of the Russian North that offer solutions to rather differing challenges.

An example for future challenges for the Russian North is the continuous northward movement of many resource industries, on which the development of the region is reliant. In the oil and gas industry the times of 'easy' deposits, that were mostly developed during the Soviet time and enabled a relatively simple and cheap production until recently, seems to be over (Wüst 2007; Gaddy and Ickes 2008). Many new deposits have been found in very remote northern and thus challenging places, for example on the Yamal Peninsula (e.g. Bovanenkovo) or off-shore (e.g. Shtokman or Prirazlomnoe). The production conditions in these areas are significantly more difficult, both economically and/or technically, and developing those fields requires the concentrated efforts of all stakeholders. These new challenges and the reluctance of many firms to invest into new oil and gas fields, explained by the uncertainties of the Russian markets, has led to a declining oil production since 2007 (Gaddy and Ickes 2008; Barentsobserver 2009).

As this short overview on some of the significant problems and challenges for the Russian North shows, the future development of the region is strongly dependent on factors that derive from the Soviet socio-economic heritage, the present-day approaches to transition and also decisions made by political and business leaders. Those factors are very often outside of the control of those who administrate the region. Development obstacles and innovation potentials are therefore often imposed from outside or due to past choices – for example, global market fluctuations, overpopulation and approaches to resettlement programs, introduction of new technologies or issues related to the business climate made on the national scale. Nevertheless, all of these processes cannot be substantiated in the Russian North without taking local factors into consideration. Local economic development has to be captured as spatially contingent to a multi-layer legacy of localities and their embeddedness in a complex structure of social and physical relations (Tykkyläinen 2008a).

In this study I introduce and investigate long-distance commuting (LDC), or *vakhtovyi metod* as it is referred to in Russia, as an approach to labour

organisation that directly affects the above issues of northern Russia and the development of its resource peripheries. Long-distance commuting enables employees and employers to separate the home environment from the work environment, and in this way extends the accessible labour market. It requires long and extensive travel arrangements between home and work and the accommodation of the workforce during the shifts at the work site. The main advantage of this form of labour mobility is the flexibility in labour relations based on an extended spatial reach and different opportunities for economies. It has been argued that long-distance commuting is the flexible post-Fordist equivalent to the construction of single resource towns during Fordism (Hayter 2003). But this new flexibility for employees and employers comes at a price. Bifurcation of individuals' lives between two clearly distinct environments has manifold implications – for example, regular family separations, time and money resources needed for travelling or alienation between workers and their places of work. As a consequence, long-distance commuting can be understood as both an optimising and a constraining behaviour.

Long-distance commuting is not a new concept for the resource industries in the Russian North; it has been applied there for many years, and therefore has a historical legacy in the region. The central concern in this study is to unravel what this particular form of labour mobility can offer to stakeholders in the region under consideration of its historical legacies and present contingencies. The problems of the Russian North mentioned above require new ways of thinking. Long-distance commuting is a practise of labour management that can offer solutions for some of those issues. It can be applied to address the problem of overpopulation in parts of the north and to mediate between overpopulated localities and those with a lack of labour (Round 2005; Heleniak 2007; Spies 2009). It also helps resource industries to access resource deposits in very remote northern places in an economical manner and deal with unstable commodity markets by increasing their ability to (re)act more flexibly. And indeed, it seems that many firms in Russia prefer long-distance commuting arrangements for their operations (Yegorov 2005).

In the process of change that started as post-Soviet transition and that is still ongoing, labour mobility and commuting is very likely to play a role in shaping new spatial structures. However, the implementation of long-distance commuting operations is not only dependent on the economic or political need for alternative concepts, but also on regional and local traditions, the preferences of individuals, and other relational factors. Labour is traditionally considered as the most place-bound and geographical factor of production; it is said that it has to go home every night, and therefore is considered as especially locally embedded (Peck 2003; Coe et al. 2007). Additionally, work relates from the workers' perspective as much to social and cultural matters as to material aspects (Iverson and Maguire 2000). Therefore the question arises how the life as circulatory migrants, depicted dramatically by some as astronauts (Coe et al. 2007), that comes along with long-distance commuting is perceived by those directly involved. The influence of labours' stances for shaping economic landscapes can be expected to be substantial in a spatially contingent and relational setting.

In order to capture the meaning of spatial and social contingencies, in this study I develop a concept of organisations and the management of work that is

sensitive to particularities of long-distance commuting applied under the circumstances of the Russian North and the perceptions and preferences of individuals involved. Additionally, I aim to conceptualise the interplay between long-distance commuting and spatial reorganisation in the Russian North. In the following section I explain how I approach these research concerns in theoretical and practical terms within the field of economic geography.

1.1 Contexts, relations and actors – a conceptual framework

Recent trends in economic geography are influenced by a general cultural or institutional turn in the social sciences (Barnes 2001; Nielsen 2007). As an outcome, contemporary human geography applies a concept of the economy that understands economic structures and processes by situating them within different social, political and cultural relations (Coe et al. 2007). Due to this strong contrast to the assumptions and generalisations of orthodox economics, the evolving concept is sometimes labelled as 'new economic geography'[1]. Since the new of today will be the old of tomorrow, it is useful to define the concept in other terms than just by its present novelty. Bathelt and Glückler (2003), for example, are trying to develop a concept that they label as relational economic geography. Others, for example Essletzbichler and Rigby (2007), chose a particular dynamic perspective on economic development and speak about an evolutionary economic geography. In common, those approaches see economic structures and social institutions in general embedded in a multifaceted context and evolving due to past developments (i.e. path dependence) and in a self-reproducing and continuity-preserving way (Martin 2003, 2006). Such a setting necessarily contains many contingencies and, since all real situations have a complex combination of these types of relations, social science should not be restricted to a narrow path in its advancements if it aims to grasp the differentiations in the world (Sayer 1992). Actors (i.e. individuals, organisations, institutions, etc.) have a central meaning in this economic geography since they are needed as decision-making bodies through which the manifold relations of a complex world are lived and substantiated in form of changing socio-spatial structures and practices (Tykkyläinen 2008b). Besides formal relations, actor relations are always prone to informal interference in inter- and intra-organisational networks, power struggles and rhetoric (Yeung 2005). Finally, by introducing a distinct geographical perspective on economic development and recognising localities as significantly diverse, it becomes clear that all development paths and measures and their outcomes are bound to space and time and, abstractly spoken, will lead to a constant transformation of economic landscapes (Tykkyläinen 2008b). Thus, path dependence is itself place-dependent (Martin 2003).

How can such an economic geography be implemented and performed in real world research? Yeung (2003) criticises that the methodological developments are not keeping up with the theoretical advancement of the new

[1] This expression is also used by economists, e.g. Krugman (1998). However, their approach is much more strongly economics based. Bathelt and Glückler (2003b) and Coe et al. (2007) state that this concept is therefore better described as 'geographical economics'.

economic geography. He advocates for a process-based methodological framework that is not anymore exclusively based on scientifically established objective research techniques, which inevitable neglect the complexity of life (Yeung 2003). Cornerstones of such an approach are the application of mixed methods (triangulation), identification of the main actors and their networks as well as a grounded on-site research design (Tykkyläinen 2008b). Consequently, case study research, which aims at considering the full variety of evidences and sources of social processes, is an important technique for economic geographers. It is particular strong in studying contemporary social phenomena and retains holistic and meaningful characteristics of real life events (Yin 2003).

The Russian resource periphery[2] with its developments during the post-Soviet transitional stage is a region with still evolving socio-economic structures and therefore predestined for being studied by the introduced approaches. Its current stage is a unique combination of economics, culture and space and it is moving along an unpredictable development path (Tykkyläinen 2008b). Process-based on-site fieldwork with surveys and interviews are essential for grasping the dynamics in the region and its many distinct localities. This mix of methods can identify the main actors and leads to an improvement of the research results. It has been proved to be well-suited for research in Russia's northern resource peripheries (Tykkyläinen 2000; Rautio 2003; Piipponen 2007). Likewise from a practical point of view, case study research of Russia's peripheries is a rational choice. Due to the limitations of resources for research and the vastness of the study area, the introduced methodological approach helps bringing important processes to the research agenda, but due to this strong exploratory character the external validity of the results depends on later studies (Tykkyläinen 2008b). Nevertheless, the limited possibility for generalisation in case study research is counterbalanced by the opportunity to explore the development paths of the Russian North through 'thick description' (Legge 2005).

In this case study I apply a triangulation of methods by analysing results from a questionnaire survey, expert interviews and secondary sources. The core of the analysis is survey data. Insights gained by its analysis are strengthened by information received from personal conversations with selected experts[3] on economic development of the Russian North. The analytical focus of the research is on actors, and particularly on the employees of the case study's company (SeverTEK, see Chapter 2), and the aim is to develop an understanding of the relations between the actors (their perceptions, re-actions, struggling), approaches to the organisation of work processes and the consequences for the development of Russia's resource peripheries.

The survey was conduced in November 2004 and designed for all employees of SeverTEK that are working and living in the accommodation at the company's remote South Shapkino oil field. The questionnaire was first written

[2] Spies (2009) provides more details on the Russian North and its development as a resource periphery.

[3] Interviews: Gubaidullin 2004; Hanna 2004; Naskova 2004; Khariton 2005; Belaya 2007; Dimitrieva 2007; Zalkind 2007. The plan to interview several employees was impossible to implement after Lukoil took over SeverTEK. No access to the oil field and possibilities for interviews was granted by the new owner.

in English and translated into Russian before its distribution among the employees (Appendices 1 and 2). Though designed specifically for this case, it was built upon the experiences gained from former studies in the Russian North (Rautio 2003) and concerning similar issues (Tykkyläinen 1994). The questionnaire consists of 25 main questions and a total of about 170 items. Besides general aspects like the respondents personal characteristics, it covers the issues of work experience and satisfaction with different aspects of work life, and particularly long-distance commuting. Furthermore, there are questions on the residential preferences and realities of the employees. The survey was conducted with the support of SeverTEK in the form of granting access to the research site and helping to distribute the questionnaire among two subsequent shifts at the oil field. All respondents were asked to answer to the questions independently and unsupervised. Nevertheless, they could ask for help from the management if questions remained unclear. Participation was voluntary. The completed questionnaires were collected by members of SeverTEK's management and handed over to me, partly directly at the field and partly by post. The outcome of the survey is 357 filled questionnaires, which is a share of over 80% of the targeted employees.

At this point it is relevant to elaborate in more detail why it is appropriate and important to consider the opinions and perceptions expressed by those who are directly concerned with long-distance commuting. Why is it valuable to study employees' opinions and perceptions that are always and inevitably an expression of individuality and likely to vary over time? The methodological and theoretical approaches chosen in this study and presented above, place individuals at the centre of the investigation. Both, a process-based case study methodological approach and the definition of organisations as open social systems (Chapter 4) that develop based on evolutionary and relational ties, require understanding of the individuals involved in organisation. Labour can hardly be treated in the same way as other factors of production, even though that has been the case in mainstream economic thinking for a long time (Schmid 2004; Spies 2008). Labour is intentionally and unintentionally involved in shaping its own environments by creating continuously new socio-spatial practises and structures (Herod 1997). Individuals act according to their own frame of reference in perceiving and organising their environments and as a consequence, there will not be any one blueprint or best practise solution for the organisation of work (Purcell 1999; Iverson and Maguire 2000). Also due to the decreasing role of labour unions, labour relations are increasingly shaped individually, often less articulated and in more fuzzy approaches (Lier 2007). Consequently, it is the people that make places of work; this is particularly so if the organisation of work aims at the consent and commitment of the workforce, as advocated in the so-called soft version of human resource management (Schneider 1987; Guest 1999). This argumentation is further strengthened if there is a lack of qualified staff on the labour market, as for example in the Russian oil industry. The position of employees and their increasing bargaining power puts pressure on employers to know the needs and wishes of their staff and consider work and non-work environments as relevant factors in competing for the best individuals (Freeman and Rogers 1999; Iverson and Maguire 2000).

These arguments point to the fact that we need to ask the involved individuals if we want to gain knowledge about the organisation of work

processes and their manifold implications. Whom else could we ask? Their 'stories' are the best available input for studies such as the one presented here, in spite of the limitations. This is consequently also true for the role of long-distance commuting and its implications for different relevant environments that need to be identified within the research process. Therefore, in the following sections I analyse the attitudes of the individuals making up the workforce with regard to those environments, their interplay with the organisation of long-distance commuting, and in contrast to classic management procedures.

1.2 Research questions

Based on the research aims and concerns that I developed and posed at the beginning of this chapter and the theoretical and practical approaches introduced in the section 1.1, this study seeks to find informed answers to the following research questions:

1. Is a specific understanding of organisations and the management of labour needed in order to capture place- and time-specific contingencies in the investigation of long-distance commuting, and if so, what kind of understanding? Are general conceptualisations of organisations and the management of labour sensible to the stances and perceptions of the directly involved individuals, and if so, is it possible to capture the diversity of real world relations within the limits of abstract concepts?

2. How are long-distance commuting and its implications on business and social spheres changing the process of work organisation and management? Are individuals' attitudes, coping and changing preferences, as found in the case study specific settings, interfering with the management process? Are aspects of the lives of the workforce that are outside of traditional management thinking affected by long-distance commuting, and if so, how are those managed? What about conventional factors in managing labour when long-distance commuting is used?

3. What is the role of long-distance commuting in the Russian North and its resource peripheries now, and what would it be in the future? Does labour mobility, as introduced in this study and under the circumstance of still ongoing restructuring, changing spatial structures and worker's preferences, have the potential for leading to an altered settlement structure for the region? If so, what kind of changes can be expected and based on what processes?

1.3 Structure of the study

In addition to this introduction, the study consists of four further chapters and the conclusions. Chapter 2 introduces the research case upon which the whole study is based. The developments of the oil company SeverTEK and of the city Usinsk, in which the company is located, are described. Besides historical facts

the focus is on the present situation in Usinsk and at SeverTEK. The chapter presents readers with the necessary background knowledge of this case of resource based development in the Russian North. Furthermore, specific information on the details of executing oil extraction at remote locations with long-distance commuting as applied by SeverTEK is provided.

The first part of Chapter 3 is dedicated to explaining the concept and principles of long-distance commuting in general. Since this form of labour mobility is at the centre of this study, an in-depth description is necessary in order to present all relevant theoretical and practical details. The second part of the chapter deals with long-distance commuting in Russia. While many parallels between the commuting in Russia and other countries exist, the Russian case is nevertheless sufficiently different in order to introduce it separately, for example due to the Soviet past of the country.

Chapter 4 contains the core of the study with respect to the interplay of current concepts of organisations, the management of labour and long-distance commuting. I demonstrate here how present understandings of organisations and the management of labour, which are characterised by a general higher complexity and holistic approaches as compared to former prevalent concepts, developed throughout the 20th and 21st century (Chapter 4.1). The purpose of this section is the development of an analytical framework for the examination of long-distance commuting that is based on a relational understanding of socially constructed order. In Chapter 4.2.1, I introduce a concept for organisations and their environments that is used to explain the ramifications of regular labour mobility, and that constitutes a framework for approaching the empirical investigations of the following section (4.2.2). The presented tests are designed to reveal the relevance of the introduced relational concept and contrast it with the impacts of conventional approaches to the management of labour.

In Chapter 5, I apply the insights gained in the previous chapters and earlier studies (Spies 2006, 2008, 2009) for an evaluation of long-distance commuting as a development impulse for regional structures in Russia's northern resource periphery. The aim of this part of the study is to show how long-distance commuting can affect the development paths of a remote and highly heterogeneous region. Furthermore, I show how commuting has been applied in the context of tensions resulting from the region's Soviet past and the post-Soviet present.

2 SeverTEK – THE RESEARCH CASE

SeverTEK is an oil producing company in the Timan-Pechora basin of North-West Russia and has its head office in Usinsk. Usinsk is the unofficial capital of the Timan-Pechora oil province and is located in the North of the Komi Republic in the border zone of the tundra, 90 kilometres south of the Arctic Circle and about 750 kilometres from Syktyvkar (Zhuralev 2005). Construction of the town, named after the biggest tributary of the Pechora River (Usa), started in 1967. Nevertheless it was not officially founded until 1975 and in 1984 it obtained city status (Gubaidullin 2004; Konttinen 2007). Its main purpose from the very beginning was to serve the oil and gas industry as a regional centre. In 1952 and 1964 geological expeditions into the Usinsk region had established its potential for oil and gas exploitation and in 1967 the first well started test production (Gubaidullin 2004). The city represents a typically Soviet project in the North. Built in a very remote location in a harsh environment[4], it still has no connection to the main road network. It was initially planned to have 100 000 inhabitants, and was constructed and inhabited by people from all parts of the Soviet Union (Zhuralev 2005). Its architecture is dominated by apartment buildings with five or nine storeys erected along wide and straight streets (Figure 2).

Figure 2. In the centre of Usinsk (Photo: M. Spies)

[4] The average annual temperature is -3.2°C and the snow cover lasts an average of 215 days (Gorod Usinsk 2002).

In 2004 Usinsk had a population of 42 700 inhabitants with an average age of 32 years. The majority of inhabitants are directly involved in the oil and gas industry. The most important company is Lukoil-Komi, which is involved in many aspects of the city life, also outside of economic spheres (Gubaidullin 2004; Naskova 2004). The city develops very positively. Unemployment is almost absent[5] and the quality of life is high. However, these developments come at a price. Living costs in Usinsk are the highest in the Komi Republic and there is a severe lack of housing, which forces everybody without a job to leave and limits the opportunities for newcomers to move in (Gubaidullin 2004).

The closed joint stock company[6] SeverTEK was founded in 1996 in order to exploit several hydrocarbon deposits in the Timan-Pechora region. The main deposit is the South Shapkino oil and gas condensate field, which is located in the tundra of the Nenets Autonomous Okrug (Figure 1 and Figure 3). Other smaller deposits also under licence by SeverTEK are located south of South Shapkino in the Komi Republic (Pashshorskoe, Verkhnegrubeshorskoe and South Iuriakhinskoe). The South Shapkino field was discovered in the 1970s and the first evaluation of its exploitation potential was done in 1995 and led to an estimated 25 million tonnes of recoverable reserves (European Bank for Reconstruction and Development 2002). Due to these positive results, SeverTEK was established shortly after, initially as an international co-operation between Russia's KomiTEK (50%), France's Elf Aquitaine (30%) and Finland's Fortum (20%). The following years witnessed starting planning and testing activities, the halt of all efforts as a consequence of the 1998 economic crisis, as well as several changes in the ownership structure (Oil and Gas Online 1999; Naskova 2004; Jussila 2006). In 1998 Elf Aquitaine sold its share of SeverTEK to Fortum, and in 2000 Lukoil took over KomiTEK. Fortum and Lukoil became equal shareholders with 50% each.

The major step towards production start-up was made in 2001 when SeverTEK was able to ensure financing of the final development stage. An award winning deal, made with the European Bank of Reconstruction and Development and private banks, provided US$ 200 million to the company for a drilling program, the construction of processing facilities and a pipeline (European Bank for Reconstruction and Development 2002). It was the first project finance agreement in the Russian oil and gas sector after 1998 and led to the start of large-scale development and construction, five years after the company had been established (Fortum 2003). By that time the estimated reserves of the four fields had grown to 30-40 million tonnes of oil and a yearly production of 2.5 million tonnes was targeted (Fortum 2004). The production started in July 2003 and in January 2004 the output had reached 24 000 barrels per day[7] (Jussila 2006).

The next important change took place in 2005 when Lukoil bought all shares from its Finnish partner Neste Oil[8]. On November 23rd both companies sealed the deal and Lukoil paid US$ 321.5 million to Neste Oil for the 50% stake. The

[5] In 2004 the unemployment rate was officially 1.3%.
[6] According to the Russian legislation closed joint stock companies (zakrytoe aktsionernoe obshchestvo, abbreviated ZAO) have a limited number of shareholders.
[7] That equals a yearly output of 1.2 million tonnes.
[8] Neste Oil was part of Fortum until 2005.

purchase was preceded by statements of Neste Oil that it is not interested in selling its share in SeverTEK and was explained with the claim that the company wanted to concentrate on refining after its separation from Fortum (Virta 2003; Neste Oil 2005). The deal earned Neste Oil a profit of 140 million Euros (Jussila 2006). From 2005 onwards SeverTEK became a subsidiary of the Lukoil-Komi Group, which is in itself a subsidiary of Lukoil (Lukoil 2008). At the time of the takeover, SeverTEK had proved reserves of 29.5 million tonnes and an output of about 1.5 million tonnes per year (Lukoil 2006).

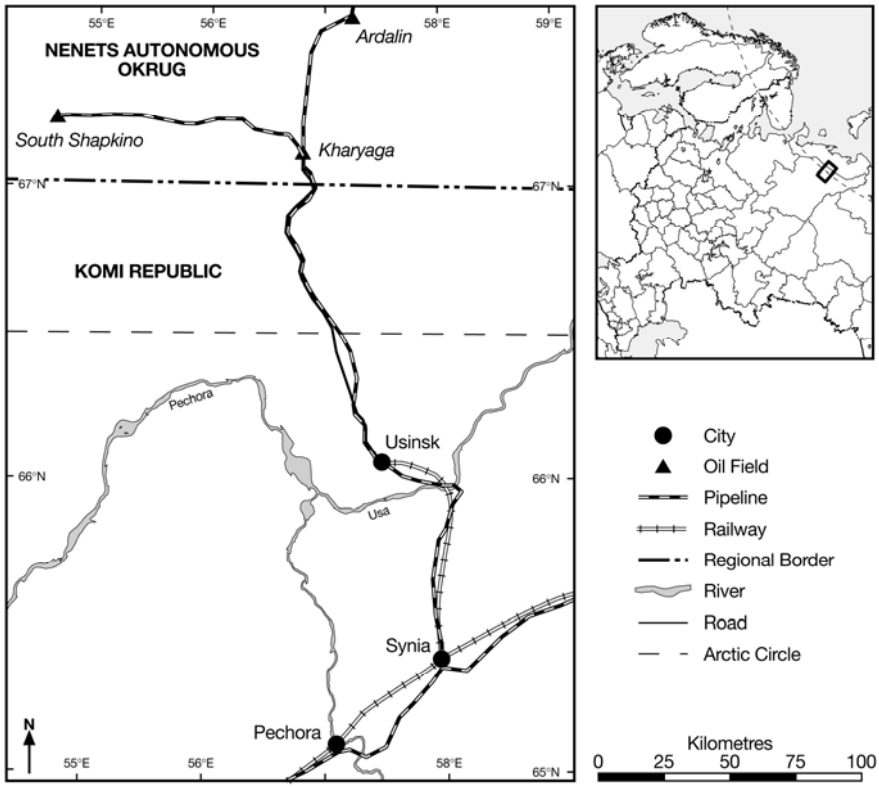

Figure 3. SeverTEK's production area (Spies 2008, 78)

SeverTEK's main production and processing facilities are built in the vicinity of the South Shapkino field. At this location, about 180 km from the company's head office in Usinsk, are also the accommodation units for the workers that are engaged with long-distance commuting. The development of the oil field required 31 production wells to be drilled[9], 100 km of pipeline to be laid and construction of all facilities from scratch in very demanding natural conditions (European Bank for Reconstruction and Development 2002; Hanna 2004; Ropponen 2005).

The accommodation complex at South Shapkino is designed for housing a maximum of 250 people at a time. As with all other facilities, it was built after

[9] Additionally, twelve boreholes for production enhancement measures were drilled.

2001 and is therefore a new and modern set of buildings (Figure 4). SeverTEK made an effort to offer many amenities to its employees but due to the location in the tundra the possibilities for improving the living conditions are limited (Naskova 2004). Basic health care, laundry service, and free-time activities (gym, TV/video devices, table tennis, etc.) are offered for free to all employees. Also the food supply and accommodation is not charged for. Nevertheless, heated indoor space is a scarce commodity in every oil and gas field in the Russian Arctic, since construction is very expensive. The dormitory rooms are therefore small and usually four workers have to share a room of about 10 square metres (Figure 5).

Figure 4. South Shapkino's accommodation complex (Photo: M. Spies)

In SeverTEK the long-distance commuting work schedule is organised on a 15-days-on/15-days-off rotation. This means that all employees stay for 15 days at South Shapkino in order to work daily 12-hours shifts, either between 7:00 am and 7:00 pm or between 7:00 pm and 7:00 am[10]. If two subsequent shifts agree, the 15/15 rotations can be extended to 30/30 rotations. The other half of each rotation is used by the employees for travelling home and resting after the intensive work load while on duty (see Chapter 3.1). The transportation from the head office in Usinsk to the oil field is organised by SeverTEK by helicopter. The majority of employees has to arrange the journey to the head office by themselves. Only highly qualified staff gets the cost that are associated with travel to the head office refunded (Naskova 2004; Spies 2006, 2008). Access to the workplace and the return to home are completely controlled by SeverTEK. Also telephone and internet connections are limited due to technical capacities and costs. All employees on the field are limited by strict security measures that are common for all oil and gas production sites in the area. Alcohol consumption is

[10] Construction and maintenance work halts if the temperature falls below -42°C because the materials and machines cannot withstand such cold. Oil production is not dependent on temperature.

strictly forbidden and everybody entering South Shapkino is searched for hidden alcohol. Noncompliance leads to immediate dismissal, which happens occasionally (Naskova 2004). Contact to reindeer herders (the only other regular human inhabitants in the area), in the vicinity of the oil field is limited to official company organised happenings. The goal is to avoid regular personal small-scale trading between herders and the staff of SeverTEK, due to potential risks involved in such contacts.

Figure 5. Dormitory room (Photo: M. Spies)

In autumn 2004, during the field work, SeverTEK had 589 employees. Of those 320 worked at the oil field and the rest were involved in management and administration. The average monthly salary for all employees in 2004 was US$ 1420; the average salary for blue-collar employees was US$ 867 (SeverTEK 2004). Compared with the average salary in Russia at this time (US$ 237) the salaries paid by SeverTEK, as generally in the oil and gas industry, are very high (Rosstat 2006; BOFIT 2007).

The employees' homes are distributed throughout Russia and even beyond (Spies 2009). Of the 589 employees, 166 live in Usinsk in the direct vicinity of the companies head office. The other employees live throughout Russia and five individuals live outside Russia. The average commuting distance is over 1000 km. Slightly less than half commute up to 300 km, about 20% between 300 and 1000 km and about 30% more than 1000 km. The location of the home is related to the salary; highly-skilled employees are mostly employed from Moscow or abroad since they are not available from the local labour market in Usinsk (Naskova 2004). In 2004, the average monthly income of those employees of SeverTEK living in Moscow was almost US$ 5800, and those living abroad got about US$ 24 000 (SeverTEK 2004). Table 1 shows some

further details of SeverTEK's staff. In order to ensure a productive work atmosphere, SeverTEK pays much attention to the selection of their employees. Most new employees are hired upon recommendation of the current staff and providing a realistic impression of the long-distance commuting work condition is part of the preparation of newcomers (Naskova 2004).

Table 1. Personal information on the employees (N = 357)

Average age	38 years
Average commuting distance	1071 km
Median commuting distance	360 km
Sex	
▪ Male	94%
▪ Female	6%
Family status	
▪ Married /cohabitating	83%
▪ Have children	77%
Former work experience	
▪ In another oil company	61%
▪ With long-distance commuting	65%

3 LONG-DISTANCE COMMUTING

3.1 The principles of long-distance commuting

Long-distance commuting is an approach to the organisation of the labour force that is based on an unambiguous spatially and temporally separation between the workers' homes and the locations of employment. Hobart (1979, 2) defines long-distance commuting accordingly as

> "…all employment in which the work place is so isolated from the worker's homes that food and lodging accommodation are provided for them at the work site and schedules are established whereby employees spend a fixed number of days working at the site, followed by a fixed number of rest days at home. The expectation is that the employees will work an indefinite number of work and home rotation cycles."

As a result of these defining features, long-distance commuting is above all characterised by a bifurcation of the employees' lives between two locations, neither of which can be labelled as the clear centre of life. Consequently, the spatial extensibility of all involved stakeholders is significantly increased, not unusually over thousands of kilometres (Spies 2006). On the labour markets that means a major extension of opportunities (Houghton 1993). Job seekers have the opportunity to target vacancies in areas and branches outside of their immediate environment. For employers it becomes possible to access labour resources also from distant labour markets, for example if the local supply of labour is insufficient in terms of quality or availability. Long-distance commuting has therefore an important adjustment function on spatially uneven labour markets. As a consequence, it is widely applied in recruitment measures by branches that operate at locations lacking sufficient labour supply and the potential to attract permanent in-migration (Spies 2006). Natural resource extraction industries with their production sites being often in extreme remote regions are, hence, among the main users of this form of labour mobility. Long-distance commuting operations are most common in large countries that are richly endowed with natural resources. Due to these reasons long-distance commuting is most commonly applied in Canada (Storey and Shrimpton 1989; Shrimpton 1994; Ritter 2001; Costa 2004) and Australia, particular Western Australia (Houghton 1993; Tykkyläinen 1994, 1996; Hogan and Berry 2000; Heiler and Pickersgill 2001; Storey 2001b; Watts 2004).

The implementation of long-distance commuting schemes in firms can take very different forms and show many different organisational details (Shrimpton 1994). Work schedules are based on shift rotations of various combinations. The stay at the work site and the following rest period at the employees' homes can last from a few days up to a few months. Depending on the location of the workplace and the distances that need to be covered, transportation can be most feasibly organised on land or by air. Nevertheless, almost all long-distance commuting operations have in common that they run concentrated work

schedules. This means that the employees usually work every day of the shift, without days of rest, and additionally as well more than 8-hours per day (Heiler and Pickersgill 2001).

Labour mobility that leads to regular absence from the workers' homes and extensive time spent at a distant workplace is not as such a recent phenomenon. Throughout history some professions required a basic mobility, e.g. sailors or seasonal harvest work. Long-distance commuting as understood in this study differs from these examples since its application is now often extended to workers in branches that do not necessarily have to be as mobile. For example, in the mining sector long-distance commuting is increasingly replacing the formerly common way of labour organisation at the remote location, i.e. the construction of resource towns (Storey and Shrimpton 1994). Furthermore, the scale of long-distance commuting operations is today enlarged. The first examples of operations in modern industries that were entirely based on a labour force that commutes regularly over long distances appeared after the World War II in the offshore oil industry in the Gulf of Mexico (Chamber of Minerals and Energy Western Australia 2005). The step towards onshore long-distance commuting in the mining sector occurred in Canada and Australia in the late 1970s and early 1980s (Storey 2001a).

The reasons for the growing number of long-distance commuting operations are diverse (Spies 2006). The most basic reason is the spatially unbalanced distribution of natural resources and the workforce (Storey and Shrimpton 1989). Additionally, the resource extraction industries advance into ever more remote areas due to the short supply of many commodities and high commodity prices. The Arctic is a good example of that trend (Seidler 2008; USGS 2008). In many cases it is not feasible anymore to construct more permanent settlements as the accommodation needed for long-distance commuters at such remote locations. There are different reasons for this. From an economic point of view, long-distance commuting operations are commonly considered as the more cost efficient approach, if compared to the construction of new resource towns. The exact calculation of costs depends on various factors, e.g. scope of the operation (number of employees, commuting distance and the duration of project), location and natural conditions, details of the organisation of work (shift length and concentration, form of accommodation) and technical developments (Lightfoot 1991; Houghton 1993; Tykkyläinen 1996; Costa 2004). Nevertheless, the cost savings and the more even distribution of the needed investments favour commuting operations. A second important reason for the expansion of long-distance commuting is the preferences of the involved individuals for their lifestyle. A permanent residence at a remote resource town with its limited infrastructure and services is not desirable anymore for the majority of employees (Storey 2001b; Tuhkunen 2007). It has been shown that the long-distance commuting, that allows for reconcilability of residence in an urban environment and employment in the remote resource industry, is often preferred since it helps achieving personal goals for one's own way of life (Spies 2006, 2008, 2009).

The increased use of long-distance commuting has important implications for the organisations and the employees. Most affected are the ways in which firms have to organise their workforce, the personal lives of the employees and their families and the communities in which the workers live and from where

they are regularly absent (Spies 2006). Figure 6 shows the manifold implications of long-distance commuting. Companies that run long-distance commuting operations have to take care of aspects that are usually not in the focus of human resource management, for example transportation issues, accommodation facilities, harmonious atmosphere also in the free time (Storey and Shrimpton 1989). The employees' well-being and family life are affected by, among other things, the regular separations and reunions, the long and concentrated work shifts, often harsh environmental conditions of the work sites, limited personal space at the work sites, and the relatively long-term commitments required from the employees (Arnold 1995; Collinson 1998; Sibbel 2001). Work safety issues are also affected (Baker et al. 2003; Mikkelsen et al. 2004). For the home communities of the employees, long-distance commuting means a temporary but constant brain-drain. While the workers are still official residents of these communities, their ability to be involved in the community life is limited. Another problem for communities is the fly-over issue (Storey 2001b). Since long-distance commuting is usually organised between a few urban areas and the remote production sites, many communities 'between' those areas are excluded from benefitting, even if they are relatively close to the production sites.

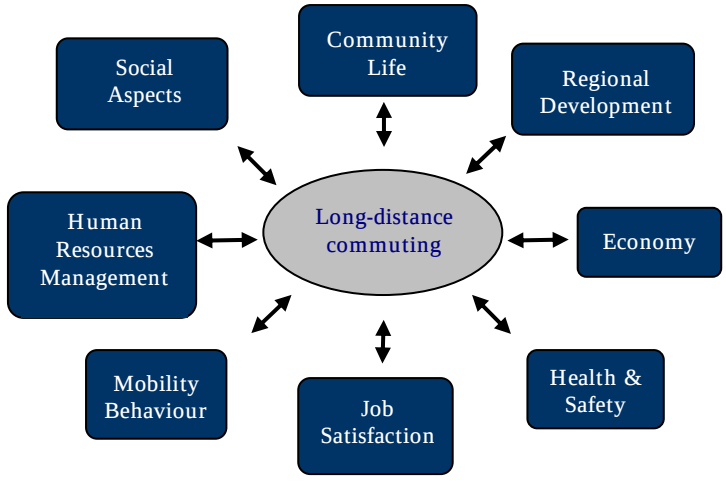

Figure 6. Implications of long-distance commuting

The notion of distance and traditional travel-to-work areas is changed by long-distance commuting (Spies 2006). An important theoretical implication is the technological erosion of time-space constraints and, as a consequence, the blurring of the distinction between short-term mobility and migration (Gramling 1989; Tykkyläinen 1996). All models for regional development that are based on a distant-decay assumption become obsolete under long-distance commuting conditions. Instead, regional structures are characterised by random and fragmented configurations (Tykkyläinen 1994, 1996).

3.2 Long-distance commuting in Russia

Long-distance commuting is in Russia organised basically according to the same principles as introduced in the previous section. The labour code of the Russian Federation[11] from 2001 (chapter 47, article 297) states:

> "Long-distance commuting is a special form of mobilising labour from their permanent place of residence when workers cannot return to their permanent place of residence on a daily basis. Long-distance commuting is used when the place of work or location of the employer is far away, with the purpose of reducing the period of construction, repair, and reconstruction of industrial, social, and other objects in sparsely populated, remote regions or regions with an unfavourable environment, and also with the purpose of realising other industrial activity. Workers employed through long-distance commuting, when at the place of work, live in specially constructed settlements provided by the employer represented by a complex of buildings and structures intended to maintain living conditions for such workers during working hours and breaks between shifts, or else in other premises adapted for these purposes and hostels paid at the employer's expense."

Given Russia's geographical size and its natural resource richness, which is concentrated in the vast peripheries of the country (Barentsobserver 2006), it should not come as a surprise that many examples of long-distance commuting based operations can be found in the resource industries, most commonly in the oil and gas industry (Borisov 2004). The approach is referred to as *vakhtovyi metod*, which translates into shift-work, and the involved employees are accordingly *vakhtoviki*. Common variations of the shift-work method are the expedition method and the shift-expedition method, both of which are based on long-distance commuting (Sapozhnikov and Chudnovskii 1988). Because the roots of long-distance commuting reach back into the Soviet past, and because of developments during the transition phase after the dissolution of the USSR, the details of the shift-work method, as well as the research conducted on the matter, differ partially from examples found in other countries.

Ever since the planned exploitation of the North had started after the October Revolution, long-distance commuting has been a part of that development (Sveshnikov 1988; Gavrilova 2002). It only became a commonly used method of labour management in the 1960s and 1970s, a process directly connected with the development of Western Siberia[12] into the leading oil and gas producing region of the USSR (Armstrong 1976; Slipchenko 1979; Borisov 2004). The West Siberian Lowlands were at the time very sparsely populated

[11] The International Labour Organization (2001) provides a translation of the labour code in English.

[12] The oil and gas province Western Siberia is today part of the Urals and Siberian Federal Districts.

and even basic infrastructure was absent in many places. The region then experienced a very rapid increase of oil and gas production (Tykkyläinen 2003). Since it is also very large in geographical size, labour shortage was a common problem. As a result, the region had to be developed almost from scratch, economically and socially, and the Soviet plans for constructing permanent settlements for the new oil and gas workers could often not keep-up with the pace of the growing industry (Gavrilova 2002). Long-distance commuting, as part of an accelerated development plan, appeared as one solution to that problem and ensured that the needed labour came to the region. Later, during the 1970s and 1980s, the northwards thrust of the oil and gas industries gave a new incentive for using long-distance commuting since construction costs were substantial due to the remoteness and harsh climate[13]. The increasing use of long-distance commuting was accordingly in most cases rather a necessity instead of a chosen alternative, and therefore to a large extent spontaneous or even chaotic (Gavrilova 2002; Borisov 2004).

In the Soviet Union and also in today's Russia the distinction between inter- and intra-regional long-distance commuting is important (Krivoshchekov et al. 1994). A high-ranking official from the Khanty-Mansi Autonomous Okrug, for example, thinks that there is today hardly any long-distance commuting in the region (Khariton 2005). Obviously, intra-regional commuting, which is very common in the region, does not count as long-distance commuting in the opinion of this official. At first inter-regional commuting was indeed more common in order to bring the needed labour supply into the newly developed regions. Later the intra-regional commuting became more important. So called shift-settlements or base-towns, in which intra-regional long-distance commuters reside and which are located up to several hundreds of kilometres from the main towns, became increasingly common (Gavrilova 2002). A good example for this trend is Yamburg (Tykkyläinen 2003). The consequence was a rather rapid decentralisation of the population, for example the population of the three main northern towns in the Tyumen region dropped from 85% of the total of all inhabitants in the oil and gas regions to 70% within five years (Borisov 2004). Hence, commuting changed the regional structures of the affected areas significantly.

Long periods of these specific Soviet development strategies led to settlement structures characterised by a combination of traditional permanent population and new settlements that were created based on long-distance commuting. This combination of settlement types was the starting point for post-Soviet developments. Today there is very little construction of new permanent housing infrastructure in northern resource peripheries and companies as well as employees are therefore often reliant on long-distance commuting for the organisation of labour processes (Borisov 2004; Gubaidullin 2004). Labour mobility in form of shift-work is accordingly at present still on the agenda. Many details of its implementation are defined by the labour code of the Russian Federation (International Labour Organization 2001; Borisov 2004). However, it is very difficult to get comprehensive information and data about its present status. It seems that statistics on the use of long-distance commuting for the

[13] Cost considerations were already during the Soviet time an important factor for regional development; see for example Bogudinova (1985).

whole of Russia do not exist, since the state is not anymore centrally organising the process (Belaya 2007; Zalkind 2007). Some even conclude that long-distance commuting is almost unresearched in Russia today (White 2007). There are some detached numbers for single cases available that give a rough understanding of the extent to which shift-work is relevant. Reshevskaia (2005) estimates that in 2005 about 26% or about 30 000 of all of Gazprom's employees working in the north are long-distance commuters (11% intra-regional and 15% inter-regional). For the entire Khanty-Mansi Autonomous Okrug the number of commuters in 2003 is estimated by Borisov (2004) to be about 71 000. These numbers show that long-distance commuting definitely has its place in today's business structures; most of all in the extraction industries, but also for example in forestry, and that it needs to be studied (Dimitrieva 2007).

The decision to use long-distance commuting is made by the two most influential stakeholders, the state and the companies. Both have their own interests in arranging shift-work operations. For the companies economic reasons are naturally most important. Long-distance commuting is for example used to get cheaper (e.g. from now independent stated of the former USSR) or highly educated labour from elsewhere to work sites in the north (Borisov 2004; Khariton 2005; Madsline 2006). The interests of the state are not as clearly defined. On one side long-distance commuting helps in restructuring the settlement structures of the north, for example in offering much wanted alternatives to permanent residence or ending the lack of skilled labour. Therefore authorities, particularly on the regional level, are often in favour of long-distance commuting (Drobizheva 1999; Paton Walsh 2003; Eilmsteiner-Saxinger 2008; Sotnik 2008). On the other hand there are also strong voices to be heard that dislike the growing use of the *vakhtovyi metod*, among them President Medvedev and the representative of the president for the Urals Federal District Latyshev (Latyshev 2008; RIA Novosti 2008). They seem to be in favour of permanent settlements.

The third category of the main stakeholders involved is the employees. As I have shown elsewhere, many of those employed at long-distance commuting operations are rather satisfied with their work arrangements (Spies 2006, 2008, 2009)[14]. The *vakhtoviki* often develop a distinct identity based on their way of life and do not wish to change it (Eilmsteiner-Saxinger 2008, 2009). On the other hand, *vakhtovyi metod* does not have a very good reputation in Russia (Dorozhkin 2003; Zalkind 2007). Many see the social, psychological and physiological disadvantages as pivotal and do not wish to enter the long-distance commuting labour market or continue their involvement.

Predictions about the future of long-distance commuting are not very easy since the preferences of the involved stakeholders are not straightforward. The employees see advantages and disadvantages and also the influential actors of the state express very different opinions. It seems that there is a struggle between a pragmatic fraction that is in favour of shift-work, and those that favour a strong Russian presence in the resource peripheries and reject the displacement of permanent population. Only the industry seems to be largely in favour of long-

[14] Good examples for the positive living conditions of long-distance commuters in the Russian North are presented by Follath and Schepp (2007) and Seiser (2007).

distance commuting. Since it is the companies that actually implement commuting operations, and given the fact that the northwards thrust is ongoing (for example to the Yamal Peninsula or to off-shore fields), it seem most likely that long-distance commuting will play a prominent role in the future of the Russian resource industry and northern development. The organisation of labour processes and labour relations based on the *vakhtovyi metod* is therefore relevant since the successful management of Russia's key industry is and will be concerned.

4 ORGANISATIONS, THE MANAGEMENT OF LABOUR AND LONG-DISTANCE COMMUTING

4.1 Basic concepts

The focus in this chapter is on the organisation of work and the question of how the administration of labour processes is changing due to the implementation of long-distance commuting in resource peripheries. It is therefore of interest to introduce the main approaches to organisations and the management of work during the past. Based on this knowledge it will be possible to develop an extended understanding of labour processes that is required under the preconditions found in this case study.

The roots of organisational studies can be traced back to the second half of the 19th century, at a time when capitalist industrialisation started to change the preconditions for work. A central goal of studying organisations has traditionally been to mediate between collective needs and individual wants in order to maximise outcome (Reed 1996; Procter 2005). Organisations are considered as complex and constituted according to very different understandings. Defining organisations all-embracingly is therefore challenging (Veen and Korver 1998). At a basic level, organisations can be defined as associations of individuals aiming at achieving goals by implementing a division of labour within a framework of formalised rules and hierarchies (Veen and Korver 1998). Accordingly, it is not possible to distinguish utterly between individuals and organisations; rather organisations are systems of individuals (Schmid 2004). All theorising on organisations is therefore bound to time and place and is, as a result, contextual (Reed 1996).

The understandings of organisations as well as of the philosophies behind managing the organisations have changed and are still changing. Two philosophies, which can be depicted using the machine and the organic metaphors, have nevertheless been the main concepts for understanding labour processes in organisations (Doyle 2003). The machine metaphor stands for the organisation of work according to the principles set by the scientific management methods. The organic metaphor represents approaches that focus on individuals as emotive actors and are commonly associated with the human relations school of management.

The scientific management method is strongly associated to Frederick Taylor and is therefore also referred to as Taylorism (Strang and Kim 2005). The American engineer created this strongly rationality based and deterministic-positivistic influenced method at the beginning of the 20th century founded on his formal and ‘scientific’ studies of work processes. The focus is on repetitive tasks and time-motion studies designed to improve the efficiency of those tasks (Veen and Korver 1998). Based on his observation of manual work, Taylor formed several general rules for the organisation of work in an unambiguous

division of labour and with the goal of mass production. He stated that each task has to be done by a carefully chosen and suitable individual capable of doing precisely that job, each work process should be divided into as many separate tasks as possible that require just a minimum of training, workers do not need to think about their tasks, and finally that workers are motivated by progressively increasing monetary rewards only (Doyle 2003; Bolton 2005). All these principles, which explain the machine metaphor mentioned above, led Taylor and other advocates of this approach[15] in their belief that there is in each and every organisation and work process, the one best way of achieving output maximisation and solving organisational problems.

As a consequence of the scientific management practise, the worker became an individual unit of production with little room for emotions, thoughts or other expressions of individuality (Bolton 2005). The goal of Taylorism is therefore the clear separation between the workers hands and brains and to control the knowledgebase underling the work processes and production. Moreover, the planning of work was based on the separation of the workers from all external disturbances (Veen and Korver 1998). Henry Ford's introduction of the assembly line broadened the control of the worker by determining additionally the place and pace of work (Graham 2005). The societal structures that started developing in the early 20th century based among others on the principles of increasing rationalisation, specialised division of labour, and mass production has since been labelled as Fordism (Amin 1994; Bolton 2005; Tonkiss 2006).

At the time the Fordist society and the scientific management approach were considered as very progressive. But it needs no exceptional imagination to see potential problems of the systems when considering the workers' situation. The outcome of Taylorism is a very unsatisfying, even scary, work environment, and turnover rates were accordingly high (Doyle 2003). From an economic perspective the inability of the system to deal with change and dynamism in complex organisations are considered now in many cases as unprofitable (Reed 1996). Finally, Taylorism focuses so much on the microcosms of the work group and, as a consequence, neglects more general structural and administrative aspects of organisations (Veen and Korver 1998). For these reasons, Taylorism (and Fordism) was increasingly criticised towards the middle of the 20th century. Nevertheless, its legacy is still an important factor in the organisation of work, usually in the form of one of manifold variations that have built upon Taylor's original ideas[16] (Veen and Korver 1998; Doyle 2003; Batt and Doellgast 2005).

From the 1920s onwards a counter-movement developed as a direct reaction to Taylorism (Bolton 2005). According to the new concept, organisational actors have to be considered as social actors that are not only driven by rationality but also by emotions. Actors are not pure economic utility maximisers, but also have social and psychological needs beyond the materialistic; this inevitably necessitates dealing with the human factor in management (Nohria and Gulati 1994; Staw 2004). Furthermore, individuals and groups in organisations are a part of the same integrative 'organism' and they function according to the goals

[15] E.g. Fayol and Barnhard

[16] For example, Batt and Doellgast (2005) identify the situation in call centres as new taylorised work organisations or lean production as democratic Taylorism.

of organisations only if their needs (also non-monetary) are satisfied (Bolton 2005). The reciprocal influences that all parts and actors of organisations have on each other, comparable to the way in which living organisms function, explains why the new thinking is depicted using the organic metaphor. Organisations have to be described as systems with formal and informal structures in which social evaluation takes place and that are not only orientated towards the production of goods and services (Veen and Korver 1998). The fundamental criticism of Taylorism is accordingly the dehumanising effects of scientific management and its inevitable compromise of creativity (Bolton 2005; McKinlay 2005).

The new thinking became known as the human relations approach and was the dominant school of thoughts in organisation studies until the 1960s, but still remains influential today[17] (Nohria and Gulati 1994; Bolton 2005). A major cornerstone in the development of the human relations approach was a series of long-term field studies by American researchers at the Hawthorne factory in Chicago during the 1920s and 1930s. Due to the observation that any attention given to workers and groups increases productivity, independent of what kind of attention is shown, the studies are evidence for the importance of motivation of the individuals involved in the work process (Veen and Korver 1998). The focus on motivation and informal structures in organisations led to the introduction of social aspects into management thinking and the thorough consideration of the human factor in business decision making (Dipboye et al. 1994; Veen and Korver 1998). Management of work is not anymore conceived as an act of rational economic planning but instead as an instinctive act of craft by a careful observer of human behaviour (McKinlay 2005).

The main criticism of the human relations school is that the approach does not take the interaction of the organisations and their environments seriously (Nohria and Gulati 1994). The focus is still on managers that are able to 'deal' with the needs of individuals in organisations in order to overcome functional problems. Even though workers are not anymore treated as individual units of production, they still do not come to life as distinct human entities separate from the organisation (Bolton 2005). External influences, such as political, social, psychological and economic factors, remain neglected.

The outcome of such criticism was a rethinking about the human relations school starting roughly in the 1960s. As mentioned, it was realised that the basic understanding of individuals in the scientific management and human relations approaches were not that far from each other. The human relations school was found guilty by its critics of still overrating the power of management techniques to deal with subjective interferences (Bolton 2005). By considering organisational actors as socially embedded and emotive actors whose relationships are constantly evolving, among others through struggle and conflict, the understanding of organisations became much more complex and people in organisations finally got personalities (Schmid 2004; Schneider and Smith 2004). The additional incorporation of various kinds of other contextual factors (historical, economic, political etc.) into organisation studies and the resulting explicit focus on the relationships between organisations and their

[17] The main supporters and contributors to the human relations school were Mayo, Hertzberg, Maslow and McGregor (Bolton 2005).

environments marked the departure from the human relations school towards a new stage (Dipboye et al. 1994; Nohria and Gulati 1994). After the rather strict separation between the economic and social spheres that characterised the studies of organisations during the greater part of the 20th century, the new approach sees organisations as entities of "…socially constructed and sustained 'order' necessarily grounded in the localized stocks of knowledge, practical routines and technical devices mobilized by social actors in their everyday interaction and discourse" (Reed 1996, 42).

Clearly, the new thinking is more complex and holistic than earlier concepts of organisations. Not as clear is the labelling of the new approach. It seems that the times of unambiguously hegemonic understandings of organisations are over. What characterises the new stage is the implementation of non-orthodox approaches that are not subject to rational explanations, the dealing with the interplay between formal and informal structures and seeing organisational actors as active and knowledgeable agents whose identities are shaping the structures of the organisations (Nohria and Gulati 1994; Bolton 2005; Rubery 2005). That leads to a notion of organisations as social systems. More precisely, the notion of organisations as open-systems that continuously interact with an environment in which they are inescapably embedded. Consequently, the, or at least a, major force behind developments in and of organisations has to be contingency rather than universality and the research focus for studying theses developments has to shift from the macro to the micro level (Reed 1996). It becomes necessary to distinguish between the formal organisation (for example companies and their legal status, etc.) and the practices in organisations that are contingent on place and time. A possible third and more abstract approach to organisations could be represented by the stances of involved stakeholders and their ideas of how the organisation should be managed. Consequently, rather than forming one clearly defined concept of organisation, these basic principles are constitutive for many different schools of thought that dominate today's perceptions of organisations and labour processes.

What are the consequences of this understanding of organisations? Employees are obviously at the boundary between organisations and the external environment (Nord and Fox 1996). These borders become increasingly blurred due to the comprehensive interactions with and the embeddedness of organisations in their environment (Jackson 2006; Yeow and Jackson 2006). Veen and Korver (1998, 11) express the challenges for those responsible of running organisations with these words:

> "Gaining a sufficient degree of efficiency, control, stability, structure, and motivation is the complex problem of understanding and managing the area that defines the locus of and the tension within the many relationships of individuals-organizations-environments. The various approaches show that the organizations must navigate among a number of obstacles to arrive at a solution for this problem. It should control the behaviour of its members, and guide it in the direction preferred by the organization. At the same time, it ought to guarantee that these individuals remain sufficiently motivated. … More generally, the most basic problem for an organization

> is to meet the demands of both its members and its environment, while maintaining its own identity and cohesion."

What does this mean for the organisation of work? While context is becoming more important and employees are being given more autonomy, it seems that workplaces have become, for the time being, less manageable (Bolton 2005; Thompson 2005). Since the world of work is more complex, the means for understanding also have to become more complex (Ackroyd et al. 2005). But after all, it is still the firms and employers that are the architects of employment (Bolton 2005; Rubery 2005). It is in their hands to shape the structures and push their organisations in a desired direction. The tools for doing so are today considered to be found in the human resource management (HRM) approach (Kamoche 2001; Legge 2005).

Human resource management is not a new concept but it is in its context that today's enlightened view on human capabilities in the organisational environment occurred (Drafke and Kossen 1998; Doyle 2003). Simply the use of the term 'human resource management' shows a change in attitude towards employees, especially if compared to the formerly used expression 'personnel management'. Human resources become recognised as a central business concern and investments into the labour force worthwhile (Storey 1989). Personnel is now understood as an asset and not merely in terms of costs (Torrington 1989).

At the heart of human resource management lies a fundamental contradiction. The management has to achieve simultaneously control over the staff and get its consent, two tasks that seem difficult to reconcile (Legge 2005). The more so as diverse groups of employees demand the matching of management and motivational practises to their needs. Successful management of these challenges in organisations of post-modern societies is most likely to be achieved through commitment and development of a corporate culture rather than imposition of hierarchical and bureaucratic central structures (Bolton 2005). The implications of this axiom for the practical and applied organisation of work are manifold. Just as multifaceted are the many management tools and practices that were developed based on these principles, e.g. strategic human resource management, high-performance work systems, and hard and soft modules of human resource management.

The different approaches to human resource management are characterised by what Storey (1989) calls the human resource management cycle (Figure 7). Achievement of employee commitment and fulfilment of the organisations' goals can be reached accordingly through the adequate interplay of the following factors: employee selection, performance, appraisal, development, and rewards within the organisation. As a matter of course, such a managerial understanding of work organisation is criticised for neglecting the focus on humans and repeating the same 'must-do'-style advise as earlier proposed by the human relations school (Bolton 2005). In order to develop this basic concept of human resource management and the organisation of work further, the organisations, as the key locations, have to be placed in a spatially and temporally context, offering a macro framework for the evaluation of micro processes (Bolton 2005).

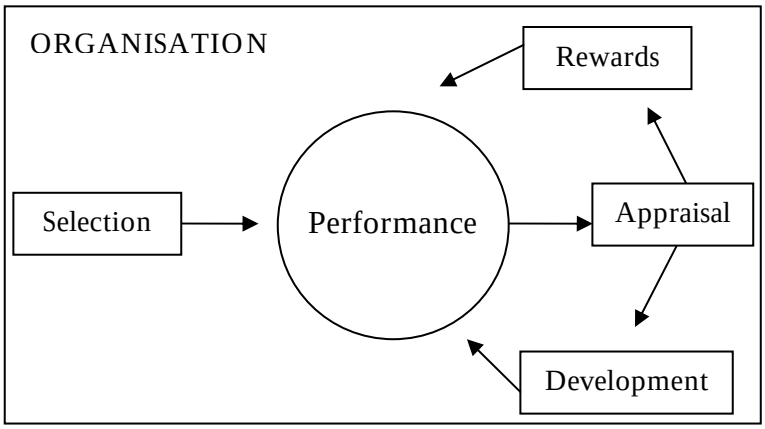

Figure 7. Human resource management cycle, devolved based on Storey (1989, 7)

Figure 8 illustrates how the human resource cycle is embedded in the environment of every organisation. All the activities of the management within the organisation interact with forces and processes that are not within the direct control of the administration. Therefore, the boundaries of organisations are permeable and cannot be seen as clearly defined borders. In the case of employee selection, it is intuitively comprehensible that it cannot proceed only within the organisation. New employees usually come from outside the organisation. On entering the organisation, they change the status quo by acting and reacting as individuals, either rationally or emotionally, intentionally or subconsciously, but certainly also influenced by the new environment. Also the other steps of the human resource cycle do not happen in isolation from their context. Due to the strong influence of contingent factors, human resource management is a never-ending search for compromises between best practice and best fit, the latter being more likely to be realised (Purcell 1999; Legge 2005). A telling example for the challenge of finding a general and suitable approach to the management of labour is the situation in the Russian North and the application of long-distance commuting. Under these circumstances the management has to find solutions for work processes that have to be organised in very unconventional conditions (harsh natural surrounding, extreme remoteness, often absence of most basic infrastructure, etc.) and considering a very heterogeneous workforce with different cultural backgrounds. Both, location and workforce do not represent any average concept and their treatment can hardly follow the same rules as in more regular settings.

Following the above argumentation leads to the conclusion that each organisation has to find its own solutions for its way of arranging work processes. Certainly, there are aspects of the work process that can be considered to follow more or less standardised rules in the majority of organisations. But as soon as the preconditions for labour processes change due to internal or external influences, it is likely that repercussions on the organisational structures can be found. The next chapter therefore focuses on the organisation of work in the

northern Russian resource industry that operates commonly with long-distance commuting and how this form of labour organisation can be arranged to meet the needs for all involved stakeholders.

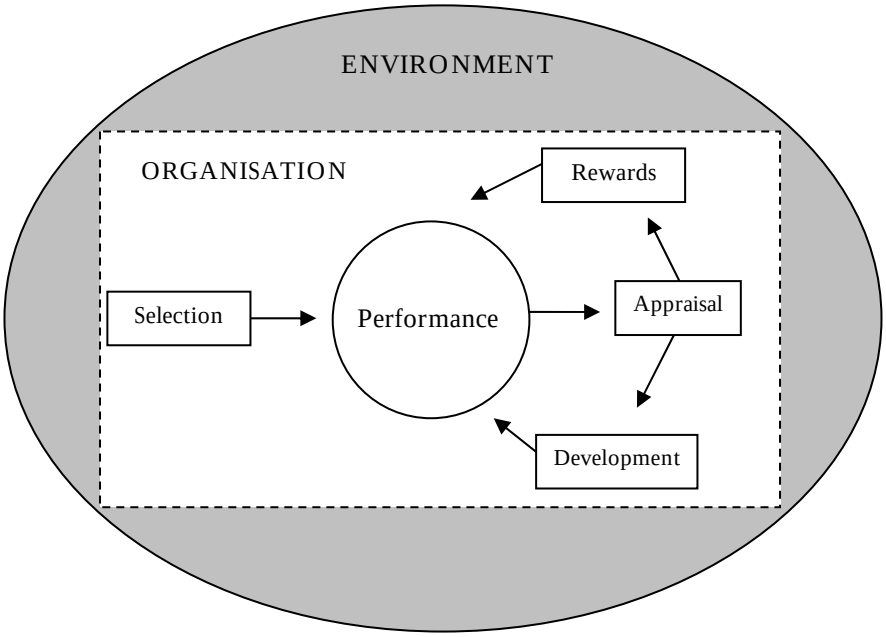

Figure 8. HRM, organisations and environment

4.2 Organisations, human resources and long-distance commuting

4.2.1 Extended concept of human resource management – intersecting and detached environments

As has been shown in Chapter 3.1, long-distance commuting is characterised by the spatially and temporally bifurcation of the employees' lives between a home and a work environment. If the context of the environment has any significance for the organisation of labour processes, as assumed in the above introduced concepts, then it appears very likely that this rather distinguished way of running the resource industry in the Russian North will have its influences on the practices of human resource management. Indeed, it seems to be almost self-evident that arrangements for transportation between home and workplaces, the organisation of accommodation facilities at very remote locations, or the implementation of compressed work shifts, for example, are influencing the way of managing firms, i.e. organisations, as the one analysed in this case study.

One concept for handling the significantly extended amount of factors gaining relevance for studying the organisation of work is the contingency approach. Seeing context and the interplay of numerous factors as linked to the situation of organisations might be a pragmatic way of grasping a diverse real-

world setting. But is such an endeavour helpful in terms of studying the organisation of work? It can be argued that this approach inhibits further investigations due to its overwhelming complexity. Purcell (1999) and Legge (2005) suggest, for example, that the quest for suitable management practices under such conditions leads inevitably into a cul-de-sac. It is simply not possible to control all contingencies. How then can the study of work processes be arranged in order to achieve manageability of a multi-facetted reality without compromising it?

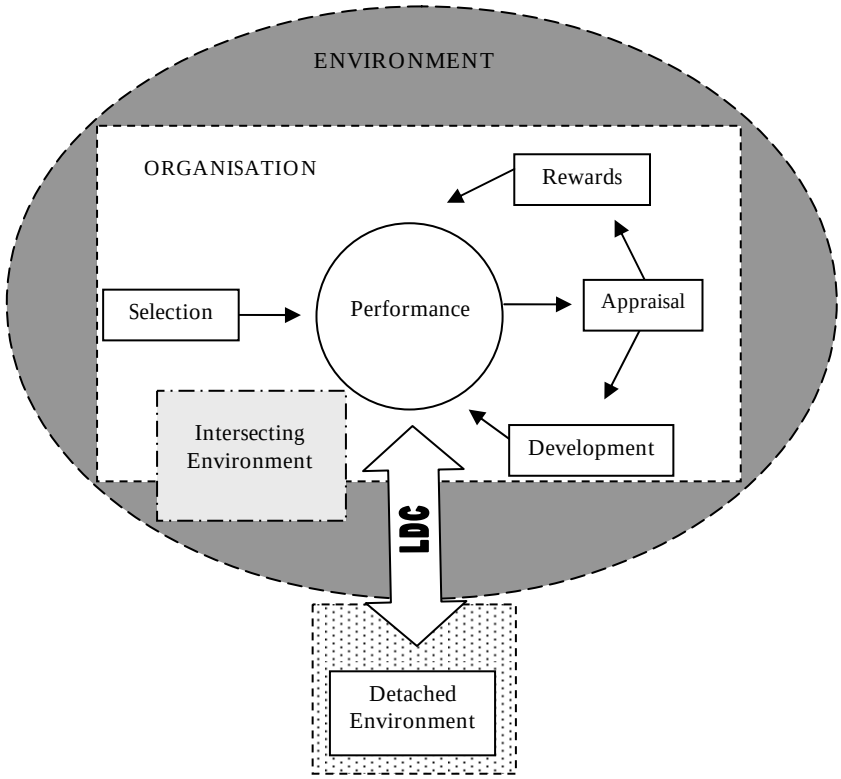

Figure 9. HRM, organisations and extended environments with LDC

I suggest an approach to the analysis of work processes under long-distance commuting conditions in the Russian resource periphery as it is depicted in Figure 9. It adds to the concept of human resource management shown in Figure 8, which recognises the embeddedness of organisations in their environment, more specific adjustments that are relevant due to long-distance commuting schemes. Rather than stressing the general importance of context, which leads to the overwhelming complexity, I am in favour of naming the changes that long-distance commuting cause for the environments in which the organisations are embedded. This allows an analysis of the relevance of these aspects for the organisation of work. This does not mean that I am advocating for a restriction of the importance of context. As shown in Figure 9, even the borders of the environment have to be open for external influences, since it is

difficult to define one clear environment under the preconditions of long-distance commuting.

What then are the specific adjustments? Long-distance commuting adds two dimensions to the environment of work processes that are significant. In Figure 9 they are symbolised by two rectangles. One is situated at a central place and overlaps the boundary between organisations and its external environment. Consequently, it can be labelled as an intersecting environment and represents, for example, the accommodation complex found in long-distance commuting firms. In conventional understanding, accommodation arrangements and the organisation of free-time activities are not considered as part of the internal responsibility of work organisations. At remote workplaces the unambiguous distinction between work sphere and free time fails. For example, it seems reasonable to assume a negative impact on the work process and functioning of firms if the personnel is unsatisfied with the accommodation conditions. It is therefore in the interest of the firms to manage these aspects and meet the needs and wishes of the employees, a task that is not considered in conventional human resource management and that is certainly also influenced by external factors.

A second extension of the environment takes place at a distance. In Figure 9 the environment is symbolised by the disjunctive rectangle at the bottom and can be labelled as a detached environment. It represents the home environment of employees engaged with long-distance commuting. The way of life and social contacts in this spatially remote environment is influencing the way in which the staff acts, reacts and perceives the work situation at the production sites. Therefore, it has to be included in the analysis of work processes. Furthermore, the way in which the long-distance commuting is practically organised, that is the processes bridging the detached environment with the firms' immediate context, will have repercussions on management style. Moreover, it has to be an integral part of the human resource management.

The focus in the analysis of work processes at remote work sites that are operated with long-distance commuting is, hence, extended to factors that hardly can be included in the sphere of conventional approaches of human resource management. Following dogmatic-like understandings, as applied by both Taylorism and the human relations school, is not helpful. Nor is it helpful to lean back on a contingency view alone. In the next chapter I implement an investigation of employees' views that is based on the extended perspective on human resources as laid out above. It is designed to clarify the importance (or missing importance) of the intersecting and detached environments and their implications for the organisation of work.

4.2.2 Organisation of work with long-distance commuting – the employees' verdict

The following section presents an empirical analysis of the preferences and perceptions of SeverTEK's employees with respect to long-distance commuting and different specific aspects of their work relations. The type and quality of data acquired with the questionnaires directed the selection process for the applied statistical methods. From the wide range of statistical tests available for social scientists, I chose to concentrate on comparing and analysing mean values of

different respondent groups. This approach is well suited for attitude measurements, which are the main component of the questionnaire (Appendices 1 and 2). The approach results in a compressed and qualitatively enhanced data structure. Therefore, constructed variables that are based on several items from the questionnaire each are at the centre of the following analyses. Those items are all measured on a five-point Likert scale (1-5) and they are inserted into the variables with equal weights. Consequently, the variables represent the arithmetic mean of the respondents' answers to all the items that were used for their construction (Table 2). Based on this data compression the quality of the outcome increases and allows for extended statistical enquiries (Bryman and Cramer 2004). The outcome can as well vary between one and five, whereby higher outcome figures stand for more positive appraisals of the respondents and, hence, higher satisfaction with the theme covered by the variables[18].

Two constructed variables are designed for revealing the importance of different environments relevant for long-distance commuting (Figure 9). The first contains nine items that express an appraisal of the intersecting environment (Table 2). Accordingly, those items are chosen that are related to different aspects of the life at the remote South Shapkino accommodation complex. Simply put, this variable could be labelled as 'work environment'. However, since the situation on work sites that apply long-distance commuting is characterised by features that cross the conventional border between free and work time, I refer to this constructed variable as the 'Intersecting environment'. The importance of the detached environment is evaluated by the second constructed variable. It contains items on family issues and relations between employees at their living place and could also be introduced as the 'home environment' variable. Nevertheless, due to the unclear meaning of term 'home', in particular for those involved in extensive commuting, I label this variable as 'Detached environment'. The third variable is constructed of the average outcomes from items that deal with issues typical for long-distance commuting. Since the commuting is the link between the two environments and the conventional organisation, its influence needs to be analysed. The label 'Long-distance commuting' is used for this variable. Finally, in order to evaluate the significance of the two environments and long-distance commuting a last constructed variable with the label 'Classic management' contains information on the assessment of conventional management issues (e.g. financial aspects, relations between management and workers, motivation, workers' satisfaction, etc.). Contrasting classic management approaches with the management approaches at remote workplaces where long-distance commuting is used will demonstrate the relevance of traditional versus 'extended' factors in human resource management.

[18] Some of the items had to be scored in reverse order in order to maintain a consistent orientation of the scores.

Table 2. Constructed variables

Constructed variable	Included original variables (sub-variables)
Intersecting environment	1. The layout of the accommodation complex helps everyone to feel integrated into the work community 2. There is no purpose in the way this accommodation complex is designed 3. Living together in the accommodation complex is stressful 4. It causes problems when everybody knows everybody else's business 5. There is hostility between people in this accommodation complex 6. Many people are inconvenienced by the behaviour of their colleagues 7. Many people are inconvenienced by the noise of their neighbours 8. I believe that those who administer this complex care about us employees 9. Employees have enough influence on the provision of recreational facilities
Detached environment	1. My work schedule causes problems for family life 2. The long work shifts increase responsibility and pressure on the spouse 3. Many employees and their families come together also in free time 4. My family would not move to a remote oil town 5. Family problems with organising social and recreational activities due to my shift-work can be overcome without serious difficulties and drawbacks 6. I do some hobbies with other SeverTEK employees in my free time
Long-distance commuting	1. Flight connections to South Shapkino 2. Long-distance commuting is a modern approach to work organisation on an oil field like this 3. I want to work as a long-distance commuter until I retire 4. Compensation for staying at the work site several days is fair 5. I would like to have more flexible working hours 6. My colleagues have problems with adjusting to the shift rotations
Classic management	1. They treat me like a number in this company 2. The company makes me feel like I belong to it 3. The company considers workers' matters appropriately 4. Income disparities are too large between employees 5. My pay is adequate for my needs 6. My pay is fairly satisfying 7. The promotion system is fair 8. My prospects in the company are very limited 9. Time passes quickly during work 10. I have enough say in how I do my work 11. I have enough say in what I do 12. My work is the same day after day 13. I can discuss problems easily with my boss 14. My boss does a good job 15. The management system should be improved 16. There are enough consultations between the management and others

The following statistical analyses are based on two main approaches. At first I investigate the interrelations between the four constructed variables and groups of respondents (Figure 10 and Table 3). Those groups are formed according to general characteristics (age, family status, sex, type of employee) and case specific distinctions. The different average scores for the constructed variables of the groups of employees are displayed in Figure 10. In order to assess the differences found among the groups the *t*-test is applied. The independent *t*-test is a

parametric test for differences between mean values and requires normally distributed populations and data measured at least at the interval level (Field 2005). The assumption of normal distribution is met but considering outcome from constructed variables (or summated scales as such data is also referred to) as interval level data is disputable. According to Bryman and Cramer (2004) such an outcome can be considered as interval/ratio data in spite of its limitations and I follow their argumentation here[19].

The second statistical approach is designed to determine which factors have the most influence on: (1) the respondents' preferences for long-distance commuting as compared to 'normal' employment schemes, (2) the desire to keep on working in the same job until retirement, (3) the judgment on the management of SeverTEK, and (4) the appraisal of employees' position in the company. The four constructed variables and the same general factors that were already used in forming the respondent groups are utilised as predictors. Logistic regression models, which are suitable for dichotomous categorical outcome variables (Field 2005), will reveal the significance of the predictors and their strength. Other tests (cross-tabulation and Pearson's correlation test) are used in order to support the two main approaches and to strengthen the argumentation on the identified patterns.

As specified above, the first analytical approach to the research questions tests whether the results for the four constructed variables (in the form of mean values) vary significantly among the mutually exclusive pairs of respondent groups. In plain terms, I test whether different employee characteristic lead to altering perceptions of the intersecting and detached environments, and altering perceptions of the long-distance commuting process as well as of classic management approaches. A first impression of the results can be gained from a look at Figure 10. It becomes clear that some of the pairs of respondent groups yield strongly differing results (e.g. the groups judging on the management system and their outcome for the intersecting environment). Therefore, Figure 10 is important for understanding the orientation of the results intuitively by reading from the graphs which groups have higher and lower satisfaction scores for the constructed variables. Other results are too indistinct for any first-glance interpretation. In those cases the numerical results from the *t*-tests displayed in Table 3 are providing the precise outcome and possibilities for accurately interpreting the differences found between the respondent groups' attitudes towards the four constructed variables.

[19] Due to this quality issue of the data, I controlled the *t*-test's result by comparing the outcome with the results from a non-parametric Mann-Whitney test. The significant differences found were all the same except in one case. The Mann-Whitney test finds a significant difference ($p < .05$) between those who think that working and living places should be the same and those who do not think so for the scores of the intersecting environment variable. The *t*-test does not show in this case a significant outcome (Table 3).

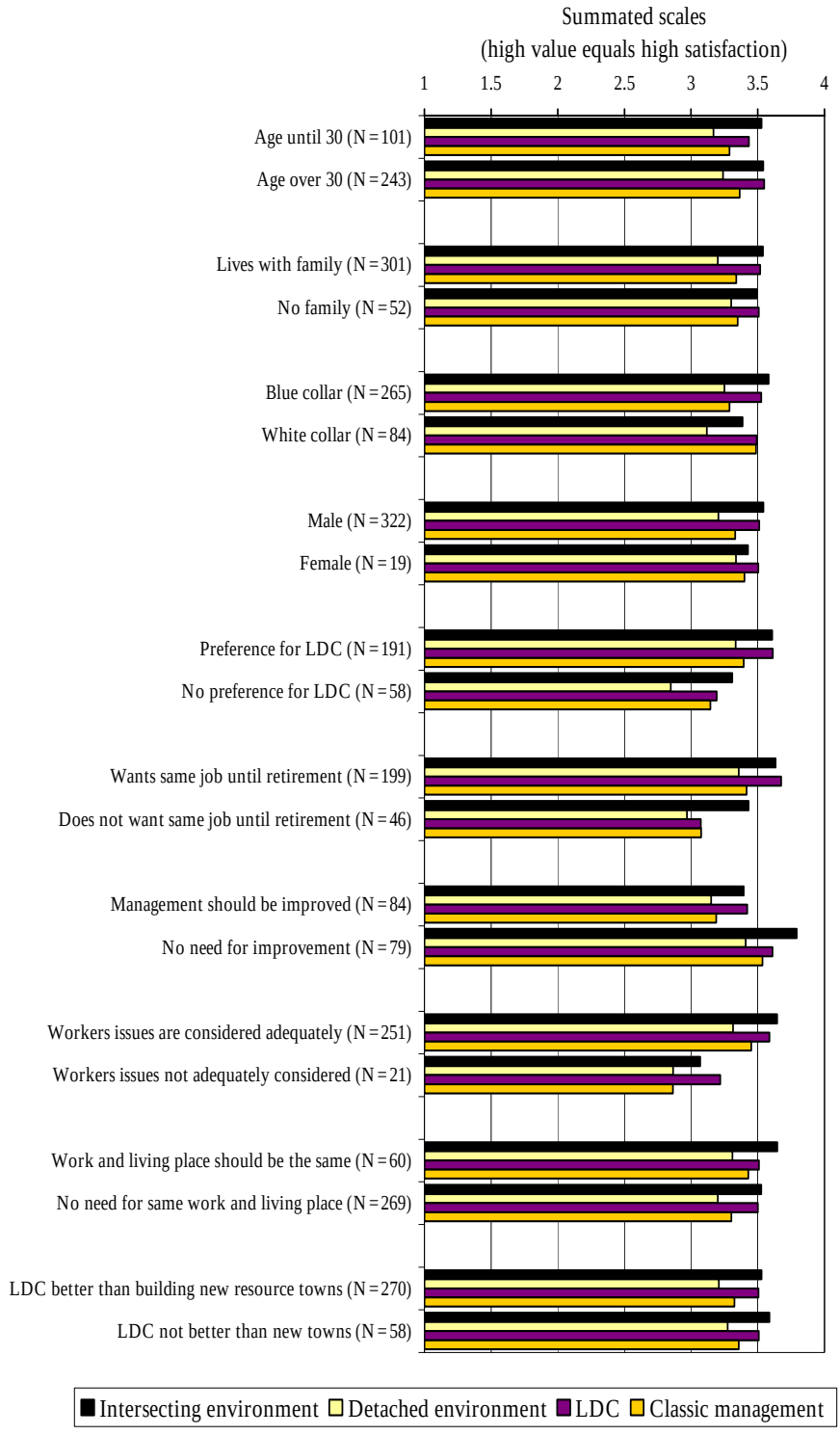

Figure 10. Constructed variables and respondent groups

Table 3. Respondent groups and differences in their scores for the constructed variables

		Constructed variables			
	N	Intersecting environment	Detached environment	LDC	Classic management
30 and under	101	*t* = -0.209 df = 338 *p* = .834	*t* = -1.088 df = 322 *p* = .277	*t* = -2.285 df = 341 *p* = .023*	*t* = -1.491 df = 342 *p* = .156
Over 30	243				
Family	301	*t* = 0.29 df = 347 *p* = .529	*t* = -1.202 df = 330 *p* = .230	*t* = 0.160 df = 350 *p* = .873	*t* = -0.153 df = 351 *p* = .878
No family	52				
Blue collar	265	*t* = 3.130 df = 343 *p* = .002**	*t* = 1.865 df = 326 *p* = .063	*t* = 0.637 df = 346 *p* = .525	*t* = -3.643 df = 347 *p* <.001***
White collar	84				
Male	322	*t* = -0.994 df = 335 *p* = .321	*t* = 1.032 df = 318 *p* = .303	*t* = -0.061 df = 338 *p* = .951	*t* = 0.673 df = 339 *p* = .501
Female	19				
Preference for LDC employment	191	*t* = -4.266 df = 246 *p* < .001***	*t* = -6.213 df = 242 *p* < .001***	*t* = -7.169 df = 247 *p* < .001***	*t* = -3.981 df = 247 *p* <.001***
No preference for LDC employment	58				
Wants same job until retirement	199	*t* = -2.530 df = 243 *p* = .012*	*t* = -4.766 df = 238 *p* <.001***	*t* = -10.132 df = 243 *p* <.001***	*t* = -4.948 df = 243 *p* <.001***
Does not want to stay in the same job	46				
Management should be improved	84	*t* = -5.569 df = 159 *p* <.001***	*t* = -3.179 df = 153 *p* = .002**	*t* = -2.785 df = 161 *p* = .006**	*t* = -5.314 df = 161 *p* <.001***
No need for improvements	79				
Employees' issues are considered adequately	251	*t* = -5.477 df = 268 *p* <.001***	*t* = -3.855 df = 259 *p* <.001***	*t* = -2.846 df = 269 *p* = .009**	*t* = -6.678 df = 270 *p* <.001***
Not considered adequately	21				
Work and living place should be the same	60	*t* = 1.760 df = 326 *p* = .079	*t* = 1.489 df = 315 *p* = .137	*t* = 0.138 df = 327 *p* = .890	*t* = 2.138 df = 327 *p* = .033*
Do not need to be the same	269				
LDC is better than building new towns	270	*t* = 0.856 df = 323 *p* = .393	*t* = 0.859 df = 314 *p* = .391	*t* = 0.013 df = 326 *p* = .990	*t* = 0.192 df = 326 *p* = .848
Building new towns is better than LDC	58				

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. Cells with significant differences are highlighted with grey colour.

The ‘Intersecting environment’-variable yields significantly different results for five pairs of respondent groups (Table 3). The strongest interrelations are found related to the employees’ preferences for long-distance commuting employment, the judgment on the management, and the view on the employees’ position in SeverTEK. Additionally, those who would like to work in their present job until their retirement and blue collar employees score as well significant higher outcomes for this constructed variable. From another point of view these results imply that those respondent groups yielding significantly higher results, and thus those respondents that are presumably dealing better with living at the oil field during their shifts, are more likely to prefer long-distance commuting over conventional employment, they have a more positive opinion of the management, they feel as if they are treated better by the company, and would like to continue their employment in the long term. Since the accommodation at a remote work site is a central feature of long-distance commuting, some of these results are not surprising but are nonetheless important. The significant differences found among the two types of employment groups tell us that workers or blue collar employees are more satisfied with the intersecting environment.

The results for the ‘Detached environment’-variable are surprising since they do not point to significantly different perceptions of those with family ties and those without. The variable includes several items on the implications of long-distance commuting for spouses and families of the respondents (Table 2). Generally, family ties are not relevant for any of the constructed variables in this study. Either the influence of families is only secondary, or those without a spouse and children are also facing difficulties, for example due to being separated from their friends or parents. Age, sex and type of employment are neither relevant for this variable. Unlike these grouping factors, a successful handling of problems related to the detached environment is strongly associated with one’s job attachment (preferences for long-distance commuting, wish to continue the ongoing employment, better attitude towards the management, and the personal situation). As with the intersecting environment, the respondents’ experiences about being torn between two environments do not lead to a final judgment that the living and working place should be the same.

The ‘Long-distance commuting’-variable comprises items on typical practical arrangements and general judgments on this form of labour organisation. It is included into the analysis as a connector between the detached and intersecting environments as well as the organisation as such. Also for this constructed variable, significant different mean scores were found among the four pairs of groups representing attitudes towards long-distance commuting employment, plans for staying in or leaving SeverTEK, the judgments on the management and the consideration of employees’ issues. Those respondents perceiving the organisation of practical and general aspects that are contained by the ‘Long-distance commuting’-variable (Table 2) more positively, as indicated by higher mean scores, are more likely to belong to a group of respondents that represents preferred employee behaviour (i.e. preference for LDC, wish to stay in SeverTEK until the retirement, better judgment of the management, and considering employees’ issues as adequately recognised). Contrary to all other constructed variables the factor age is also relevant here. It appears that the older part of SeverTEK’s staff copes better with the practical and general issues. This

could be a result of longer work experience and habituation, or of different demands and notions of the working environment or life in general of the younger (post-Soviet?) generation of employees.

The last constructed variable, which grasps the attitudes towards approaches and means of classic management endeavours, is significantly different among a total of six pairs of respondent groups, more than any of the other variables. Those satisfied with the classic management (i.e. monetary aspects, relations with the superior, perception of work routines etc.) are not surprisingly also those who like their job more and want to stay in it. Nor is it surprising that white collar employees are more satisfied with the classical management tools, as their significantly higher average scores for this constructed variable compared to the blue collar group suggest. After all, it is them who set the rules, and in many respects they enjoy better working conditions (Spies 2008).

The constructed variable for the classic management also varies significantly between those respondents who think that work and living place should be the same and those who do not see such a need. Surprisingly, those who would like to see both places at the same geographical location are more satisfied with the management. Since long-distance commuting will never allow for such a combined place of living and working, it was expected that the results would show the opposite pattern. Therefore it is difficult to conclude on the reasons for the found associations. The living and working place issue, as well as the last pair of groups in Table 3 (LDC is better than establishing new resource towns), were included into the analysis in order to gain information on more general implications of the different environments and long-distance commuting related labour processes. However, it seems that the respondents' opinions on these two questions are not linked to the four constructed variables.

Overall, the results provide surprisingly little evidence for the relevance of the general factors according to which some of the respondent groups were formed. As already mentioned, the family factor is not related to any of the variables, neither is the sex of the employees. The age group factor has a significant influence on one variable and the employee group factor on two variables. In contrast to this modest influence, the case-specific factors clearly have a stronger impact (Table 3). These results are supported by the analysis of the dependencies between the four general and the six case-specific factors (Table 4). The cross-tabulation reveals that differences between the age groups are relevant and that the younger employees seem to have more problems coping (higher rejection of long-distance commuting employment, more want to leave their present job, less think that their matters are adequately considered). The only other significant difference is among the blue and white collar employees, the latter displaying clearly stronger preferences for long-distance commuting over establishing new resource towns. Living with a spouse and children does not lead to results different from those without family. Nor does the sex of the respondents have significance for the analysis.

Table 4. Dependencies between general and LDC specific groups of respondents

		Prefers LDC	Does not prefer LDC	Wants same job until retirement	Does not want the same job	Management improvements needed	Not needed	Employees' matters are considered adequately	Not considered adequately	Work and living place should be the sane	Do not need to be the same	LDC is better than establishing new resource towns	LDC is not better than establishing new resource towns
Blue collar	Count	148	41	154	37	58	58	192	17	45	202	199	48
	Expected Count	144.4	44.6	154.7	36.3	60.9	55.1	193.3	15.7	44.6	202.4	205.3	41.7
White collar	Count	40	17	42	9	25	17	54	3	13	61	67	6
	Expected Count	43.6	13.4	41.3	9.7	22.1	19.9	52.7	4.3	13.4	60.6	60.7	12.3
Age ≤ 30	Count	47	25	41	20	23	30	70	11	20	79	80	18
	Expected Count	54.7	17.3	49.2	11.8	26.7	26.3	74.9	6.1	17.7	81.3	80.6	17.4
Age > 30	Count	137	33	150	26	57	49	174	9	37	182	180	38
	Expected Count	129.3	40.7	141.8	34.2	53.3	52.7	169.1	13.9	39.3	179.7	179.4	38.6
Female	Count	12	2	11	3	2	6	14	0	2	13	16	1
	Expected Count	10.7	3.3	11.3	2.7	3.9	4.1	12.9	1.1	2.8	12.2	14.0	3.0
Male	Count	169	54	178	43	73	73	225	21	57	242	243	54
	Expected Count	170.3	52.7	177.7	43.3	71.1	79	226.1	19.9	56.2	242.8	245.0	52.0
Family	Count	162	49	173	38	72	63	209	17	50	223	229	45
	Expected Count	161.9	49.1	171.8	39.2	68.8	66.2	208.4	17.6	49.6	223.4	225.8	48.2
No family	Count	26	8	24	7	10	16	39	4	9	43	38	12
	Expected Count	26.1	7.9	25.2	5.8	13.2	12.8	39.6	3.4	9.4	42.6	41.2	8.8
		Significant differences between the age groups, $\chi^2(1) = 6.51$; $p = .011$*		Significant differences between the age groups, $\chi^2(1) = 9.40$; $p = .002$**				Significant differences between the age groups, $\chi^2(1) = 6.02$; $p = .014$*				Significant differences between the employee groups, $\chi^2(1) = 5.05$; $p = .025$*	

Note: * $p < .05$, ** $p < .01$. Cells with significant differences are highlighted with grey colour.

As a last step of this first part of statistical elaboration on the importance of different environments and general factors captured in the four constructed variables, their direct correlations are tested. In order to find out if the respondents' result for one of the four variables has an influence on the others' scores, the Person's correlation test has been calculated. Table 5 contains the

outcome of the test and provides clear evidence for positively correlated constructed variables. The figures imply a statistical strongly significant relationship with a medium to large overall effect (Field 2005). That means for the organisation of labour processes at the remote oil field that investments of the employer in improving the employees' situation with respect to any of the four constructed variables will lead to a wide multiplication effect. Any worsening of the employees' situation will have the same implications, but in a negative direction.

Table 5. Correlations between the constructed variables

	Intersecting environment	Detached environment	LDC	Classic management
Intersecting environment		$r = .456$ $p < .001$***	$r = .376$ $p < .001$***	$r = .401$ $p < .001$***
Detached environment	$r = .456$ $p < .001$***		$r = .432$ $p < .001$***	$r = .473$ $p < .001$***
LDC	$r = .376$ $p < .001$***	$r = .432$ $p < .001$***		$r = .467$ $p < .001$***
Classic management	$r = .401$ $p < .001$***	$r = .473$ $p < .001$***	$r = .467$ $p < .001$***	

Note: *** $p < .001$.

The second statistical approach mentioned at the beginning of this section aims to identify the factors that are likely to lead to employee behaviour that is desirable for work organisations. Using logistic regression models, I test which of the four constructed variables and the general demographic and work-related factors are leading to preferences for long-distance commuting, the wish to continue working in the same job, a positive attitude towards the management, and the perception that employees' matters are adequately considered. Additionally, the factor commuting distance is included in order to test if it is influencing on the employees' stances. Tables 6 to 9 contain the outcome for logistic regression models designed for predicting employee behaviour. The upper parts of the tables show which variables proved to have significant influence on the outcome and, hence, are suitable predictors for the behaviour of the respondents. The lower parts show those variables included into the model that do not have significant explanatory power. The models' overall strengths can be assessed by referring to the *R*-statistics as well as to the chi-spare figures. The *R*-square can be interpreted as an indicator for the goodness-of-fit for the data and the model, and the results stand for the variances in the outcomes explained by the model (Field 2005). The models' chi-square statistics represent the improvement of the exploratory power of the models by including the predictor variables (Field 2005).

The logistic regression model in Table 6 shows that three predictor variables lead to significant outcomes and, hence, have explanatory power for predicting employees' preferences for long-distance commuting based work relations. Accordingly, the employees are more likely to prefer commuting if they are satisfied with the general and practical arrangements of the long-distance commuting work scheme and if they are dealing well with the implications for the detached home environment. Furthermore, the preference for long-distance

commuting becomes stronger with the growing age of the respondents. According to these results, those responsible for managing the work processes need to pay particular attention to an agreeable organisation of the commutes and to concerns that are related to the detached environment at the living places of the staff. Consistent with earlier results is the role of the age factor. The management should consider the needs of the younger employees since they are less open to the way in which their work is organised. In a business environment characterised by growing lack of qualified staff and a generally ageing population, the young employees are an important asset. Regarding the non-significant factors the most interesting outcome is the missing relevance of family ties and commuting distance. As shown already above, the family factor seems to be of secondary importance. The missing significance of commuting distance, measured in kilometres, might point to a stronger significance of relative distance and the organisation of the commute in each individual case (Spies 2006).

Table 6. Predicting whether the respondents prefer LDC employment to working and living at the same place

Predictor	B	SE	Wald	Significance
Significant predictor variables				
LDC	2.303	0.625	13.594	< .001
Detached environment	1.132	0.513	4.872	.027
Age	0.051	0.25	4.270	.039
Non-significant predictor variables				
Intersecting environment	0.602	0.517	1.359	.244
Classic management	-0.381	0.606	0.396	.529
Male	0.651	1.151	0.320	.572
No family ties	-0.264	0.591	0.199	.656
White collar employee	0.204	0.504	0.165	.685
Commuting distance	0.000	0.000	0.012	.913
Constant	-12.874	2.639	23.789	< .001

R^2 = .373 (Nagelkerke). Model $\chi^2(9) = 57.712$, $p < .001$.

The respondents' wish to keep on working in the same job until they retire can also be predicted by the general long-distance commuting and age variables (Table 7). The model shows that those coping better with the commuting process and the older staff are more likely intending to stay in the job. Because of the lack of qualified staff, any company operating in the northern Russian oil industry should appreciate and hope for employees that have plans to stay. SeverTEK, for example, pays considerable attention to the long-term attachment of its staff to the company (Hanna 2004; Naskova 2004). The consequences for managing an organisation are similar to those of the last model of predicting preferences for long-distance commuting employment. While it seems understandable that older employees are more likely to wish to stay in the same job until the relatively close retirement, the need to consider the matters of importance to younger employees still remains crucial. It is also comprehensible that a good organisation of practical issues and a general appreciation of long-distance commuting will support the wish to keep one's present job. A look at the non-significant factors reveals the missing influence of both the intersecting

and detached environments. The employees' decision for their work future is apparently not based on what I call above an extended concept of human resource management. The same is again true for the conflict potential that long-distance commuting bears for families.

Table 7. Predicting whether the respondents would like to keep the same job until their retirements

Predictor	B	SE	Wald	Significance
Significant predictor variables				
LDC	5.095	0.934	29.724	< .001
Age	0.100	0.034	8.694	.003
Non-significant predictor variables				
Detached environment	0.619	0.580	1.139	.286
Commuting distance	0.000	0.000	0.761	.383
Classic management	0.629	0.807	0.608	.436
Intersecting environment	-0.407	0.635	0.412	.521
No family ties	-0.409	0.741	0.304	.581
White collar employee	0.344	0.726	0.255	.635
Male	0.370	1.453	0.065	.799
Constant	-21.725	4.150	27.409	< .001

R^2 = .576 (Nagelkerke). Model χ^2 (9) = 89.700, p < .001.

Two factors appeared to significantly influence the model for predicting the respondents' attitudes towards the management (Table 8). The logistic regression tests if and what factors predict most accurately that respondents are satisfied and are not demanding management improvements. The results suggest that the attitude towards the management improves correspondingly with growing satisfaction with classic management issues (salary, relation to the superiors, work routines, etc.) and with increasing approval of the way in which the accommodation at the work site is organised. Those issues seem to be considered as the main field of responsibility for the management. Since companies (and hence the management) have a straight influence on these factors, they are able to impact on the perceptions directly. Other concerns, like the arrangements in the detached environment and family issues, which are outside of the companies' direct sphere of intervention, are not as important here.

The last model (Table 9) is designed for revealing the factors that influence the respondents' perceptions of whether their matters are adequately considered by the employer. The rationale behind this model is that those thinking that their voices are considered are likely to be more satisfied with the way in which their work is organised. Since this concern is similar to the previous model in which the management was judged, it is not surprising that the same predictor variables are influential here. It seems that the respondents refer mostly to aspects like income, work relations and routines when they think about the matters that are important to them. Apparently, they also want to have a say when the arrangement and design of the accommodation complex of the intersecting environment is concerned. The factor age comes close to being significant and gives a further indication of the higher satisfaction of the older part of the staff. To some extent surprising is the total insignificance of the

employee group factor. Since white collar employees are those who make the decisions and blue collar employees will have to deal with them, it was assumed that the latter might have less positive perceptions.

Table 8. Predicting whether the respondents do not wish for management improvements

Predictor	B	SE	Wald	Significance
Significant predictor variables				
Classic management	2.718	0.802	11.491	.001
Intersecting environment	1.501	0.589	6.487	.011
Non-significant predictor variables				
No family ties	-1.273	0.774	2.705	.100
Age	-0.042	0.027	2.399	.121
White collar employee	0.831	0.566	2.158	.142
Commuting distance	0.000	0.000	1.415	.234
Detached environment	0.307	0.596	0.265	.607
Male	0.436	1.276	0.177	.733
LDC	-0.028	0.717	0.002	.969
Constant	-13.347	3.272	16.637	< .001

R^2 = .465 (Nagelkerke). Model χ^2 (9) = 53.879, p < .001.

Table 9. Predicting whether the respondents think that employees' issues are considered adequately

Predictor	B	SE	Wald	Significance
Significant predictor variables				
Classic management	5.017	1.403	12.786	< .001
Intersecting environment	1.999	0.845	5.599	.018
Non-significant predictor variables				
Age	0.077	0.041	3.505	.061
Commuting distance	0.001	0.000	2.640	.104
No family ties	-1.277	1.014	1.587	.208
Detached environment	0.845	0.858	0.971	.325
LDC	-0.362	0.918	0.156	.693
White collar employee	-0.017	1.096	0.000	.984
Constant	-23.380	5.535	17.842	< .001

R^2 = .508 (Nagelkerke). Model χ^2 (8) = 52.611, p < .001. Note: Predictor variable 'Sex' was excluded from the model due to its problematic distribution.

As shown, all four models are statistically significant and account for between 37% and 58% of the observed variances. These results provide evidence for the relevance of the chosen predictors in the organisation of employment with long-distance commuting in the Russian North. Four predictors (intersecting environment, LDC, age, classic management) appeared to be significant in two different models and are accordingly the most important. They should be carefully considered by those responsible for the organisation of work relations.

5 RESOURCE PERIPHERY, LONG-DISTANCE COMMUTING AND THE DEVELOPMENT OF THE RUSSIAN NORTH

In the previous chapter I showed that the challenges for employees working with long-distance commuting are not an impregnable obstacle for successful implementation of this labour scheme. The intersecting and detached environments as well as the commuting process as such are not significant hurdles. Similar impressions have been gained in earlier studies (Spies 2006, 2008, 2009). In principle, the labour relations on remote production sites of the resource industries can be managed productively and in a way that meets the needs and understandings of the individuals involved (Spies 2008). Even significant commuting distances, reaching easily several thousands of kilometres, do not necessarily inhibit labour satisfaction if the individuals' perceptions are taken into consideration, for example in terms of relative or time distances (Spies 2006). A previous study revealed that among employees of the successful oil industry in the Russian North, as in the local population in general, there is significant potential for future outmigration from the region (Spies 2009). Consequently, long-distance commuting, which functions as an intermediary between the industries' needs for labour and the often aspired outmigration, is likely to play an important role in producing modern regional structures.

The probability of a prominent role of long-distance commuting in the Russian North and its resource peripheries is further heightened if considering the development, Soviet and post-Soviet, of this part of the country. The main structures can still be considered as results of Soviet prioritising (Sjöberg 1999; Tykkyläinen 2008b). Even though post-Soviet transitions have certainly influenced today's situation in the north, the urban character and relatively high population density in circumpolar conditions are still unique for these high-latitude areas of the world. Today's judgment on these Soviet achievements is predominantly done through an economic lens and based on cost considerations. Hill and Gaddy (2003, 5), for example, try to calculate directly the costs for today's Russia that are connected to dealing with its Soviet inheritance and conclude that Russia's North needs to selectively 'shirk' in order to become manageable. Since the importance of the North as a resource periphery will remain, some speak in this context of the burden and blessing of space that Russia has to face and handle in a way that emphasises the blessing (Blakkisrud and Hønneland 2006). Long-distance commuting can be one means of achieving this goal (Round 2005).

The role of Russian North as both a major asset for development of the whole country and a major burden that requires efficient measures for separating the future from the past development paths, led and still leads to strongly fragmented structures in the region. The socially and spatially selective development (Jones 1997), that takes place in a relatively few favourable locations, causes substantial territorial disparities in the north (Bradshaw and

Vartapetov 2003; Göler 2005). Among the most prosperous regions are those that host companies of the natural resource industries, and, as a consequence, are highly dependent on these sectors (Bradshaw 2006). Perovic (2003, 90) speaks in this context of 'corporate regions' that sharply contrast to the remaining parts of Russia. Since the few development hotspots in Russia are separated by huge and 'empty' landmasses, Dienes (2002, 443) expressed the situation rather figuratively but nevertheless tellingly in these words: "Geographically, economically, and socially, Russia today is an archipelago". An archipelago situated in a very challenging natural environment, which acts as an additional development restraint (Lynch 2002).

Long-distance commuting can help to blur the strictly defined borders between parts of the Russian North with and without development potential. By connecting the prosperous development spots to other places in which the commuters reside, the wealth created in the resource peripheries is spread on a wide scale. Furthermore, long-distance commuting is also a suitable approach to dealing with the expensive population accumulation in Russia's North. Long-distance commuting allows for needed demographic adjustments without depriving northern industries of labour potentials since the labour force can move from northern living places to areas that are more suitable for human settlements. Accordingly, long-distance commuting has served a different function in Russia (centralising impulses) as compared to other countries that are engaged in decentralisation policies, for example Australia (Storey 2001a). It allows for reconciling selective shrinking with selective development. Labour mobility is therefore one key to the future of the Russian North (Hill and Gaddy 2003).

The outcome will not be a less fragmented regional structure. Due to the vastness of the Russian North and the harsh environment, any visions for evenly developed structures of the areas have to remain a utopia. Instead a newly fragmented structure that is based on human needs and economically efficient approaches to the resource peripheries should be envisaged by decision makers. A fragmented spatial structure that again builds upon priorities, for example of individuals to reside in southern areas of Russia (Spies 2009), or the priorities of the oil industry for exploiting ever more remote resources. Any attempt at utilising the Russian North, particularly its most remote parts, inevitably has to be based on some kind of political, social or economic prioritising, since a spontaneous occupation seems very unlikely due to the many aggravating local circumstances. Long-distance commuting leads therefore to a new landscape of priorities, though one that differs strongly from the landscape of the Soviet period and its legacies (Sjöberg 1999). Economic rationales and individual preferences, rather than an ideology, have become rightly more important as the fundamental foundations.

Figure 11 contains an attempt at conceptualising the role of long-distance commuting in shaping the regional structures. While being embedded in case specific environments formed by unique peculiarities, long-distance commuting is always strongly shaped in its details by the interplay of numerous other factors on different scales. State legislations, regional resource endowment and differing work cultures, for example, are decisive for concrete features of the commuting applications that always vary to a certain extent. These dependencies are symbolised by the narrow upwards pointing arrow. The second arrow stands for

the influence that long-distance commuting has on spatial structures and development. For example, by offering possibilities for restructuring, loosening the strict distinction between prosperous and unsuccessful regions or opening up remote resource peripheries for profitable exploitation, it has profound implications on development, locally, regionally as well as on the national scale. Therefore this arrow is significantly stronger than the first. As has been stressed throughout this study, all mentioned processes are always contingent on specific contexts and legacies and therefore path dependent. The role of long-distance commuting in Russia, as in all other places, is determined by the unique constellation found on all relevant scales (richly endowed resource periphery, population excess in the north, legislation, etc.). Within this multivalent setting, the governance of spatial development has to aim at constructive solutions for each case of long-distance commuting implementation. A demanding task, particularly if, as done in this study, individuals' stances receive an adequate consideration.

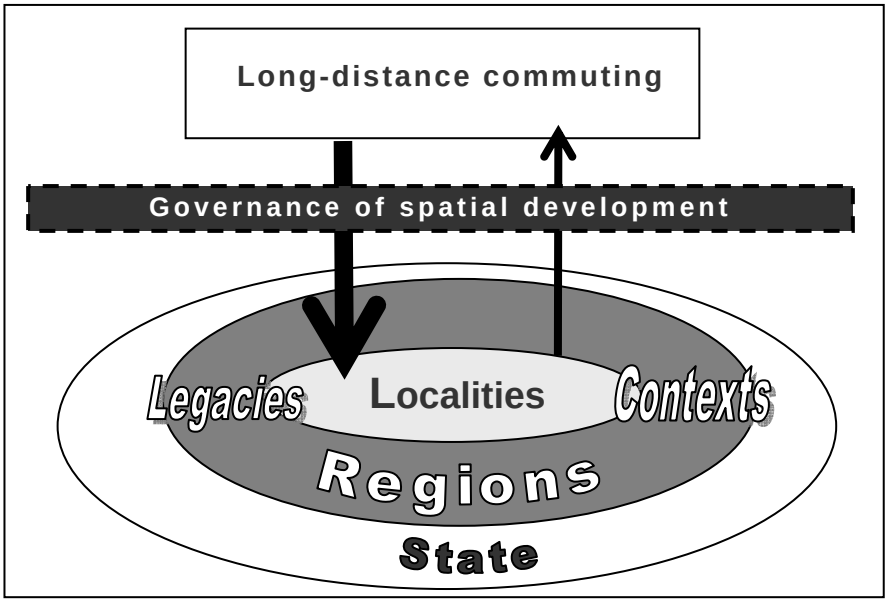

Figure 11. Long-distance commuting and regional development

The progress of Russia's resource peripheries in the north is likely to take place sporadically in development pockets (Tykkyläinen 1996, 2000). These development pockets (DP) are 'connected' to the 'mainland' Russia via many channels of economic, social and political ties with long-distance commuting being one means of linkage. However, it is more than only a technical connector since it leads to profoundly altered structures on both sides of its implementation, as has been shown above. While being of outstanding economic importance, development pockets in the Russian North are in many respects not self-sufficient. Labour supply is a good example of this fact and long-distance commuting can be applied in order to address this problem.

Figure 12 depicts how long-distance commuting is the leverage for spreading the impacts from the development pocket across boundaries of different permeability, and how it brings impulses from outside into these localities since dispersing and attracting forces are likely to work simultaneously. Principally, it can work on a global scale (Spies 2006), but due to different cost considerations of real world transactions, some distance-decay interferences seem likely. Theoretically, the directions of long-distance commuting do not face constraints. Based on these factors, the leverage of commuting is depicted by different sized arrows pointing in all directions. The regular character represents a generalised concept of long-distance commuting that might be helpful for illustrating the processes in an abstract way. A real world setting, contingent on place and time, is not likely to be as regular. An impression of how regional development in favourable locations and long-distance commuting interplay based on a relational and path dependent understanding is given in Figure 13.

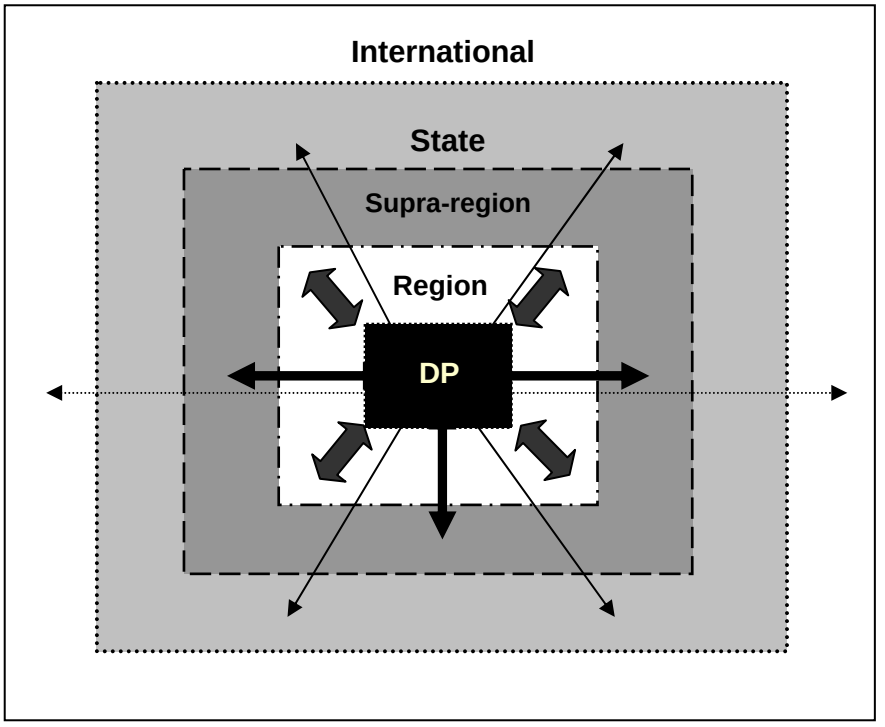

Figure 12. Sporadic development and long-distance commuting

The directions and strengths of connections are dependent on case specific preconditions. The example here is based on the SeverTEK case study[20]. In Russia, the direction of the connection is very likely to be predominately southward. In Northwest Russia, the direction of the connection is likely to be southwest, with only few ties into northern or eastern directions (Spies 2009).

[20] Development pocket - Usinsk; region - Komi Republic; supra-region - Northwest Russia; state - Russia.

Also the strength of the connections is very different. A major part of commuters will come from within the supra-region or even closer areas and only some commute on national scale and even less internationally. Indeed, a significant share is likely to reside in the development pocket itself, which can be considered as a result of the urban character of the Russian North. Other countries do not have such a significant labour pool in their resource peripheries. When it comes to the quality of the ties, differences can for example occur between high ranking managers travelling by plane from Moscow and workers' journey in the train from Syktyvkar. These nuances are depicted by different arrows. Furthermore, it is likely that ties between the development pocket and the outside world is not always straight-forward. Personal histories or the post-Soviet separation of the USSR into nowadays independent states may have led to interrupted connections following loops rather than a direct path.

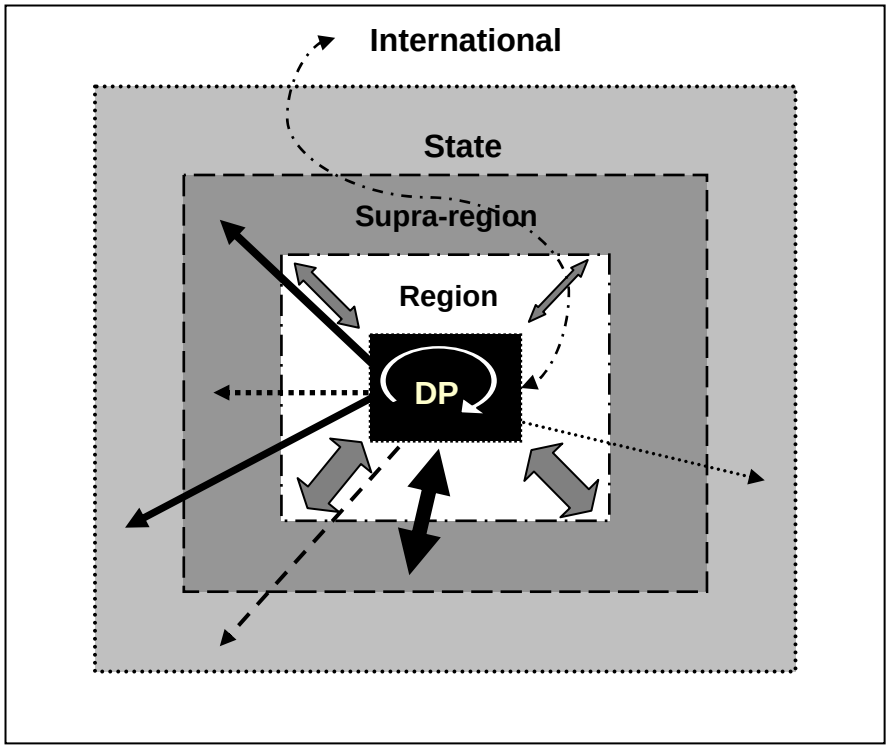

Figure 13. Sporadic development and long-distance commuting in a relational setting

The situation in Russia's resource peripheries and long-distance commuting vaguely resembles what some describe as local buzz and global pipelines in the process of knowledge creation (Bathelt et al. 2004). In order to lead to successful development paths, long-distance commuting has to utilise the local potentials (i.e. the local buzz) of the development pockets that are present as a result of Soviet priorities. Simultaneously, it has to bring qualified outsiders into the peripheries that boost those potentials (i.e. global pipelines). Only an interplay of

both factors promises fruitful results. The outcome will be a constant creation of new spatially and temporally contrived communities (Russell 1999). Any general outlook in the future of the region and the role of long-distance commuting has to remain vague. Nevertheless, since these communities are not bound to a particular scale of locality, the analytical focus inevitability has to be on actors, who, after all, are the agents of any development (Grabher and Stark 1998; Panelli and Welch 2005; Tykkyläinen 2008b).

6 CONCLUSIONS

6.1 Answers to the research questions

This study seeks answers to several aspects of the interplay between the management of work in organisations, long-distance commuting and the spatial as well as temporal characteristics of northern Russia. The research focused on the development of a conceptualisation of the management of work that is sensitive to case specifics and studies the interrelations between labour mobility, resource peripheries and individuals' perceptions. Following, I make conclusions about the theoretical and empirical inquiries that aim to answer the research questions as introduced at the beginning of the study (section 1.2).

The *first set of research questions* concerns the way in which labour relations under the circumstances of long-distance commuting can be conceptualised without neglecting case specific contingencies. The evolution of organisational and managerial thinking started in the 19th century and comprehended labour at first as a very static and depersonalised factor of production that can be managed without special recognition of environmental context. With time the changing approaches to the issue brought the human factor behind labour to the fore and it was firmly embedded in a relational context. Organisations are now understood as open systems. This brings along a great opportunity to consider case specific contingencies – for example, for long-distance commuting in the post-Soviet Russian North, for which general models or conceptualisations are necessarily blind. At the same time, it hampers investigations due to overwhelming complexity and the risk for analytical culs-de-sac. Labour relations, as with all social interactions, have to been seen in their contexts and should be judged upon a sensible consideration of contingencies within relational and path dependent settings. In order to avoid the analytical and methodological dilemma that arises from the overwhelming complexity of contingencies and the limitations of research to capture those adequately, I advocate a pragmatic and sober approach that remains reasonably concrete as well as plausibly complex. For this case study on long-distance commuting I decided to enlighten the conceptualisation of labour relations by curtailing the context to two specific extended environments that I think are pivotal (detached and intersecting environments). Other research settings would require a different choice of relevant context.

The outcome of the empirical investigations in section 4 shows that the chosen approach, which can be labelled as a restricted or selective extension concept for analysing the management of labour in relational contexts, has its legitimacy, as the detached and the intersecting environments appear to influence on employee behaviour and perception. At the same time the persistent indications of a missing relevance of family ties in the context of long-distance commuting employment schemes, point to the fact that such an approach is not able to capture all relations within the multifaceted contexts of work organisations. Based on theoretical as well as very practical considerations, it seems to me very unlikely that family ties can be without interference on commuters. More likely, the constructed model of human resource management

within extended environments (Figure 9) is not able to capture this issue and its consequences adequately. These kinds of shortcomings have to be understood as the price for maintaining general analytical manageability. Nevertheless, I do not see alternatives to a restricted extension concept for the management of work processes in case study research such as the one reported here.

The *second set of research questions* relates to the influence of long-distance commuting on the management of work processes. According to the results from the statistical enquiries in section 4.2.2, the intersecting and detached environments have an important but also ambivalent meaning for the organisation of labour processes with human resource management and, hence, interfere, at least partially, with the management approaches. On one hand, there are clear indications for their importance. The comparison of the mean values for the employee groups for each of the constructed variables with the *t*-test suggest that those in SeverTEK who have a higher tolerance of the intersecting and detached environment variables are more likely to develop a general attachment to their jobs. Additionally, the logistic regression models of the second statistical approach revealed that those environments are crucial factors for leading to desirable employee behaviour.

On the other hand, some of the results, particularly the factors that appeared non-significant in the *t*-tests and logistic regressions, produce indistinct information on the meaning of the two environments. Again, the consistently absent impact of the family situation and the partially conflicting results for the differences between blue and white collar staff, raise the question whether an extended approach to the management of labour has significance. If the perceptions of work processes would be strongly influenced by processes occurring in a detached home environment – i.e. if they would be unambiguously socially embedded – there would be some indication for the relevance of the family situation of the respondents.

Overall, the respondents do not see a general disadvantage of long-distance commuting if compared to more conventional employment patterns. This is supported by the outcome that neither the demand for a geographical consolidation of work and living place nor the judgment that building new remote resource towns is preferable to long-distance commuting lead to relevantly different outcomes for the constructed variables. To conclude, the long-distance commuting specific extended view on the organisation of labour has its relevance and those responsible for the management of work have to extend their thinking into spheres that are usually considered to be the private life of employees. The most significant issues of an extended approach to management are nevertheless still within reach of long-distance commuting companies (e.g. free time activities at the accommodation facility, the practical arrangements of commuting, etc.). Other issues that are more difficult to influence by the management – for example, family ties – appeared to only have a moderate influence. From the employees' point of view, a reasonable management of the intersecting and detached environment as well as the practical issues of commuting are relevant preconditions for a positive perception of and attitude towards one's employment situation at a remote oil field. But at least as relevant are factors labelled in this study as classic management approaches. A particular importance of the 'extended' factors cannot be found. It seems that all of the considered aspects influence all other aspects (Table 5),

either positively or negatively, and that any approach to human resource management is well advised to consider this interplay.

The *third set of research questions* deals with the interplay between long-distance commuting and regional structures in the Russian North. Since the results from this study are based on a single case study, it has to be stressed again that any conclusions on general implications on Russia's resource peripheries are deduced only. As has been said above (section 1.1), case study research as defined in this study enables 'thick description' of ongoing development processes; external verification depends on later studies. However, careful general conclusions appear appropriate due to similarities in the development paths throughout the Russian North.

Long-distance commuting has for a long time had an important role in the resource peripheries in Russia. Until the present it is a powerful tool for dealing with the limiting geographical characteristics of the vast Russian North (remoteness, climate), which inhibit at many locations more conventional development strategies. Additionally, long-distance commuting enables one to deal with the particularities set by unique post-Soviet, post-Fordist and post-'easy oil and gas' circumstances, which all contain self-reproducing and continuity-preserving tendencies of the former status-quo. Labour commuting as introduced in this study has the potential for offering constructive solutions for challenges derived from these developments via path dependence. This situation of the Russian North and its resource industries as described in this and former studies (Spies 2006, 2008, 2009) lead me to conclude that there will be in the foreseeable future a need for long-distance commuting. It is likely that the significance of long-distance commuting operations will increase. The generally found openness of the employees towards this form of labour commuting is therefore good news for those responsible for managing and guiding the future development of the area.

With respect to possible repercussions of long-distance commuting on regional structures it can be stated that this form of labour mobility can contribute to the departure from Soviet set development rationales. It offers starting points for the restructuring of an exceptional highly populated part of the circumpolar north. For example, it allows for simultaneous selective outmigration and attraction of much needed experts into a particular region. Likewise it gives resource companies a needed tool for the management of labour relations if those companies intend to enter even more remote and challenging parts of the resource peripheries. Both processes will affect the regional structures by enabling necessary adjustments to outcomes from the Soviet legacy and economic developments on the resource markets.

6.2 Long-distance commuting and relational economic landscapes of priorities

At the beginning of this study I introduced the implications of long-distance commuting on a general theoretical basis (Chapter 3). Now it is possible to apply the insights gained during the research process for a case study specific synthesis concerning the resource industries in the Russian North and long-distance commuting. The results found in the previous chapters and former studies (Spies 2006, 2008, 2009) provide inputs that enable an adjustment of

the figure depicting the variety of potential influences of long-distance commuting (Figure 6). The multifunctional implications that long-distance commuting can have on the resource peripheries of northern Russia are depicted in an abstract way in Figure 14; Table 10 summarises the outcomes.

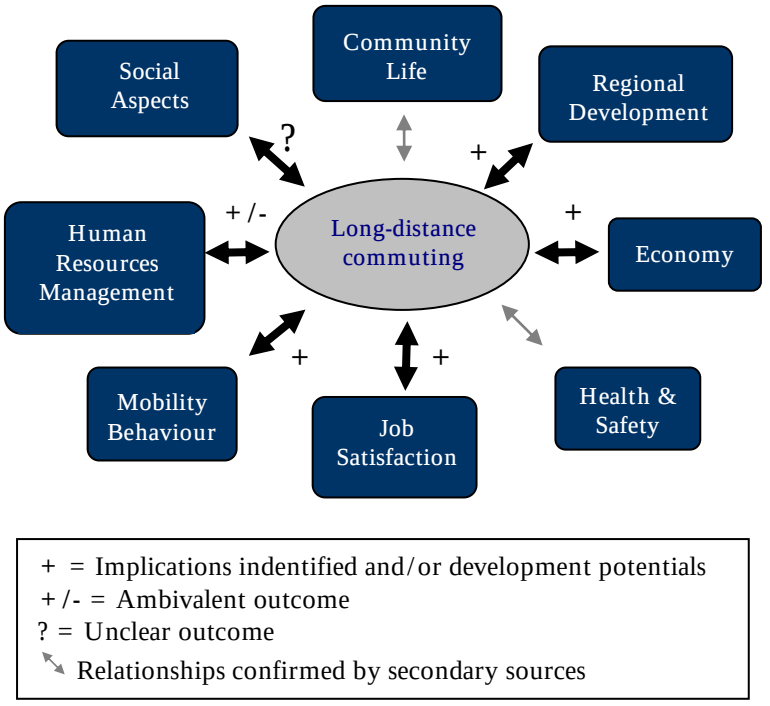

Figure 14. Implications of long-distance commuting

The results provide strong evidence for the outstanding importance of the case and place specifics for interpreting the role and potential of long-distance commuting. The Russian North and its resource peripheries constitute a very particular framework for applying labour mobility schemes. It is characterised by manifold legacies, a very challenging natural environment and processes of economic change. Only under consideration of these regional and local contingencies, can reasonable and realistic interpretations be made.

The relevance of case and place specific contingencies in this case study on long-distance commuting applications in the Russian North has been stressed by creating an extended understanding of and approach to conceptualising organisations and the management of work. The empirical analysis of employees' perceptions and stances verified the appropriateness of the chosen relational approach by revealing interrelations between the extended environments, desirable employee behaviour and, as a consequence, the business setting for resource enterprises operating in the North. Furthermore, a successful development of the area appears to be more likely if those responsible for the management of human resources and regional development are fully aware of

the challenges involved in long-distance commuting and how those are perceived by individuals.

Table 10. Implications of long-distance commuting

Sphere of influence	Relevance of long-distance commuting (LDC)
Regional development	LDC has the potential to change regional structures. In this and earlier studies (Spies 2009) I demonstrated how it can alter the Russian North by reducing Soviet legacies and adjusting economic landscapes to present day requirements (e.g. post-Fordist shrinking, northwards thrust of resource industries). LDC allows for working in the north while residing elsewhere and is likely leading to a reduced permanent population.
Job satisfaction	Interrelations between LDC and job satisfaction have been found several times in my studies (Spies 2006, 2008). Also in this study it becomes evident that mostly those influences can be positively interpreted as meeting the needs and perceptions of the employees. LDC does not necessarily constitute insuperable obstacles for the individuals involved in the case study from the Russian North.
Mobility behaviour	LDC is inherently touching on mobility behaviour. I could demonstrate that this form of labour mobility extends the spatial reach of employees in an almost unrestricted way in terms of physical distance (Spies 2006). LDC can also be used for dealing with the problematical high population density of the Russian North (Spies 2009).
Human resource management	Human resource management is under the preconditions of LDC extended into spheres of employees' private life, i.e. extended environments. Those have to be recognised in order to achieve productive business environments. The impact of the extended environments appears to be of the same importance as traditional management factors. Individuals' perceptions proved to be relevant, and sensitive approaches to human resource management are needed.
Social aspects	The literature establishes manifold influences of LDC on social aspects. However, in this study the results show a somewhat differing outcome since family issues remain surprisingly little biased by LDC work relations.
Economy	The overall outcome for the different spheres of influences leads to a significant relevance of LDC for economic development. In the context of the Russian North it offers in many respects possibilities for dealing efficiently with the local conditions in the form of unambiguous relational ties and legacies. The overall economic impact on the Russian North as well as Russia as a whole is likely to be positive.
Community life	Influences of LDC on community life are generally established, for example based on regular absences of inhabitants or the fly-over issue.
Health & Safety	Health and safety issues are influenced by LDC, for instance due to extensive work shifts, often extreme work locations or psychologically challenging work environments.

If economic development is captured through an evolutionary lens, the foundations for long-distance commuting operations in Russia's resource peripheries are set by manifold processes. The region hosts both old commuting

arrangements inherited from the Soviet time and newly established operations. Today long-distance commuting is applied in the Russian North based on cost considerations (post-Fordist preferences for leaner economic structures), due to the thrust of many industries further north (post-'easy deposits') and various attempts at dealing with legacies of the Communist past (post-Soviet transition). With respect to long-distance commuting, the economic landscapes of Russia's resource peripheries are certainly shaped due to path dependence of evolutionary processes. Labour mobility is contributing to a slow departure from the landscape of Soviet priorities (Sjöberg 1999) by replacing those with new models of socially and economic based concepts of precedence.

Due to the limitations set by the treble-post condition (post-Soviet, post-Fordist, post-'easy deposits') in which Russia's North finds itself and based on the natural challenges of northern peripheries (remoteness and climate) the utilisation of natural resources and the inhabitation of the region are necessarily based on prioritising, the rationales of which can be various. Long-distance commuting has been identified as a powerful tool for reconciling several of the crucial priorities involved in present day developments in the Russian North. It allows individuals to choose employment in the resource industries while residing in more comfortable locations outside of the resource peripheries. It allows an exploitation of very remote deposits without paying the price of having to establish permanent settlements at these places. And it allows authorities to selectively withdraw population from the north without depriving the regional industries of labour, or loosing political control over the areas. Long-distance commuting is therefore very likely to have significant implications on the potential development paths of Russia's resource peripheries and in shaping new economic landscapes of priorities that appear to be needed for a positive future of the whole country.

Figure 15 presents a synthesis of the obtained results based on the conceptual framework applied in this study that includes legacies, contexts and contingencies as well as future development options as being related by path dependence. It shows that human resource policies and approaches to the organisation of work that are sensible for the needs of individuals are a central and integral part of practices that determine the role of long-distance commuting for the future development of the Russian North. While Soviet legacies are certainly still of relevance, particularly in the Russian North, it is foremost the present of the area, which is now firmly integrated in a global agenda of external influences, that will determine the anticipated interplay between labour mobility and regional development. Studying perceptions and attitudes of individuals and actors with case specific and sensible concepts of organisations gives a strong voice to those living and working with long-distance commuting in the Russian North and opens up new channels for investigating potential development pathways.

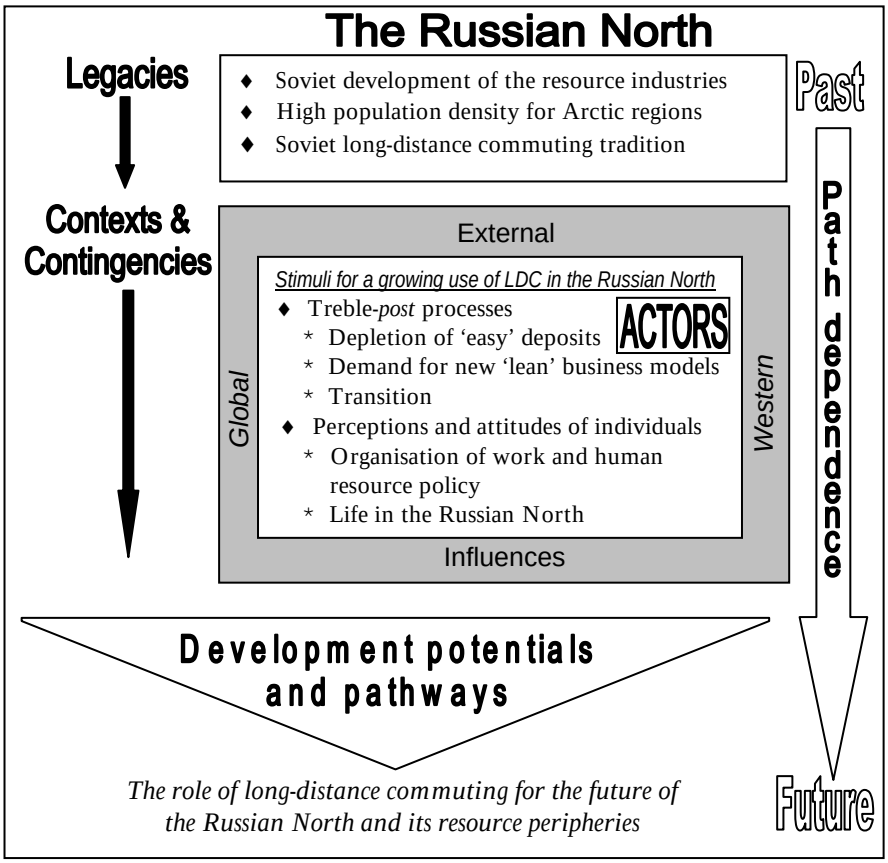

Figure 15. Future role of long-distance commuting and the development of the Russian North

6.3 Implications for future research

The conclusions presented above pose several research problems that offer valuable and important foundations for further research. Since the presented work is firmly based on the case study research principles as presented in section 1.2, its strength and simultaneous limitation is related to what I have introduced as 'thick description'. This study has to be understood as strongly exploratory in character. Further research is needed in order to validate the results on a wider scale and to confirm my conclusions more generally. Potential research projects on long-distance commuting and the development of the Russian North that aim at general theoretical and practical insights would need to consider extensions to the data base on multiple starting points. First, the situation in other resource companies should be considered, both from the oil and gas industry as well as from other natural resource sectors, in order to get a more comprehensive outlook on long-distance commuting schemes. Secondly, regional variations within the Russian North and/or other resource peripheries

have the potential to cause significantly differing contingencies and would need to be included into the research design. Thirdly, in order to capture the full extent of social implications of long-distance commuting the detached environment could be investigated at place. This might include efforts for recognising also the experiences of family members and other relevant individuals that are not present at the work sites. Due to the diversity of detached environments, a stronger use of mixed research methods may possibly be suitable for this purpose.

Valuable results are also likely to be the outcome of an in-depth study on long-distance commuting in Russia. Most of the available information either dates back to the Soviet time or is distributed by companies. It seems to me that there is a significant lack of up-to-date and independent information on the role of long-distance commuting and its implications in Russia. Due to the diversity of long-distance commuting applications in Russia and the unclear structure of official responsibilities for and standpoints towards this labour mobility scheme, it is a very challenging task to present this information in a coherent way. Nevertheless, the potential outcome would be a great novelty. This would also enable a better comparison on the international scale.

Finally, I would like to encourage studies of the consequences of the current worldwide economic crisis on northern development in Russia and long-distance commuting. How are decreasing natural resource prices changing the preconditions for northern development? Would employees cope as well with the hardships of long-distance commuting if their income level would significantly drop? The data for this study was gathered during a very prosperous period of Russia's resource industries. It would be interesting to see the changes in attitudes and on perceptions of the involved employees that have happened since the economic situation has deteriorated. A relational and evolutional interpretation of the economy would suggest deep alteration on the regional and local contingencies.

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APPENDICES

The data collected with the following questionnaire is available for research purposes from the author or from the Department of Geography at the University of Joensuu.

Appendix 1. Questionnaire to SeverTEK's labour force (in Russian)

Только для научного исследования
Для работающих на СеверТЭК
Конфиденциально. Пожалуйста, ответьте на все вопросы!

1. Вначале, пожалуйста расскажите о себе и своей семье. Сколько Вам лет? _____лет.
   Пол (пожалуйста, обведите соответствующую цифру) Мужской 1 Женский 2
   Вы женаты/ замужем или с кем-то живете? Да 1 Нет 2
   Сколько детей проживает сейчас с Вами? _____
   Сколько людей проживает сейчас с Вами?_____

2. Где Вы родились? (Город/поселок и субъект федерации)_____

3. Где Вы постоянно проживаете? Укажите город/поселок и субъект федерации. _____

4. Как долго Вы проживаете в этом городе/поселке)? _____лет ИЛИ_____месяцев.

5. Как далеко расположен Ваш город/поселок от Вашего места работы на СеверТЭК? _____км
   (пожалуйста, обведите одну цифру) по прямой 1 ИЛИ по дороге 2

6. Как долго Вы работаете на СеверТЭК? _____лет ИЛИ _____месяцев ИЛИ _____дней.

7. Вы работаете (пожалуйста, обведите одну цифру напротив соответствующего ответа)

В администрации	1	На транспорте	5
В ремонтном подразделении	2	В отделе обслуживания	6
На производстве	3	В другом месте, где?_____	7
В геологической разведке	4		

8. Вы являетесь (пожалуйста, обведите одну цифру напротив соответствующего ответа)

Менеджером	1	Рядовым сотрудником/рабочим	3
Начальником производимых работ	2	Другим, кем? _____	4

9. Вы работаете в (пожалуйста, обведите одну цифру напротив соответствующего ответа)

СеверТЭКе	1	в фирме-подрядчике	4
Лукойле	2	нешней сервисной компании	5
Фортуме	3	Вы – предприниматель	6

10. Сколько часов в день Вы работаете? _____часов. Сегодня с _____до _____.
    Сколько дней длится Ваша вахта? _____ дней.
    Сколько дней Вы отдыхаете? _____дней.

11. Где Вы живете во время вахты? (пожалуйста, обведите цифру напротив соответствующего ответа)
    Южно-Шапкинском 1 другом месте, где?_____3
    Каждый день езжу на место работы из дома 2

12. До получения нынешнего места работы я
работал(а) в другой нефтяной компании 1 был(а) безработным(ой) более двух месяцев 3
в какой?_____
работал(а) в другой отрасли 2
в какой?_____

13. Проживали ли Вы до этого во временных общежитиях на месте работы?
Нет 1 Да 2, в общей сложности Вы жили _____ лет И _____месяцев.

14. Начиная с сегодняшнего дня, сколько еще месяцев (лет) Вы планируете работать в СеверТЭК? (пожалуйста, укажите планируемый срок, ИЛИ обведите цифру 1)

Я планирую остаться на своей работе _____месяцев ИЛИ_____лет

Так долго, как это будет возможно 1

Если Вы намерены работать менее 2 лет, почему Вы планируете покинуть СеверТЭК?

_____

15. Пожалуйста, оцените важность КАЖДОЙ причины Вашего решения работать в СеверТЭК. (пожалуйста, обведите только одну цифру для каждого высказывания согласно степени важности для Вас)

	Очень важно	Менее важно	Не принимаю в расчет
Специфика моей профессии заставляет меня часто менять место работы, я останусь здесь на некоторое ремя.	1	2	3
Они предложили высокую заработную плату	1	2	3
У меня было мало возможностей для трудоустройства и я принял(а) это редложение	1	2	3
Мой работодатель или мой начальник решили, где я буду работать	1	2	3
Я коплю деньги на черный день	1	2	3
Я коплю деньги, чтобы купить квартиру/дом в городе/поселке, в котором я иву	1	2	3
Я коплю деньги, чтобы переехать в другой регион России	1	2	3
Я был(а) безработным(ой) и смог(ла) найти работу здесь	1	2	3
Здесь я получил(а) лучшую и более стабильную работу, чем у меня была до того	1	2	3
Я был(а) переведен(а) или получил(а) повышение	1	2	3
Я хотел(а) получить новый опыт, сменить обстановку	1	2	3
Я сбежал(а) от обыденности	1	2	3
Работа в нефтяном секторе престижна	1	2	3

16. Ставите ли Вы перед собой какую-нибудь определенную цель, которую Вы хотите достичь, работая на СеверТЭК? (пожалуйста, обведите соответствующую цифру)

Да 1 Нет 2 Если Вы ответили Нет, переходите к вопросу номер 17 →

Подробнее: _____

Как Вы считаете, до какой степени работа здесь поможет Вам достичь Вашей цели (целей)? (пожалуйста, обведите цифру напротив соответствующего ответа)

Уже помогла	1	Не уверен(а)	4
Очень поможет	2	Вряд ли	5
Вероятно поможет	3	Скорее всего не поможет	6

17. Оцените, пожалуйста, в какой степени следующие условия проживания в жилом комплексе, соответствуют Вашим потребностям. (пожалуйста, обведите одну цифру в соответствии с Вашей оценкой.) Даже если Вы не проживаете в жилом комплексе, пожалуйста, ответьте:

	Более чем соответствуют	соответствуют	Не соответствуют	Отсутствуют	Не интересуют меня в данный момент
Жилье?	1	2	3	4	5
Столовая?	1	2	3	4	5
Меню?	1	2	3	4	5
Бар?	1	2	3	4	5
Душ и туалет?	1	2	3	4	5
Телефонная связь?	1	2	3	4	5
Автомобильное сообщение?	1	2	3	4	5
Воздушное сообщение?	1	2	3	4	5
Телевидение?	1	2	3	4	5
Медицинские услуги?	1	2	3	4	5
Освещение?	1	2	3	4	5
Звукоизоляция?	1	2	3	4	5
Другое, что?_____	1	2	3	4	5

Какие условия проживания в жилом комплексе необходимо улучшить? Как этого добиться

_____

Какие удобства должны быть в жилом комплексе по Вашему мнению?

_____

18. Следующие вопросы касаются того, насколько Вы удовлетворены жизнью в жилом комплексе. Что Вы думаете о следующих высказываниях в настоящий момент (пожалуйста, обведите одну цифру для КАЖДОГО высказывания). Даже если Вы не проживаете в жилом комплексе, пожалуйста, ответьте:

	Полностью согласен	Согласен	Нейтрален	Не согласен	Полностью не согласен
Структура этого комплекса дает чувство вовлеченности в жизнь коллектива	1	2	3	4	5
Такое чувство, что этот жилой комплекс было построено без учета его назначения	1	2	3	4	5

Жизнь в жилом комплексе вызывает стресс, так как коллеги по работе живут по соседству друг с другом	1	2	3	4	5
Жизнь в жилом комплексе вызывает ряд проблем, поскольку все знают друг о друге все	1	2	3	4	5
Это всего лишь место работы, меня не волнуют отношения с людьми в жилом комплексе	1	2	3	4	5
Вне работы не имеет никакого значения, состоишь ли ты в штате или работаешь по временному онтракту	1	2	3	4	5
Между людьми, проживающими в жилом комплексе, есть неприязнь	1	2	3	4	5
Те, кто работают по контракту и живут в жилом комплексе только временно, создают проблемы	1	2	3	4	5
Поведение соседей причиняет многим людям неудобства	1	2	3	4	5
Шумные соседи мешают многим в жилом комплексе	1	2	3	4	5
Большинство людей в СеверТЭК объединяются в кланы	1	2	3	4	5
Между работниками СеверТЭК и другими нет взаимопомощи	1	2	3	4	5
На СеверТЭК различия между социальными классами бросаются в глаза	1	2	3	4	5
Работа вахтовым методом и жилой комплекс являются современным способом организации работы на нефтяных месторождениях	1	2	3	4	5
График моей работы вызывает проблемы в семье	1	2	3	4	5
Длительная вахта увеличивает бремя ответственности, лежащее на супруге	1	2	3	4	5
Мои лучшие друзья тоже работают здесь	1	2	3	4	5
Мои лучшие друзья работают в этой же смене	1	2	3	4	5
Многие работники СеверТЭК и их семьи встречаются вместе в свободное время	1	2	3	4	5
Мне больше нравится работать вахтами, чем постоянно жить в том же месте, где я работаю	1	2	3	4	5
Моя семья не захочет переехать в далекий город нефтяников	1	2	3	4	5
Проблемы, возникающие при организации семейного отдыха из-за моей вахтовой работы, легко преодолимы	1	2	3	4	5
Я думаю, что те, кто управляет этим комплексом, заботятся о нуждах таких людей как я	1	2	3	4	5
У работников мало шансов высказаться по поводу организации отдыха	1	2	3	4	5
Я хочу работать в подобном месте до своей пенсии	1	2	3	4	5
В свое свободное время я встречаюсь с другими работниками СеверТЭК, у которых такое же хобби как у меня	1	2	3	4	5

19. На Вашем нынешнем месте работы, что Вы думаете о КАЖДОМ следующем высказывании? (пожалуйста, обведите одну цифру для КАЖДОГО высказывания)

	Полностью согласен	Согласен	Нейтрален	Не согласен	Полностью не согласен
19.1 **Компания, в которой Вы работаете**:					
У нее хорошая репутация	1	2	3	4	5
В этой компании плохо работать	1	2	3	4	5

Они относятся к тебе как к рабочей единице	1	2	3	4	5
Важно, что у нее есть иностранный партнер	1	2	3	4	5
Сразу чувствуешь, что ты часть компании	1	2	3	4	5
Компания заботится о работниках	1	2	3	4	5

19.2 **Ваша заработная плата и возможности продвижения по службе:**

Различия в уровне доходов среди служащих слишком велики	1	2	3	4	5
Моя зарплата отвечает моим запросам	1	2	3	4	5
Компенсация за пребывание на месте проведения работ в течение нескольких дней справедлива	1	2	3	4	5
Моя заработная плата справедлива	1	2	3	4	5
Система продвижения по службе справедлива	1	2	3	4	5
Мои перспективы очень ограничены	1	2	3	4	5
Мой опыт работы улучшает мои перспективы внутри компании	1	2	3	4	5

19.3 **Сама работа:**

Время проходит быстро	1	2	3	4	5
Я бы хотел(а), чтобы график работы был более гибким	1	2	3	4	5
Я могу сам(а) решать, как выполнить свое задание	1	2	3	4	5
Я могу сам(а) устанавливать себе задание	1	2	3	4	5
Моя работа – это мой вклад в процветание России	1	2	3	4	5
Каждый день одно и тоже	1	2	3	4	5

19.4 **Коллеги по работе**

Они знают свою работу	1	2	3	4	5
Здесь легко найти друзей	1	2	3	4	5
Здесь легко нажить врагов	1	2	3	4	5
Им нелегко привыкнуть к вахтам	1	2	3	4	5
Мы хорошая команда	1	2	3	4	5
Они делают свою часть работы	1	2	3	4	5

19.5 **Ваш непосредственный начальник (например: бригадир, руководитель, которому вы непосредственно подчиняетесь):**

Я могу обсудить с ним возникшие проблемы	1	2	3	4	5
Мой начальник слишком занят, чтобы встречаться со мной	1	2	3	4	5
Он хорошо работает	1	2	3	4	5
Мой начальник выслушивает предложения по работе	1	2	3	4	5
Систему руководства необходимо улучшить	1	2	3	4	5

19.6 **СеверТЭК**

В этой компании плохо работать	1	2	3	4	5
У нее хорошая репутация	1	2	3	4	5
Налажен информационный обмен между руководством и другими	1	2	3	4	5
СеверТЭК делает большой вклад в развитие региона (Коми, Ненецкий округ)	1	2	3	4	5
СеверТЭК делает большой вклад в развитие экономики России	1	2	3	4	5

19.7 **Сотрудничество с Фортум**

Это очень важно для благополучия СеверТЭК	1	2	3	4	5
Фортум несет зарубежные технологии/экспертизу в Россию	1	2	3	4	5
У меня уже есть личные контакты с иностранцами	1	2	3	4	5
Финляндия – хорошая страна для сотрудничества	1	2	3	4	5

Было бы лучше, если бы у СеверТЭК был другой партнер	1	3	3	4	5

19.8 **Потребление продукции**

Произведенная нефть должна потребляться внутри России	1	2	3	4	5
Нефть лучше экспортировать, это приносит больше прибыли, чем внутреннее потребление	1	2	3	4	5

20. Какие факторы оказывают влияние на Ваше решение не менять место жительства? (Пожалуйста, обведите только одну цифру для каждого высказывания в согласно степени важности для Вас.)

	Очень важно	Менее важно	Не принимаю в расчет
Я здесь родился (родилась)	1	2	3
Мое финансовое положение лучше там, чем в случает отъезда	1	2	3
Мне нравиться здешний образ жизни	1	2	3
Я думаю, что в нашей местности хорошо растить детей	1	2	3
У моей супруги (моего супруга) или у меня там живут близкие родственники	1	2	3
У меня там хорошие друзья	1	2	3
Я до сих пор открываю там для себя много нового	1	2	3
Моя супруга (мой супруг) не смогут найти хорошую работу в другом месте	1	2	3
Качественное жилье	1	2	3
Мне нравится местность, в которой расположен наш город/поселок	1	2	3
Нефтяная промышленность оказывает положительное влияние на ситуацию	1	2	3
Моя нынешняя работа держит меня здесь	1	2	3
Мне некуда переезжать	1	2	3
Низкая стоимость жизни и невысокие цены на жилье держат меня там	1	2	3
В нашем городе/поселке приятно жить	1	2	3

21. Вы и Ваша семья живете в (Пожалуйста, обведите одну цифру напротив соответствующего ответа):

Дом на одну семью	1
Одно- или двухэтажный дом на несколько квартир	2
Многоквартирный дом выше двух этажей	3
Другое, пожалуйста, уточните_____	4

Если бы у Вас был выбор, в какой из вышеперечисленных категорий домов Вы бы предпочли жить на данном этапе Вашей жизни?

Я предпочел (предпочла) бы жить в доме _____категории

22. Если бы у Вас был выбор, в каком из поселений Вы бы предпочли жить на данном этапе Вашей жизни? (Пожалуйста, обведите одну цифру напротив соответствующего ответа):

в городе нефтяников	1
в столице региона (например, Сыктывкар)	2
в сельской местности	3
в небольшом городе	4
все равно где, но чтобы я мог(ла)ездить домой с работы каждый день	5

23. Как Вы думаете (Пожалуйста, обведите цифру соответствующего ответа для каждого высказывания):

	Да	Нет
Работники нефтяной отрасли должны жить вблизи месторождения	1	2
Семейные дома с соответствующей инфраструктурой не должны строиться вблизи месторождений	1	2
Поездки на работу на дальние месторождения – лучшее решение, чем строительство новых городов	1	2
Моя семья готова переехать в дом, предоставленный компанией, если такие дома будут построены вблизи месторождений	1	2
Лучше улучшать условия в уже существующих городах, чем строить новые	1	2
Я бы хотел(а) выезжать на работу из центрального города (Сыктывкар, Нарьян-Мар, Архангельск)	1	2
Ваша работа расположена слишком далеко от Вашего постоянного места жительства	1	2

24. Где бы Вы хотели жить после окончания Вашей работы и/ или выхода на пенсию? (пожалуйста, обведите цифру напротив наиболее подходящего ответа)

Там же, где живу сейчас	1	В другом регионе	3
В другом городе НО в том же регионе	2		

→ Если Вы выбрали ответ номер 3, пожалуйста ,ответьте на вопросы 24.1 и 24.2

24.1 Если Вы хотите уехать в другой регион после окончания Вашей работы и/ или выхода на пенсию, пожалуйста, укажите куда. (пожалуйста, обведите цифру напротив наиболее подходящего ответа)

Другой регион на Севере	1	Москва	4
Регион на Юге России	2	За границу	5
Столица другого региона	3	Другое, куда?_____	6

Пожалуйста, напишите название региона:_____

24.2 Если Вы хотите уехать в другой регион после окончания Вашей работы и/ или выхода на пенсию, пожалуйста, укажите почему. (Пожалуйста, обведите одну цифру для каждого высказывания согласно степени важности для Вас):

	Очень важно	Важно	Нейтрально	Не важно	Не оказало никакого влияния
Более высокий уровень жизни	1	2	3	4	5
Лучший климат	1	2	3	4	5
Там живут родственники или друзья	1	2	3	4	5
Окружающая среда и природа лучше	1	2	3	4	5
Больше возможностей для свободного времяпрепровождения	1	2	3	4	5
Перееду в родные места	1	2	3	4	5
Хочу увидеть что-то новое	1	2	3	4	5
Больше магазинов	1	2	3	4	5
Медицинское обслуживание лучше	1	2	3	4	5

25. После окончания Вашей работы и/ или выхода на пенсию, в каком доме Вы бы предпочли жить? (Пожалуйста, обведите цифру напротив наиболее подходящего ответа):

Дом на одну семью	1
Одно- или двухэтажный дом на несколько квартир	2
Многоквартирный дом выше двух этажей	3
Другое, пожалуйста, уточните_____	4

СПАСИБО ЗА ВАШЕ СОТРУДНИЧЕСТВО – ПОЖАЛУЙСТА, ВЕРНИТЕ ЭТОТ ОПРОСНИК В КРАТЧАЙШИЕ СРОКИ!

Appendix 2. Questionnaire to SeverTEK's labour force (in English)

FOR SCIENTIFIC RESEARCH PURPOSE ONLY
TO THE WORKERS OF SeverTEK
CONFIDENTIAL, PLEASE ANSWER ALL QUESTIONS!

1. First could you tell us about yourself and your family, please? What is your age? _____years.
   Your sex? (Please circle one number.) Male 1 Female 2
   Are you married or living together? Yes 1 No 2
   Number of children at home now_____
   Number of relatives and others living at home_____

2. Where are you born in Russia? (Town and region)_____

3. Where do you live permanently now? The name of the town/region is _____.

4. How long have you lived in the town/region? _____years OR _____month.

5. What is the distance between your home town/region and SeverTEK-workplace? _____km.
   (Please circle one number.) by air 1 or by road 2

6. How long have you been employed in SeverTEK? _____years OR ____month OR _____days.

7. Are you working in (Please circle one number.)

Administration	1	Transportation	5
Maintenance	2	Services	6
Production	3	Other, what?_____	7
Exploration	4		

8. Are you in (Please circle one number.)

Management	1	Staff	3
Supervisory	2	Other, what? _____	4

9. You are employed by (Please circle one number.)

SeverTEK	1	A subcontractor	4
Lukoil	2	An external service company	5
Fortum	3	You are self-employed	6

10. How many hours are you working per day? _____hours. Today, from _____ to _____
    How many days does your work shift last? _____ days.
    How many days is the resting period? _____days.

11. Where do you live during your work shifts? (Please circle one number.)
    South Shapkino 1 Other, where?_____3
    I commute daily 2

12. Before working in my present job, I was
    working for another oil company 1 unemployed 3
    which?_____
    working in a different sector 2
    which?_____

13. Have you lived in a fly-in/fly-out company provided accommodation complex before?
    No 1 Yes 2, the total length of your former stay is _____ years AND _____ month.

14. FROM NOW, how much longer do you intend to stay in your job with SeverTEK? (Please write down the time you plan to stay OR circle number 1.)

I plan to stay in my present job _____month OR_____years

Depends on how long my job lasts……1

If you intend to stay less than 2 years, why do you plan to leave SeverTEK?

15. Please rate the overall importance of EACH of the following reasons in your decisions to come and work in SeverTEK. (Please circle one number for each statement according to the strength of the importance to you.)

	A major consideration	A minor consideration	Not a consideration
My work is mobile and I stay a certain period here	1	2	3
They offered a high salary/wage	1	2	3
There were few job opportunities and I accepted this offer	1	2	3
My employer or boss decides where I work	1	2	3
I save money generally	1	2	3
I save money to buy a flat/house in the town/region I live at the moment	1	2	3
I save money to live later in a different part of Russia	1	2	3
Because I was unemployed and could find work here	1	2	3
I was provided with a better or more secure job than I held before coming here	1	2	3
I got a job transfer or promotion with an existing employer	1	2	3
I had desire for new experience, desire for a change of scenery	1	2	3
I escaped the lifestyle elsewhere	1	2	3
A job in the oil sector is prestigious	1	2	3

16. Is there any particular goal(s) that you hope to achieve by working in SeverTEK? (Please circle appropriate answer.)

Yes 1 No 2 If no, go to question 17 •

Details: _____

Ultimately, to what extent do you feel that as a result of living and working here, you are likely to achieve this (these) goal(s)? (Please circle the number next to appropriate answer.)

Have already done so	1	Not sure	4
Very likely	2	Unlikely	5
Likely	3	Very unlikely	6

17. How would you rate the adequacy of the following facilities in this accommodation complex, as far as you personal needs are concerned? (Please circle one number for each statement according to how you feel.) If you are not living in a complex, please state your opinion anyway:

	More than adequate	Adequate	Inadequate	Non-existent	Not relevant to me right now
Accommodation here?	1	2	3	4	5
Dining facilities?	1	2	3	4	5
Menu?	1	2	3	4	5
Bar / pub?	1	2	3	4	5
Showers and toilets?	1	2	3	4	5
Telephone connections?	1	2	3	4	5
Road connections?	1	2	3	4	5
Flight connections?	1	2	3	4	5
TV-system?	1	2	3	4	5
Access to medical facilities?	1	2	3	4	5
Light installations?	1	2	3	4	5
Noise protection?	1	2	3	4	5
Others, what?_____	1	2	3	4	5

What facilities are inadequate in your accommodation complex and how may they be improved?

_____

Are there any essential facilities required in your accommodation complex? What?

18. These next questions deal with your satisfaction with the life in an accommodation complex. Please indicate how you feel about EACH of the following statements as you see it just now. (Please circle one number for each statement according how you feel.) If you are not living in an accommodation complex, please answer anyway:

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
The layout of the accommodation complex helps everyone to feel integrated into the work community	1	2	3	4	5
There is no purpose in the way this accommodation complex is designed	1	2	3	4	5
Living together in the accommodation complex is stressful	1	2	3	4	5
It causes problems when everybody knows everybody else's business	1	2	3	4	5
This is only a working place – I do not care about social relations here in this accommodation complex	1	2	3	4	5
Outside working hours no-one here pays much attention to whether a person is on the staff or under casual contract	1	2	3	4	5
There is hostility between people in this accommodation complex	1	2	3	4	5
Contract workers temporarily resident from time to time in this accommodation complex create problems	1	2	3	4	5
Many people are inconvenienced by the behaviour of the colleagues	1	2	3	4	5
Many people are inconvenienced by the noise of the neighbours	1	2	3	4	5
Most people in SeverTEK tend to form cliques	1	2	3	4	5
There is no good co-operation between SeverTEK employees and others	1	2	3	4	5
Social class distinctions are very noticeable in SeverTEK	1	2	3	4	5
Long-distance commuting is a modern approach to work organisation on an oilfield like this	1	2	3	4	5
My work schedule causes problems for family life	1	2	3	4	5
The long work period here increases responsibility and pressure on the spouse	1	2	3	4	5
My best friends are working here as well	1	2	3	4	5
My best friends are working on this shift	1	2	3	4	5
Many employees and their families come together also in free time	1	2	3	4	5
I like this work on a rotational basis more than the living and working at the same place	1	2	3	4	5
My family would not move to a remote oil town	1	2	3	4	5
Family problems with organising social and recreational activities due to my shift-work can be overcome without serious difficulties and drawbacks	1	2	3	4	5
I believe that those who administer this complex care about us employees	1	2	3	4	5
Employees have enough influence on the provision of recreational facilities	1	2	3	4	5
I want to work as a long-distance commuter until I will retire	1	2	3	4	5
I do some hobbies with other SeverTEK employees in free time	1	2	3	4	5

19. In your current job, how do you feel about EACH of the following? (Please circle the number next to the appropriate response for each statement.)

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
19.1 The company in which you are employed					
It has a good reputation	1	2	3	4	5
It is a poor firm to work for	1	2	3	4	5
They treat me like a number	1	2	3	4	5
It is important that it has a foreign partner	1	2	3	4	5
The company makes me feeling like I belong to it	1	2	3	4	5
It considers workers matters appropriately	1	2	3	4	5
19.2 Your pay and the opportunities for promotion					
Income disparities are too large between employees	1	2	3	4	5
My pay is adequate for my needs	1	2	3	4	5
Compensation for staying at the worksite several days is fair	1	2	3	4	5
My pay is fairly satisfying	1	2	3	4	5
The promotion system is fair	1	2	3	4	5
My prospects in the company are very limited	1	2	3	4	5
My experience increases my prospects in the company	1	2	3	4	5
19.3 The job itself					
The time passes quickly	1	2	3	4	5
I would like to have more flexible working hours	1	2	3	4	5
I have enough say in how I do my work	1	2	3	4	5
I have enough say in what I do	1	2	3	4	5
It enables me to make useful contribution to Russia's prosperity	1	2	3	4	5
It is the same day after day	1	2	3	4	5
19.4 The people you work with					
They know their jobs	1	2	3	4	5
It is easy to make friends here	1	2	3	4	5
It is easy to make enemies here	1	2	3	4	5
They have problems in adjusting to rotation	1	2	3	4	5
We work well as a group	1	2	3	4	5
They do their share of the work	1	2	3	4	5
19.5 Your immediate boss (e.g. foreman, manager to whom you are directly answerable etc.)					
I can discuss problems easily with my boss	1	2	3	4	5
My boss is too busy to see me	1	2	3	4	5
Does a good job	1	2	3	4	5
My boss listens to suggestions about the job	1	2	3	4	5
The management system should be improved	1	2	3	4	5
19.6 SeverTEK					
It is a poor firm to work for	1	2	3	4	5
It has a good reputation	1	2	3	4	5
There are enough consultations between management and others	1	2	3	4	5
It makes a major contribution to the region (Komi/Nenets)	1	2	3	4	5
It makes a major contribution to the Russian economy	1	2	3	4	5
19.7 Cooperation with Fortum					
It is very important for the well being of SeverTEK	1	2	3	4	5
It brings foreign technology/expertise to Russia	1	2	3	4	5
I got already personal contacts with foreigner	1	2	3	4	5
Finland is a good country for cooperation	1	2	3	4	5

It would be better to have a different cooperation partner	1	2	3	4	5
19.8 Consumption of the production					
The produced oil should be consumed in Russia	1	2	3	4	5
It is better to export the oil because it leads to higher benefits for Russia than domestic consumption.	1	2	3	4	5

20. What factors influence you stay in your present residential location? (Please circle one number for each statement according to its importance to you.)

	A major consideration	A minor consideration	Not a consideration
I am born there	1	2	3
I am much better off financially there than elsewhere	1	2	3
I like the lifestyle in my home town/region	1	2	3
I think that our home town/region is a good place to raise children	1	2	3
My spouse or I have close relatives there	1	2	3
I have good friends there	1	2	3
I still find new experiences there	1	2	3
My spouse couldn't get a job with as much responsibility and/or chance of advancement elsewhere than in this town/region	1	2	3
The good quality of our permanent accommodation	1	2	3
I enjoy the natural environment around our home town/region	1	2	3
The oil industry influences the situation positively	1	2	3
My present job keeps me there	1	2	3
I have no other place to go	1	2	3
The low cost of housing and living keep me there	1	2	3
Our residential town/region is pleasant to live	1	2	3

21. Are you and your family now living in (Please circle the number next to the most appropriate answer.):

A single occupancy house	1
An apartment building with at most two storeys	2
An apartment building with more than two storeys	3
Other, please specify_____	4

If you had your choice, in which of the above-mentioned dwellings types would you most like to live at this stage of your life?

I prefer dwelling type number _____

22. If you had your choice, in which of the settlement types would you most like to live at this stage of your life? (Please circle the number next to the most appropriate answer.)

in an oil industry town	1	in a small country town	4
in a capital city, e.g. Syktyvkar	2	wherever, but I would like to commute daily	5
in a rural area	3		

23. Do you feel that (Please circle the number next to the appropriate response for each statement.):

	Yes	No
Workers in the oil industry should live close to the production sites	1	2
Family houses with community services should be built close to the production sites	1	2
Long-distance commuting is the better solution than building new towns	1	2
My family is willing to move to a company house if such would be available near the production sites	1	2
It is better to improve services in the prevailing towns and regions than establishing new towns	1	2
I would like to commute from a major town (e.g. Syktyvkar, Nar'yan Mar, Arkhangelsk)	1	2
My place of permanent residence is far away from your working place	1	2

24. After your job ends and/or you will retire, where would you like to live? (Please circle the number next to the appropriate answer.)

The same place like now	1	In a different region	3
In a different town BUT in the same region	2	•If 3, go to question 24.1 and 24.2	

24.1 If you want to move to a different region after your job ends and/or you will retire, please specify where (Please circle the number next to the appropriate answer.)

Another region in the North	1	Moscow	4
A region in the South of Russia	2	Abroad	5
A capital city of a different region	3	Other, where_____	6

Please write down the name of the region:_____

24.2 If you want to move to a different region after your job ends and/or you will retire, please specify why (Please circle one number for each statement according to its importance to you.)

	Very important	Important	Neutral	Not important	Not relevant at all
Higher quality of life	1	2	3	4	5
Better climate	1	2	3	4	5
Relatives or friends are living there	1	2	3	4	5
Nicer environment and nature	1	2	3	4	5
More free time activities	1	2	3	4	5
Moving back to my home region	1	2	3	4	5
Whish to see something new	1	2	3	4	5
Better shopping possibilities	1	2	3	4	5
Better health care institutions	1	2	3	4	5

25. After your job ends and/or you will retire, in which of the following dwellings types would you most like to live? (Please circle the number next to the appropriate answer.)

A single occupancy house	1
An apartment building with at most two storeys	2
An apartment building with more than two storeys	3
Other, please specify_____	4

THANK YOU FOR YOUR CO-OPERATION – PLEASE RETURN THIS FORM VERY SOON

Article I

Spies, Mattias (2006): Distance between home and workplace as a factor for job satisfaction in the North-West Russian oil industry. *Fennia* 184: 2, 133-149.

Distance between home and workplace as a factor for job satisfaction in the North-West Russian oil industry

MATTIAS SPIES

Spies, Mattias (2006). Distance between home and workplace as a factor for job satisfaction in the North-West Russian oil industry. *Fennia* 184: 2, pp. 133–149. Helsinki. ISSN 0015-0010.

This paper investigates in a combined theoretical and empirical approach the interrelatedness of job satisfaction and distance between home and workplace under long-distance commuting conditions. After discussing the concepts of long-distance commuting and job satisfaction on a theoretical level, the focus is on the situation of employees working in Russia's oil industry. The empirical analysis is based on questionnaire data from a survey that captures employees' experiences in an oil company, which operates in the Komi Republic and Nenets Autonomous District. The paper reveals factors influencing the perception of and dealing with commuting distances reaching up to several thousand kilometres. The influence of differences in the organisation and length of shifts and in the compensation for travel expenses is analysed in detail. Ultimately, the goal of this research is to find out whether or not commuting distances face upper constraints concerning employees' job satisfaction and to discuss potential implications for developments in remote areas. The results show that growing commuting distance does not necessarily cause lower job satisfaction. Instead, a more important factor in this respect is the organisation of long-distance commuting in a way that meets the understanding and needs of the involved employees and gives room for individual coping strategies.

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Introduction

Distance is a shaping feature of the Russian North, as well as of most other remote parts of the world. It is usually viewed as imposing costs and having frictional effects on economic activities and hence, necessitates efficient coping strategies. These preconditions have led to the development of long-distance commuting as an important element of natural resources exploitation in remote areas around the world. The distances that the employees cover during the journeys between their home and workplace make daily commuting unfeasible. On-site accommodation and compact work-schedules characterise workers' everyday experience on duty, while long resting periods at home after the end of each work turn act as highly regarded rewards. Distances of several thousand kilometres and even commuting between different continents are reasonable within this setting.

Long-distance commuting is widely applied and has social, political and economic consequences for the employees and their families, companies and communities. There is, however, surprisingly little concrete research done attempting to unravel the underlying structures and patterns of interrelated factors (Storey 2001b). Storey (2001b) argues that studies on long-distance commuting involve too many assumptions and hypotheses, but too few supporting (or rejecting) proofs based on primary field research. One frequently presented assumption is a generally high job satisfaction among long-distance commuters, usually explained with financial incentives and abundant free time (for example Houghton 1993; Tykkyläinen 1996). However, the concept of job satisfaction includes various other factors that raise the question if these

two motives alone are conclusive for understanding such a complex matter.

This article attempts to unravel the influence of one very particular and inherently geographical aspect of long-distance commuting affecting the job satisfaction of employees: distance. Other potentially influencing factors, such as development disparities in the home regions of the employees and different living conditions, are not considered. The argumentation is based on a survey among employees of a Russian oil company working on a remote production site in the Nenets Autonomous District. Within an increasingly intensive discussion on the real costs of the Soviet policy for populating the north with a large and permanent population, long-distance commuting, or the *vakhtovyi* method in Russian, is considered a promising and efficient alternative. The Russian experience of labour mobility is thus worth a thorough examination, with an additional look on the meaning of distance in the Russian context of a vast geographical territory. This paper introduces an example for the application of the *vakhtovyi* method in Russia. It aims to contribute to a better overall understanding of long-distance commuting by providing well-founded knowledge on underlying factors based on a combined theoretical and empirical approach.

Research question

When commuting distance covers several thousand kilometres, the issue cannot be addressed in the same way as in traditional daily mobility behaviour. Does distance actually matter at all regarding the employees' choices of employment and perception of their work situation? Employment opportunity and job accessibility seem to be independent from the spatial connectedness of home and workplace. On the other hand, Tykkyläinen (1996) has demonstrated strong attachments of long-distance commuters to their home environments and showed that home atmosphere and lifestyle cannot be transferred to other places. Therefore, it is reasonable to assume that the degree of remoteness and separation from the home environment influences the subjective perceptions of long-distance commuters. Long physical distance narrows down the possibility of returning home by complicating journey arrangements and increasing travel time. Therefore, one has to understand not only the absolute space but also relative or individually perceived views on distance (Janelle 2001). The rationale of this paper is to unravel whether distance between home and workplace is an important element of job satisfaction in long-distance commuting and furthermore, if it can be extended without facing upper constraints?

Case study and data

This study is based on a survey conducted among the employees of the ZAO SeverTEK oil company in late 2004. The firm was established in 1996 to exploit oil deposits in the tundra of the Komi Republic and the Nenets Autonomous District, northwest from Usinsk. It was originally owned in equal shares by two oil companies, the Russian Lukoil and the Finnish Fortum. However, since autumn 2005, Lukoil has been the sole owner of SeverTEK. The construction of all production facilities was completed in summer 2005 and full production was achieved shortly after.

The total oil reserves of SeverTEK are estimated at 30–40 million tons and an annual yield of 2.5 million tons is targeted. The oil is transported via a company-owned pipeline east to the Kharyaga terminal and from there to the markets via pipelines owned by Lukoil and Transneft (Fig. 1). Possible shortages in the pipeline transportation may cause reduction in overall future oil production of SeverTEK and hence, may turn out to be a serious problem for the enterprise (Hanna 2004).

The main production facilities of SeverTEK are currently at and around the South Shapkino oil field. At South Shapkino, there are laboratories, a processing plant for enhancing the quality of the produced oil, a heliport and the accommodation buildings for the employees. In November 2004, SeverTEK had a staff of 589 individuals, 320 of which were workers. A significant part (166) lives in the Usinsk region; five live in Moscow and the majority (418) come from other regions of Russia (SeverTEK 2004). Accordingly, most employees commute to Usinsk for their work duties. Table 1 summarises some personal information on the employees. The workforce is dominantly male, rather work-experienced and lives with a partner, usually with children.

The majority of the employees are flown from Usinsk to the South Shapkino oil field and are accommodated there for their work period. Nearly all of the 320 workers and part of the administration and research staff work at the field in two shifts. The usual rotation is 15/15 (15 days work

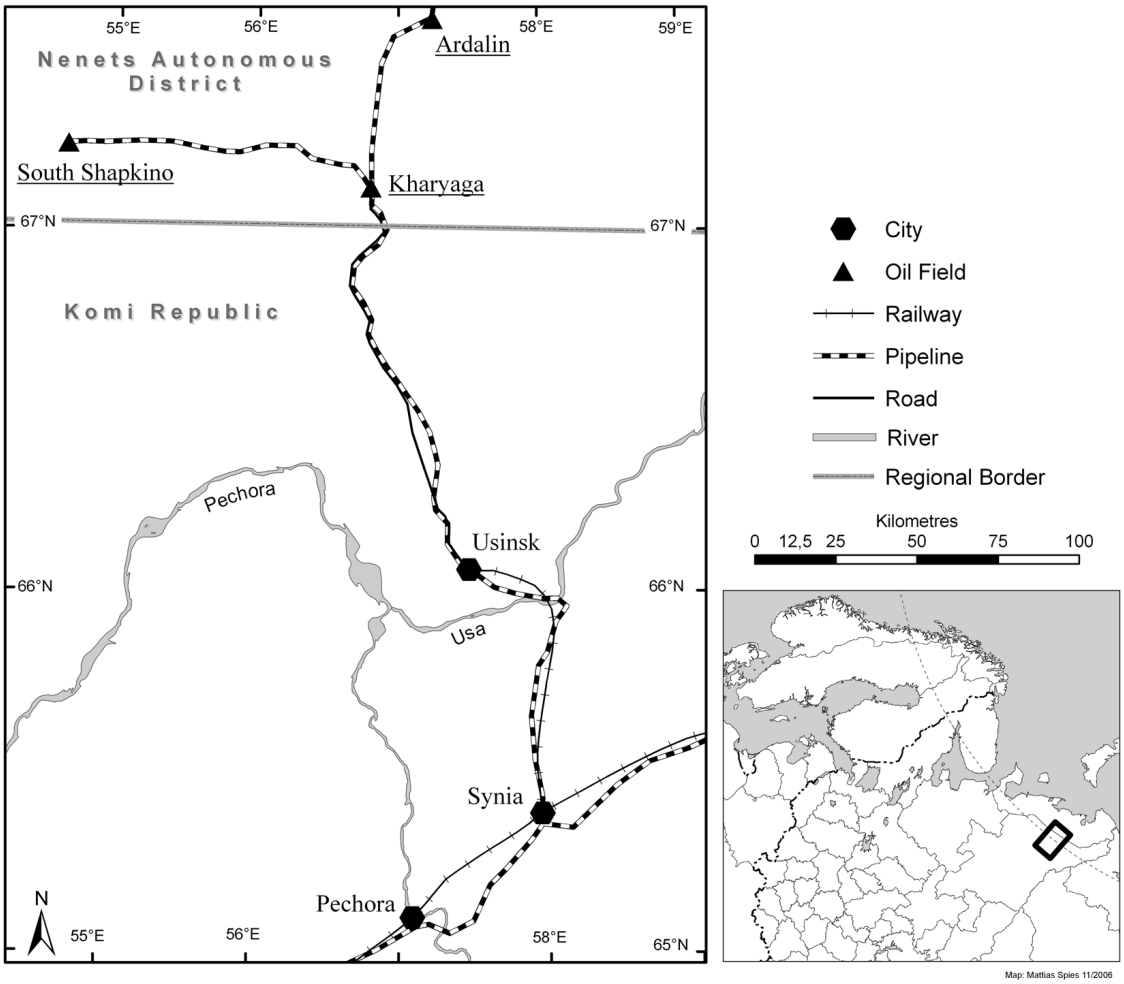

Fig. 1. Map of research area.

Table 1. Personal information on employees.

Average age	38 years
Sex	
▪ Male	94%
▪ Female	6%
Family status	
▪ Are married /cohabitating	83%
▪ Have children	77%
Former work experience	
▪ In another oil company	61%
▪ With long-distance commuting	65%

period followed by 15 days resting at home) but can be extended to 30/30 if the employees of two subsequent shifts agree on it. At the oil field, the work is organised into two daily shifts of 12 hours, each between seven o'clock in the morning and the evening. The average income of 867 USD per month (an average of the first nine months of 2004) is comparably high in Russian standards (SeverTEK 2004). The main difference in the management of ordinary workers and highly skilled employees is the way in which travel expenses are refunded. While the workers have to cover the travel expenses from home to the head office in Usinsk by themselves, the costs of highly skilled employees are covered by the company. This is explained by the shortage of educated specialists in the Russian oil and gas industry (Naskova 2004).

The accommodation complex at South Shapkino is new and modern. All facilities have been constructed since 2001 and are designed to offer a

large variety of amenities. It can be reached by helicopter from Usinsk in about 75 minutes the year round, or by vehicles along winter roads over frozen rivers and tundra. However, harsh climate and location in the far north are inevitably limiting the comfort. Construction and maintenance of the infrastructure is demanding and expensive, and space in the complex is therefore rather limited. The complex is designed to host a maximum of 250 people. Some dormitory rooms are designed for two occupants but most employees have to share rooms of approximately 10 m^2 with three other individuals (at any given time, two of the four employees will be working their shift).

The employees are provided with free food, primary health care and laundry services. Leisure time possibilities are mostly limited to indoor activities (TV, fitness room, table tennis etc.) due to climatic constrains in winter, and few opportunities in the tundra during summer. Strict intern security regulations (for alcohol use, contact with reindeer herders etc.) are further limiting personal freedom and decision-making. Therefore, workers' life is strongly characterised by 12 hours of work and subsequent sleeping time.

The survey among SeverTEK's employees reported in this paper aimed at reaching all staff working at the oil field in South Shapkino. A self-administered questionnaire in Russian language was disseminated to all present employees of two subsequent rotational shifts, of about 220 members each. Of these 440 subjects, 357 responded and returned the filled-in questionnaire.

Limitations

The main limitation of the study is that the data was collected from one company only. Therefore, it is justified to come to conclusions on the meaning of distance in long-distance commuting for the employees of SeverTEK only. Any attempt for conclusions on a wider scope has to keep this precondition in mind. Nevertheless, it seems reasonable to allow some degree of generalisation from this case study due to the similar working arrangements and conditions in other oil and gas companies in the Russian North.

It is difficult to estimate to what extent the findings suit to other regions of the world with long-distance commuting. Although the common trend in long-distance commuting research is to transfer findings from one context to another, this is criticised by Storey (2001b). The mere size of Russia constitutes a unique environment for long-distance commuters.

Both distribution and collection of the questionnaires was done with the help of SeverTEK. There is hence a possibility of bias in the data, as some employees may have felt uncomfortable to express their genuine feelings and opinions. However, no direct indication of biased answers was found in the data analyses.

Theoretical background

Long-distance commuting

Long-distance commuting (LDC) is a concept of workforce organisation and recruitment that is widely applied in the oil, gas and mining industries, as well as in all other industrial activities that take place in remote areas without sufficient local supply of labour and that lack the potential to attract labour to move in permanently. LDC is defined by Hobart (1979: 2) as "…all employment in which the work place is so isolated from the worker's homes that food and lodging accommodation are provided for them at the work site and schedules are established whereby employees spend a fixed number of days working at the site, followed by a fixed number of rest days at home. The expectation is that the employees will work an indefinite number of work and home rotation cycles." Most commonly, the travelling between home and work place is organised by air, often referred to as fly-in/fly-out. Commuting distance, transportation systems, work schedule details, on-site accommodation and other factors can vary significantly between different long-distance commuting operations and it is hence difficult to find one accurate generic descriptive definition (Shrimpton 1994). For example, shift lengths can vary from a few days to several weeks or even months. What defines the concept and distinguishes it from traditional forms of labour organisation is the unambiguous spatial and temporal separation between the employees' home and workplace. Based on this intermittent principle, the spatial range of available employment opportunities is extended widely for both employees and employers (Houghton 1993). Therefore, this form of commuting is used by various employers and industries located in regions with insufficient labour pools, thus giving access to distant labour markets.

On a grand scale, long-distance commuting was first developed and applied in the offshore oil in-

dustry in the Gulf of Mexico after the World War II (Storey 2001a; The Chamber of Minerals and Energy Western Australia 2005). LDC has since developed further and spread around the world. A frequent use of onshore long-distance commuting operation started in Canada and Australia in the 1970s, in many cases replacing the traditional establishment of mining towns at newly opened mining sites. Ever since, LDC has become more and more common, a process that is very likely to continue (Storey 2001b).

There are several reasons for the growth of long-distance commuting around the world. One reason is the unbalanced spatial distribution of population and natural resources (Storey & Shrimpton 1989). Building mining towns at remote places is not sufficient anymore. The decline in the number of remote resource towns in favour of long-distance commuting is based on three principal reasons. First, long-distance commuting is often more cost-effective than the construction of resource towns, allowing capital savings (Costa 2004). Especially front-end costs are drastically reduced and replaced by more evenly-distributed investments in transportation (Houghton 1993). Additionally, as demonstrated by Tykkyläinen (1996), longer working hours and leaner organisation structures are common in long-distance commuting operations reducing over-all costs in spite of higher transportation expenditures. Second, the progress has been strongly influenced by rapid technology development. Reliable and cheap transportation and communication technology are essential for establishing long-distance commuting operations (Tykkyläinen 1996). In addition, technological development in the mining industry works in favour of long-distance commuting. Increased automation and replacement of human labour by machinery reduce the need of labour force, which in turn leads to lower transportation costs. Third, workers' preferences have changed. The majority of mining workers are no longer willing to move to remote places in order to work in a mine (Storey & Shrimpton 1989; Tykkyläinen 1996). This is the case especially for employees with a partner and family. Due to the higher standard of living in urban regions, including better infrastructure, health and education facilities and a wide spectrum of recreational possibilities, the workers and their families are unwilling to accommodate to the Spartan life style of the resource towns. Unstable commodity prices, a trend towards smaller-scale operations and stricter regulations for environmental and social planning in the mining sector also support long-distance commuting. Consequently, there is no reason to believe that this trend in remote areas would change in the near future.

What are the political, social and economic impacts of this development? Conflicting messages have been given by the different stakeholders involved and it is difficult to judge the overall sustainability of long-distance commuting (Heiler & Pickersgill 2001; Costa 2004). The implications can be divided into three groups: First, the organisation of work differs from a normal work situation including special arrangements on working schedules, transportation issues, accommodation and other practical aspects in order to ensure a smooth production process. Consequently, facets of working life normally not in the scope of management have to be handled regularly (Storey & Shrimpton 1989). The maintenance of a harmonious working and living atmosphere among people living together in remote places, often with rather limited space and privacy, belongs to this category. Second, long-distance commuting has implications for the employees' well-being and family life. It is often assumed that the compact working schedule affects negatively the health and safety conditions. Nevertheless, these relationships are not fully proven and understood (Costa 2004). Alike, the impact on families remains unclear. On one hand it is reasonable to argue that the regular partings and reunions cause stress on families and that the extensive absence of parents is problematic. On the other hand, employees do not juggle the competing interests of work and domestic responsibilities and do not have to commute several hours each day, which reduces some stress (Heiler & Pickersgill 2001). Third, community life and regional development face new challenges in long-distance commuting settings, especially in areas with traditional village-type settlements. The long periods of absence, for example, make it difficult for residents to participate and contribute to community life. Many communities also experience out-migration of inhabitants due to their improved financial position and complain that the local share of the benefits from mining activities is too narrow (Storey 2001b). These implications are often related to the 'fly-over' problem, which leads to the exclusion of rural communities from the benefits from mining activities in their vicinity. The supply to and positive spill-over from the industry are arranged and shared between the mining site and a few, mostly metropolitan, areas from where

the mining process is organised and where most employees live. However, long-distance commuting contributes to the wealth of rural areas by enabling mining projects that would otherwise be unprofitable and by increasing employment possibilities.

On a theoretical level, the implications of long-distance commuting are extensive and challenge the traditional concepts of spatial structures and behaviour. Physical distance is perceived differently as it loses much of its limiting impacts on commuting activities. Mobility decisions are based on distance perceptions and scales that are altered by modern communication and transportation technology (Tykkyläinen 1996). More concretely, long-distance commuting changes the clear distinction between short-term mobility and permanent migration and obscures the meaning of traditional travel-to-work areas (Houghton 1993; McQuaid et al. 2001). These factors indicate a changing connotation of distance. Obviously, commuting under these new preconditions enables employees to cover much longer distances in travelling to and from work. It seems like spatial interaction is almost a random function of distance (Tykkyläinen 1996). In addition to an absolute notion of space expressed in kilometres, also alternative concepts are relevant for the analysis of long-distance commuting. Concepts like time distance and economic distance express a clearly individual or relative view on distance and help explain its changing meaning (Gatrell 1983). Janelle (1968) developed the concept of time-space convergence based on a relative understanding of space and shows how the effort needed to cope with distance is changing over time, for example by introducing more powerful means of transport. He concludes "…that physical points (places on the earth) are in relative motion with respect to one another…[and that] the structure of the resulting space, the frame of reference for human activities, is constantly in flux…" (Janelle 2001: 15474). Long-distance commuters obviously utilise the opportunities of this relativity, based on improved transport and communications technology, to overcome the friction of distance. They are extending their spatial leverage into areas that would be otherwise inaccessible. This results in growing personal extensibility (Janelle 1973; Adams 1995).

In Russia, long-distance commuting is known as the *'vakhtovyi'*, or 'shift work' method. Its principles are similar to those in other regions and described above. The sparsely populated north with its rich natural resources represents a substantial part of the country. Due to this precondition, long-distance commuting was and is an important aspect of the mining and hydrocarbon industry. Ever since the planned and industrialised exploitation of riches of the north started, labour supply was a crucial question. Several policies have been applied in order to ensure a sufficient potential of labour in the oft-extreme locations of natural resources extraction (Bond 1985). Long-distance commuting is one of the potential approaches and one that has recently attracted more attention, even though it is by no means a new concept in Russia. Sveshnikov (1988: 280) defines early examples of long-distance commuting as "expedition-related commuting-type settlements" that are supplied with food and other goods from supporting towns in more favourable natural conditions. Armstrong (1976) refers to cases of mineral resource extraction in remote northern locations in the 1960s, which applied the 'shift method'.

Today, long-distance commuting is indispensable for the industry in Russia's northern and eastern peripheries. These parts of Russia have experienced significant out-migration since the dissolution of the Soviet Union and the subsequent mitigation or disappearance of many benefits for its inhabitants (Heleniak 1999; Göler 2005). An increasing awareness of the real costs of maintaining a large and permanent population at remote locations in the north, often with extreme natural conditions, and the new geo-political realities of the post-Soviet period, have led to a different assessment of the value of these northern settlements (Hill & Gaddy 2003). Today, Russian officials promote long-distance commuting as a promising alternative development strategy for the north and claim that it should gradually replace permanent settlements (Drobizheva 1999; Walsh 2003). Nevertheless, ongoing attempts to resettle voluntarily the population from Russia's peripheries to central parts of the country are facing more difficulties than expected and are often related to place attachment, as Thompson (2002, 2004) and Round (2005) have demonstrated. Furthermore, any effort to replace permanent settlements in Russia's peripheries by long-distance commuting operations is likely to increase the fragmentation of the country between a few prospering urban areas and locations of natural resource extraction on one side and vast, 'empty', underdeveloped hinterlands (Dienes 2002).

Long-distance commuting is currently, in spite of its potential problems, an important way of attracting people to northern workplaces due to the reasons explained above, employees' preferences for living in the south and a lack of high skilled employees (Naskova 2004; Juurikkala & Lazareva 2006). Borisov (2004), for example, estimates that over ten percent of the workers in the oil and gas industry of the Khanty-Mansi Autonomous District have their homes in a different region of Russia and that the share of Gazprom's employees working with the *vakhtovyi* method will grow up to 16 percent in 2006. To conclude, present developments in Russia's peripheries and a simultaneous thrust of many natural resource extracting companies further north and east into even more remote places support the presumption that the number of long-distance commuting operations over increasing distances will continue to grow.

Job satisfaction and commuting

Research on job satisfaction is an important part of organisational behaviour and work psychology. The importance for psychological research can be evaluated from two different perspectives (Spector 1997). First, from a humanitarian perspective, a fair and respectful treatment of people is worth an endeavour. Job satisfaction appears here as evidence of good treatment of employees. Second, from a utilitarian perspective, it is crucial that satisfaction leads to employees' behaviour that supports the organisational functioning.

A look at the theories of job satisfaction gives an impression of the problems and complexities related to the issue. According to Dipboye et al. (1994), there are three different sets of important job satisfaction theories. The first is the two-factor theory. It tries to explain job satisfaction with extrinsic job factors (e.g. working conditions, salary) and intrinsic factors (e.g. responsibility and achievement). Job satisfaction occurs only when the intrinsic needs are fulfilled. The second set of theories compares the level of access to an aspect with the level of actual need to access this aspect (Dipboye et al. 1994). It deals with the degree of discrepancy between these two categories and defines it as the reason for satisfaction or dissatisfaction. This comparison can focus on a global level, measuring a value of overall job satisfaction. Furthermore, as recently stressed, it can look only at certain aspects of the job reality and give emphasis to these facets. The third set of theories is most recently developed and applied, and focuses on the individual characters of employees and on cognitive processes that constitute job (dis)satisfaction. Aspects like individual values and needs, personality traits, and the comparison of their own achievements at work with those of members of relevant social groups come to the forefront now (Thierry 1998).

Job satisfaction is influenced by a variety of factors and is far from being the result of any straightforward causal connection between any such factors. It is always difficult to deal with, for example, feelings and attitudes. Individuals tend to have their own personal point(s) of reference in the perception of their environment (Iverson & Maguire 2000). For Freeman (1978), this is the reason why job satisfaction has not received as much attention from economists as it should have due to its importance for economic processes in organisations.

The theoretical positioning is challenging. Furthermore, the specification of concrete determinates and potential effects of job satisfaction are multifaceted. When dealing with an interrelationship between personality traits and situational variables (Thierry 1998), it is not surprising that many factors influence job satisfaction. They can be divided into three groups: *Personal characteristics* (e.g. age, gender, personality and traits), *job-related factors* (e.g., salary, job design, labour conditions and participation in decision-making), and, finally, *non-work factors* (e.g. life satisfaction and family situation) that are important determinants for job satisfaction. Spector (1997) provides detailed information about, as he calls them, antecedents of job satisfaction. Among the personal factors he stresses particularly the concept of locus of control, which is a cognitive variable representing the belief/disbelief in self-determination (Spector 1997).

For this study, it is necessary to connect these insights on job satisfaction to the discussion on commuting in general and long-distance commuting in particular. It is valuable to look at specific aspects of and influential factors for job satisfaction. This emphasis on partial job satisfaction (Johansson 2004) justifies the in-depth look at long-distance commuting as one particular determinate of job satisfaction. Due to two reasons, it is not easy to establish the link between commuting and satisfaction. First, little attention has been paid so far on commuting as a determinant of job satisfaction. In addition, when it has been done, it has usually been understood as short distance or daily commuting.

Commuting studies often approach the question of job satisfaction indirectly by emphasising stress as the main factor (e.g. Cassidy 1992; Koslowsky et al. 1996; McLennan & Bennetts 2003). Nevertheless, the effects of stress are very similar to those of job satisfaction. McLennan and Bennetts (2003) name job performance, health and psychological adjustment as being affected by stress and hence, also job satisfaction is certainly influenced by commuting. Commuting is often referred to as a plague of modern man and generally associated with negative outcomes (Koslowsky et al. 1996). Distance, measured in kilometres or in time, is in this assessment of (daily) commuting one of the main determinants for stress and job satisfaction. Whether this applies also to long-distance commuting or not will be considered later. Some results (Cassidy 1992) point to the fact that longer commutes lead to a more negative experience of commuting. The relationship between distance and stress of commuting is, again, not straightforward. Johansson et al. (2003) have found that time distance has a non-linear influence on commuters' behaviour. They show that the time sensibility is much lower for very short and very long commuting distances. However, it has to be mentioned here that long time distance is defined by the authors as beyond one hour of travelling time (Johansson et al. 2003), which is, in terms of long-distance commuting as it is understood in this study, still a short distance. Concurrent results are provided concerning the means of influencing and levelling the stress caused by commuting. The fact that people seek control over their journey to work can be identified as the common bottom-line for all of these measures (McLennan & Bennetts 2003). Impedance, a concept of perceived speed and control of travelling, is very important and every attempt to increase the level of perceived speed and control helps to abate stress (Cassidy 1992).

The question, whether the findings concerning daily commuting, stress and job satisfaction can be applied to long-distance commuting, cannot be answered conclusively on a theoretical level. There are few literature references concerning this issue. Jenkins (1997) studied job satisfaction and long-distance commuting but he does not specifically deal with this question. Neither do Chen et al. (2003), who studied the determinates of perceived occupational stress among Chinese offshore oil workers. The issue is taken into account only indirectly by giving a decisive importance to the journey to and from work and the isolation from communities and family. I argue that job satisfaction in long-distance commuting is most likely influenced by some of the basic factors mentioned above relating to daily commuting. The perceived level of control is believed to be one of these central aspects. Employees seek a level of flexibility and control that meet their specific needs, and this matter may be compromised by long-distance commuting (Heiler & Pickersgill 2001). In a second assumption I hypothesise that the meaning of distance for job satisfaction and stress in long-distance commuting differs from that in daily commuting, but that it still impacts the perceived level of control. This appears to be especially valid if the subjective perceptions of individuals are considered. It seems likely that a several thousand-kilometre distance between home and workplace could lead to a strong feeling of helplessness, i.e. lack of control.

Does distance matter?

Approach to the analysis

In the analysis, physical distance is given in kilometres, as other forms of distance, such as travelling time or economic cost were not readily available. The use of physical distance has the advantage of being consistent and containing implicit information on relative concepts of distance considered in the analysis and interpretation. The distance values are based on the estimations given by the employees. It is assumed that they have sufficient knowledge of the distance they cover during their journeys to and from work. Some employees, however, referred to SeverTEK's headquarter in Usinsk when specifying the distance between home and workplace (see, for example, the minimum value of two kilometres in Table 2), while others referred to the accommodation complex at South Shapkino. Estimation errors and different associations with the term 'workplace' lead to slightly distorted data. Nevertheless, the setting of this research does not require absolutely precise distance values and their impact can be considered secondary if compared with the total range of values. Of the total 357 returned questionnaires, 306 had valid distance values, the descriptive statistics of which are shown in Table 2. The values differ significantly and they are not normally distributed.

Job satisfaction is measured as summated scales (cf. Bryman & Cramer 2004) of the employees' sat-

Table 2. Descriptive statistics distance and job satisfaction.

	Valid N	Mean	Median	Standard deviation	Minimum	Maximum
What is the distance between your home town/region and SeverTEK-workplace? (km)	306	1071.26	360	1180.89	2	10000
Job satisfaction (summated scale)	222	87.98	89	9.56	59	112

isfaction with 26 aspects of their work situation under long-distance commuting conditions (see Fig. 2). This approach is based on the idea of partial job satisfaction (Johansson 2004). Therefore, from all of the aspects covered by the questionnaire I have chosen those that allow conclusions on overall job satisfaction. A wide range of intrinsic and extrinsic job aspects is covered. The respondents were asked to rate their opinion on these 26 aspects on a five point Likert scale. The satisfaction values are derived from these agreement figures with the assumption that a strong agreement equals high satisfaction whereas a strong disagreement expresses compelling dissatisfaction. Some answers had to be scored reversely before summing up the answers to an overall satisfaction indicator. The highest possible score of 130 (26*5) expresses very high satisfaction and 26, the lowest possible score (26*1), dissatisfaction. The use of mean values of data acquired with Likert scales is controversial. Nonetheless, Bryman and Cramer (2004) argue that most writers are prepared to treat such data as interval/ratio variables if used in summated scales. The number of cases is reduced to 222 due to missing values. The summarised outcome for the overall job satisfaction is illustrated in Table 2.

Two approaches are chosen for testing the relationship between job satisfaction and distance between home and workplace. First, the immediate correlation between both factors is tested by calculating Spearman's correlation coefficient based on 222 valid cases. The missing normal distribution of the distance values inhibits the use of other testing methods (e.g., Martens 2003).

The second approach classifies the cases in three groups according to the distance between home and workplace. The distance groups (Table 3 and Fig. 2) are formed for cases with commuting distances up to 300 kilometres, between 300 and one thousand kilometres and for more than one thousand kilometres. The rationale behind these threshold values is based on the home place of the workers and the character of travel arrangements. The majority of employees travelling up to 300 kilometres live in the wider Usinsk region. Accordingly, their journey is comparatively unproblematic. The second group includes employees coming mostly from other parts of the Komi Republic or North-West Russia. Within this region, traffic connections and infrastructure are rather developed and supportive for commuters, e.g. direct flights from Syktyvkar to Usinsk. The last group includes employees travelling more than one thousand kilometres. Due to distance and/or traffic connections the commuting arrangements of these employees are time consuming and comparatively difficult to organise.

The Kruskal-Wallis test is performed in order to analyse the average job satisfaction of these three groups. This nonparametric variance analysis assumes homogeneity among the means of different groups and is based on the ranking of the scores (Eckstein 2004). Significant differences between the mean values of job satisfaction exist if it is possible to reject the homogeneity hypothesis. The Kruskal-Wallis test measures the influence of a categorical factor on a metric variable (Martens 2003). The average job satisfaction is in a strict sense not such a metric variable. Therefore, a second test is applied in which the categorical factor is formed by four groups of job satisfaction and subsequently, their influence on the distance variable is analysed. The four groups are formed by following the quartiles of the distribution and indicate increasing job satisfaction.

Another matter of complication is the fact that the working conditions in SeverTEK are not equal for all employees, as stated earlier. The most striking differences are the unequal repayment of travel expenses and variations in the shift's length, which potentially influence job satisfaction and commuting distance. While dealing with the interrelationship between job satisfaction and distance, this

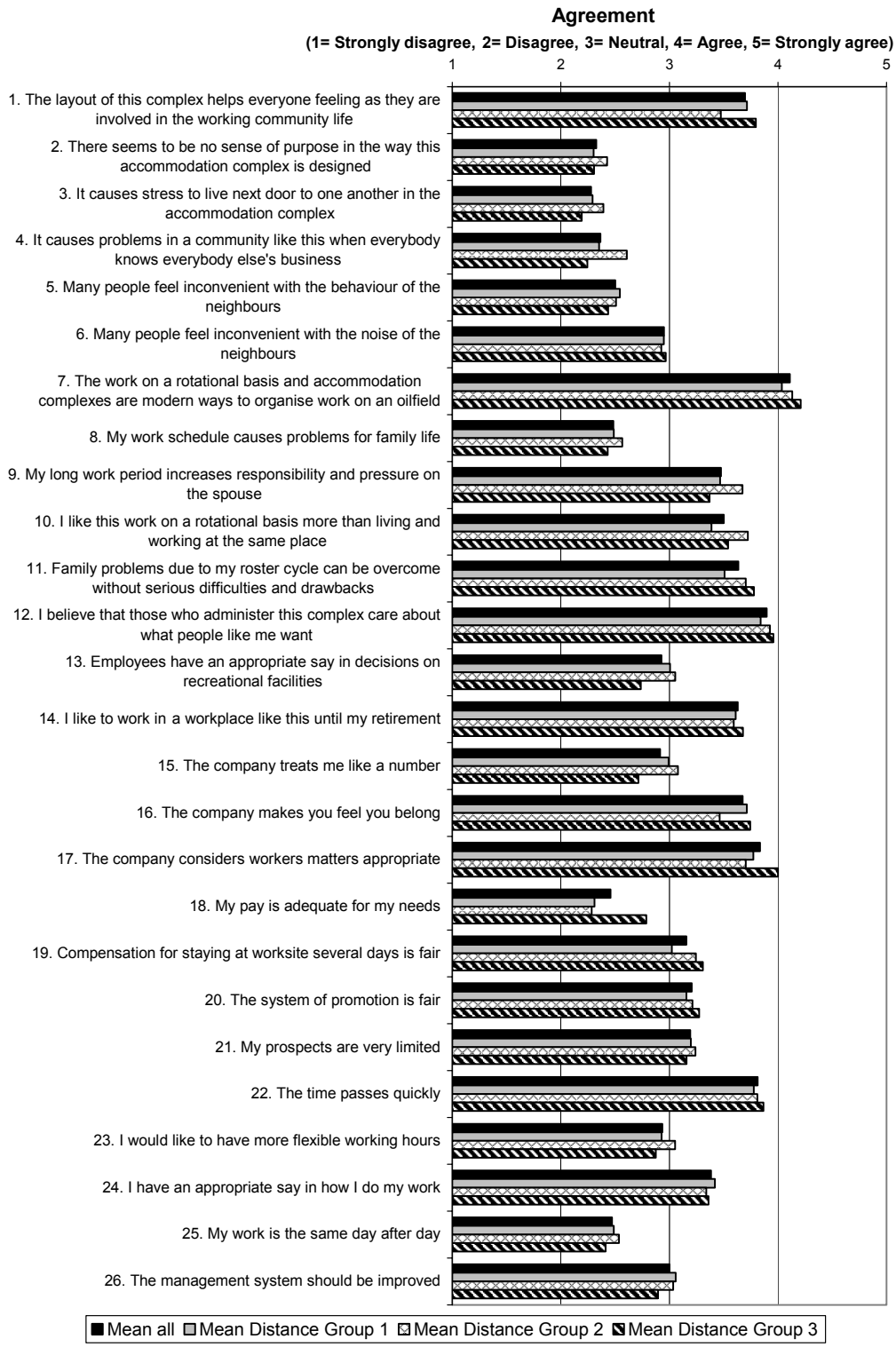

Fig. 2. Agreement with underlying factors (clustered by distance groups).

unequal treatment possibly has an influence on the employees' perceptions. Travel costs, especially airfares, are not trivial in Russia when compared to the average income. It seems reasonable to assume that employees who incur no commuting costs are happier with their jobs, especially under the conditions of long-distance commuting. The same applies to the different shift lengths. The 30/30-day rotation reduces by half the necessary monthly travel efforts because it limits the commuting to one journey into each direction instead of two in the 15/15 shifts. This saves time and money. Longer shifts could function, therefore, as a tool for altering time and economic distances. Based on these reasons, it is necessary to test if both aspects have an influence on the immediate connotation of distance for job satisfaction. This can be done by dividing the employees into different groups based on travel refunds and shift lengths before analysing their average job satisfaction and commuting distances. Furthermore, it is informative to show if these parties are represented equally in the distance and job satisfaction groups.

In the case of different travel refunds, the first group includes the white-collar management and supervisory staff. This group (N = 42) represents employees receiving refunds for their travel expenses. The second group (N = 208) includes those in SeverTEK who are not paid for their travel efforts, that is, the blue-collar staff. In order to compare the average job satisfaction of the two groups of employees, the Mann-Whitney test is performed. This is the equivalent of the Kruskal-Wallis test for two-independent-samples and proceeds in a similar way by ranking the scores and assuming homogeneity among mean values (Eckstein 2004). Cross-tabulation and the calculation of the Pearson Chi-Square reveal if the division of employees, belonging either to white or blue collar staff, across the job satisfaction and distance groups is evenly distributed or not. The same tests and procedures are applied in order to analyse the influence of different shift lengths on job satisfaction and the distance covered during journeys to and from work. At the time of employee surveying, 124 were working 15/15 rotations, while 172 employees were working 30/30 periods.

Research findings

An analysis of the 26 underlying factors of the overall job satisfaction leads to an ambivalent outcome (Fig. 2). The average agreement value of all cases for the 26 factors expresses neutral attitudes of the employees. However, some particular factors differ from the average, either negatively (for example factor 18: "My pay is adequate for my needs") or positively (for example factor 7: "Work on a rotational basis and accommodation complexes are modern ways to organise work on an oilfield").

One general trend found among the 26 factors when divided into the three distance groups is a higher satisfaction for the third group, the longest distances. In 21 of the 26 factors, this group shows the highest average satisfaction suggesting a higher job satisfaction among the employees with the longest commuting distance. This does not support the assumption that job satisfaction would decrease with growing commuting distance. Further statistical testing is needed to demonstrate if this trend can indeed be confirmed, and to unravel its possible reasons.

The outcome of Spearman's correlation is slightly positive (Kühnel & Krebs 2004) and statistically significant (0.144; $p = 0.032^*$), indicating a higher job satisfaction rate with increasing commuting distance, and pointing to the same direction as the results from the analysis of the 26 factors above. Despite the significant positive correlation between these factors, it is risky to make strict conclusions, as the positive value of the correlation coefficient is rather close to zero to indisputably indicate any major trend.

The second approach of analysing the relationship between job satisfaction and commuting distance is based on the comparison of the average values of groups. At first, the mean job satisfaction is specified for the three distance groups. Table 3 contains the average ranks of those groups and shows increasing figures indicating increasing commuting distance. The Kruskal-Wallis test indicates that the differences between the distance groups are significant by comparing the mean ranks. The homogeneity hypothesis has to be rejected and it is possible to conclude that the average job satisfaction increases significantly with the distance summarized in three groups.

In order to control the results from the first comparison of mean values and Kruskal-Wallis test, a further reversely designed statistical approach can be applied to give additional support to these findings. Table 3 shows a tendency of increasing average commuting distance within the four groups of growing job satisfaction. The significance of the differences between the four groups is even strong-

Table 3. Mean rank comparison distance and job satisfaction groups.

Distance groups [a]	N	Mean rank of satisfaction values
< 301 km (Usinsk region)	102	101.75
301–1000 km (Komi Rep. and NW Russia)	41	107.62
> 1000 km (rest of Russia)	79	126.10
Total	222	
Job satisfaction groups [b]	**N**	**Mean rank of distance values**
First quartile	60	111.13
Second quartile	54	94.14
Third quartile	56	105.47
Fourth quartile	52	136.44
Total	222	

[a] Differences in mean ranks are significant ($\chi^2 = 6.59$, df = 2, p = 0.037*).
[b] Differences in mean ranks are significant ($\chi^2 = 12.39$, df = 3, p = 0.006**).

Table 4. Mean rank comparison employee groups.

	Employee groups	N	Mean rank
Job satisfaction [a]	White-collar	28	88.95
	Blue-collar	157	93.72
	Total	185	
What is the distance between your home town/region and SeverTEK-workplace? [b]	White-collar	42	121.68
	Blue-collar	208	126.27
	Total	250	

[a] Differences in mean ranks are not significant (U = 2084.50, Z = –0.44, p = 0.663).
[b] Differences in mean ranks are not significant (U = 4207.50, Z = –0.38, p = 0.706).

er than in the previous analysis (also in the case where the extreme values are excluded), supporting the earlier conclusions. Remarkable is the outcome of group number four representing the employees with the highest job satisfaction rates: the average commuting distance of this group is clearly higher than in other groups, stressing the positive correlation between these variables.

An analysis was designed in an attempt to answer the questions of how SeverTEK's employees react to the unequal refunding of travel expenses and how this different treatment influences job satisfaction and commuting distance. Despite the differences in benefits between white-collar and blue-collar workers, there are no significant differences in job satisfaction nor in the distances covered during the journeys to and from work (Table 4). The calculation of the Mann-Whitney test confirms this outcome by leading to results that do not allow one to reject the homogeneity assumption.

The interpretation of the results from cross-tabulating both employee groups with the four groups of job satisfaction as well as three distance groups leads to similar outcomes. The observed counts and expected counts in Table 5 and the calculation of the Pearson Chi-Square result in probability values that do not prove any significant dependency between the variables.

Both approaches for analysing the importance of the unequal payment of travel refunds indicate that this policy does not significantly influence job satisfaction nor the commuting distance. Those who receive extra compensation for their journeys to Usinsk are not automatically more satisfied with their long-distance commuting job. The financial advantage, which certainly helps to cover long distances, does not automatically lead to longer commuting distances either. Differences in job satisfaction seem not to be caused by unequal travel refunds but rather by other factors not considered

Table 5. Cross-tabulation employee groups * job satisfaction and distance groups.

			Job satisfaction groups [a]				Distance groups [b]		
			1st quartile	2nd quartile	3rd quartile	4th quartile	< 301 km	301–1000 km	> 1000 km
Employee groups	White collar	Count	7	9	9	3	19	7	16
		Expected count	7.9	7.1	6.7	6.4	19.3	8.7	13.9
	Blue collar	Count	45	38	35	39	96	45	67
		Expected count	44.1	39.9	37.3	35.6	95.7	43.3	69.1

[a] Differences between counts and expected counts are not significant ($\chi^2 = 3.76$, df = 3, p = 0.288).
[b] Differences between counts and expected counts are not significant ($\chi^2 = 0.79$, df = 2, p = 0.675).

Table 6. Mean rank comparison rotation groups.

	Rotation groups	N	Mean rank
Job satisfaction [a]	15/15	82	89.89
	30/30	132	118.44
	Total	214	
What is the distance between your home town/region and SeverTEK-workplace? [b]	15/15	124	103.92
	30/30	172	180.64
	Total	296	

[a] Differences in mean ranks are significant (U = 3968.00, Z = –3.28, p = 0.001***).
[b] Differences in mean ranks are significant (U = 5136.00, Z = –7.64, p = 0.000***).

Table 7. Cross-tabulation rotation groups * job satisfaction and distance groups.

			Job satisfaction groups [a]				Distance groups [b]		
			1st quartile	2nd quartile	3rd quartile	4th quartile	< 301 km	301–1000 km	> 1000 km
Rotation groups	15/15	Count	30	23	19	10	89	27	8
		Expected count	23.0	18.8	20.7	19.5	59.5	23.9	40.6
	30/30	Count	30	26	35	41	53	30	89
		Expected count	37.0	30.2	33.3	31.5	82.5	33.1	56.4

[a] Differences between counts and expected counts are significant ($\chi^2 = 12.78$, df = 3, p = 0.005**).
[b] Differences between counts and expected counts are significant ($\chi^2 = 71.01$, df = 2, p = 0.000***).

here. The connection between refunds for travel expenses and commuting distance is, on the other hand, too intuitive to be used to deny that it influences the results found here. It is reasonable to conclude that there are no explicit signs showing that the refunding of travel expenses, and thus economic distance, is crucial in the analysis of the relationship between job satisfaction and distance.

Finally, as a last approach to empirical analysis, an assessment of the connotation of different shift lengths (15/15 or 30/30 day rotations) for job satisfaction and commuting distance was performed using the same tests as above. The comparison of mean ranks for job satisfaction and commuting distance for the two groups show (Table 6) considerable differences. Those in SeverTEK who are working on longer rotational shifts are more satisfied and they clearly commute over longer distances. The Mann-Whitney test values for these differences are highly significant.

Not surprisingly, the cross-tabulation (Table 7) of the two rotation groups with the job satisfaction and distance groups displays a significant pattern.

As the distribution of counts and expected counts shows, employees working on the longer 30/30 day shift are clearly over-represented in the fourth job satisfaction group and the third distance group. The 15/15 group reveals a contrary outcome and accordingly, is represented more strongly in the first job satisfaction and distance group. The Pearson Chi-Square's outcome confirms that this pattern is statistically significant and that the variables are dependent on each other.

The comparison of the mean ranks and the cross-tabulation suggest that shift length is important for the job satisfaction and average commuting distance for the personnel of SeverTEK. Those in the company who work on the 30/30 days shift are more satisfied with their situation and their average commuting distance is clearly longer. This result could indicate a negative linear correlation between job satisfaction and commuting distance, and the cost and efforts related to it. By working shifts twice as long it is possible to reduce commuting distance and expenses by half. For that reason, working on longer shifts could be perceived as a mechanism for reducing economic and time distances. Reducing these distances and simplifying the commuting process seemingly leads to higher job satisfaction. Variations in shift lengths alter the perception of physical distance and the satisfaction with the work situation and long-distance commuting.

Conclusions and discussion

The majority of the results presented here indicate a positive linear correlation between job satisfaction and commuting distance. The observed increase of job satisfaction with growing commuting distance is noticeable especially for the group containing the longest distances. The general positive correlation between theses variables is not strongly pronounced but is confirmed by comparing different groups of job satisfaction and distance levels. Most of the applied tests plus the analysis of the 26 underlying factors of overall job satisfaction lead to a similar result. However, the higher job satisfaction and commuting distance of those employees who work on longer rotational shifts can be interpreted indirectly as a sign for a negative influence of increasing distance on job satisfaction, as longer shifts are one option for reducing commuting efforts. Further discussion of these counter-intuitive results within the theoretical settings introduced in this paper is required to better understand the underlying factors.

Increasing distance between home and workplace does not lower job satisfaction inevitably. Concepts like locus of control and impedance, which are used in order to explain the relations between commuting, distance and job satisfaction, point to a presumable lower job satisfaction with increasing distances but fall short of explaining the observed situation. They cannot fully explain the relationship between the variables used in this research. On the other hand, these concepts make it difficult to explain the higher job satisfaction as a causal result of increasing commuting distance. Only if the control over travel arrangements, speed and costs and hence, time and economic distances, is fully independent of travel distance, it will be possible to decrease the importance of these concepts. In a real life situation, this kind of constellation seems unlikely. Again, the influence of longer rotational shifts on job satisfaction as found in the analyses above supports this argumentation. Therefore, it appears very reasonable that other factors influence the employees' job satisfaction more strongly than the plain commuting distance.

The differences between the 26 underlying factors for job satisfaction show which aspects could cause the higher satisfaction among the commuters with the longest commuting distance. Especially factors that deal with the income and the company's treatment of the employees show a higher satisfaction among these commuters. This suggests that the refunding of commuting expenses to the highly skilled and educated employees only is influential. These are the employees with a higher income and more prestigious position in the company. In this context, it seems possible that financial aspects and the status of employees within the firm are overruling or levelling off the influence of distance on the jobs satisfaction. However, the analysis also revealed that the employees with supposedly better job are not necessarily the more satisfied ones. Furthermore, they are not the employees who commute over the longest distances. Therefore, this possible explanation also fails in its reasoning for the causes of higher job satisfaction among those who commute over the longest distances.

After rejecting the idea that growing commuting distance is resulting directly in higher job satisfaction and accepting that occupying higher positions does not necessarily result in higher job satisfac-

tion, the only concrete hint on how to interpret the meaning of distance under long-distance commuting conditions are the differences between rotational groups. Different shift length does not change the physical distance between the employees' homes and SeverTEK's oil field. However, it has an important influence on the distance covered by the employees during their journeys to and from work. When it comes to the arrangement of the commuting process and its associated costs, it appears that choosing an easy and uncomplicated way of organising long-distance commuting is important for employees. They strive for higher impedance and flexibility. By voluntarily choosing to work longer rotational shifts, they successfully apply coping strategies for overcoming time and economic distances and increase their personal extensibility. The evidently higher job satisfaction and commuting distance of those who work longer shifts is a clear indication of this. This important finding stresses the significance of an individual or relative concept of distance as opposed to an absolute understanding and provides evidence for time-space convergence. Therefore, rather than the absolute number of kilometres, the individual perception and experience of commuting distance are factors influencing job satisfaction.

In the analysis of the interdependence between job satisfaction and commuting distance in long-distance commuting, no general upper limit of the distance between home and workplace was found. Long-distance commuting is therefore an alternative strategy for economic activities in remote locations, likewise in big countries such as Russia. Large physical distances, as found between the locations of remote natural resource extraction operations and places where the staff of these operations can live comfortably, are not necessarily barriers for development. More important than plain distance is the organisation of long-distance commuting operations in such a way that it meets the needs and expectations of the involved employees. The arrangement of shift lengths so that they simplify commuting efforts and lower expenses are suggested as a satisfactory and relatively easy measure to improve job satisfaction.

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Mattias Spies

4
Shift-work Employment and Labour Relations on a Remote Oil Field in the Russian North

Resource extraction in extreme isolation

It is widely recognized that raw materials and hydrocarbon products extracted from nature are the backbone of the Russian economy. What do we know, however, about the local and regional practices involved and needed to bring theses riches from the deposits to the markets? In this chapter, I will look at labour as an incorporated factor in the oil industry in Russia's North. Labour is understood here not as an abstract economic term but as a body of individual employees that actively and purposefully shape their environment (Herod 1997). The economic landscapes of oil production in the Russian North cannot be described in full without considering the attitudes and perceptions of the employees operating in extreme isolation in the tundra of North-West Russia under conditions that are bound to both geography and human behaviour in the process of landscape formation. The oil field examined in this case study is in such a remote location that long-distance commuting is used in order to bring the employees to the workplace. They are working at the oil field in shifts that last several weeks before returning home for a rest period.

The analysis identifies factors that have an effect on the employees' perceptions and attitudes with regard to different aspects of their working conditions. How do they perceive the commuting process and the living conditions at the production site? Are the general structures in SeverTEK, particularly the multinational operational environment, of relevance to the workforce? Finally, work satisfaction is assessed as a general feature of the employment relations. The respondents are divided into groups in order to establish the influence of age, type of employment, family issues, work history and goal orientation on these subjects. The answers to these questions allow

recommendations to be made regarding the organization of labour relations in order to meet the needs and expectations of the actors involved.

The Russian North and long-distance commuting

The northernmost parts of the Russian Federation are officially defined as the "Far North and territories equivalent to the Far North" (Barentsobserver 2007; Blakkisrud and Hønneland 2006; Figs. 1.1. and 2.1. in this volume). The present characteristics and conditions of this high-latitude zone may be regarded as a product of Soviet central planning, a unique endowment with natural resources in many places and a very harsh natural environment. Without neglecting the real costs of expanding into the north the systematic development of this area would have been impossible, and without the potential offered by its natural resources the Soviets' interest in the region would certainly have been less pronounced.

The main obstacles to any attempt at development in the north are the burden of distance and remoteness, inadequate or absent infrastructure and the extreme climate. All these obstacles had to be overcome in order to exploit the natural resource deposits. In addition, the pre-Soviet north's population was small and could not sufficiently meet the need for labour. In response to these challenges, the governments of the USSR reacted with a massive input of human and financial resources, resulting in a vigorously growing population and skyrocketing costs of maintaining the settlements and supporting their inhabitants (Klüter 2000), so that the costs of these measures often outreached the real revenues obtained from exploiting the remotest deposits of natural resources (Hill and Gaddy 2003). Thus the decision to develop the north was justified politically and not in the first instance economically. The Russian North therefore represents a typical centrally planned landscape of priorities (Sjöberg 1999).

The consequences of these earlier development approaches are clearly recognizable even today. The settlement structure and population density on Russia's northern peripheries are higher than elsewhere in the circumpolar north (Blakkisrud 2006). Ten of eleven northern cities with more than 200,000 inhabitants are in Russia (Göler 2005) and the population density in the Russian North is much higher than in comparable regions of Canada (Round 2005). The costs of the struggle against the illiberal geography of the north (Lynch 2002) and of supporting a huge population in remote and cold places are immense and constitute a major economic burden (Hill and Gaddy 2003). Also, the north was hit hard by the introduction of market mechanisms, because it relied entirely on the structures of a command economy (Blakkisrud 2006).

The situation experienced by the north and its inhabitants therefore worsened dramatically in many regions at the beginning of the post-Soviet period.

At the same time, the importance of the northern natural resources for Russia has if anything increased. The Russian economy is now, as ever, heavily dependent on revenues from the north, as 90 per cent of the country's natural gas, 75 per cent of its oil, 80 per cent of its gold and 90 per cent of its nickel and copper are produced there, for example (Barentsobserver 2006). No large-scale abandonment of the north or withdrawal of its population is contemplated, in spite of the costs of keeping the inhabitants there. Instead, the Russian officials are searching for and supporting development strategies that allow the country to benefit from exploitation of the natural resources and at the same time cope with the costs. The differentiation between 'promising' and 'non-promising' settlements in the north and official programmes for helping the populations of the latter to leave has been one approach to solving the problems (e.g. Göler 2005; Round 2005), while another often-promoted approach is the replacement of permanent settlements with systems of long-distance commuting (Walsh 2003; Drobizheva 1999).

Long-distance commuting involves the spatial and temporal separation of employees' work and home environments (Storey 2001). Instead of establishing resource towns close to remote sites of natural resource extraction, only temporary or semi-permanent accommodation facilities are constructed for the employees on site and the work is organized in intensive rotational shifts lasting from several days up to a few months. After each shift the employees are rewarded with an extensive rest period at home. This means that they do not have to move permanently to their place of work but instead travel between their home and workplace before and after each shift, the distance easily reaching major proportions, hence the term long-distance commuting. Due to the leaner character of long-distance commuting operations relative to the construction of resource towns and other earlier approaches, the high transportation costs are more than counterbalanced by the savings in costs.

Long-distance commuting, known in Russia as the '*vakhtovyi*', or 'shift-work' approach, has been in use for many years in the north but has gained importance and received more consideration as a development alternative during the current Russian economic expansion for the reasons presented above. Furthermore, it is also a means of attracting rare and necessary highly skilled employees to remote workplaces (Naskova 2004). Such employees are seldom willing to move to the north to work any longer, and long-distance commuting helps in complying with their preferences. For these reasons, long-distance commuting is already an important aspect of the northern economy, and it is likely to gain further importance in the years to come in view of its potential for permitting a restructuring of the Russian North (Borisov 2004).

Not only are employees' preferences for living in more hospitable regions affected by the availability of long-distance commuting contracts, but factors such as their well-being, family relations and community life at home are obviously influenced as well by this intermittent way of organizing their work (Costa 2004). Russell (1999: 22) speaks in this context of "radically spatialised work relations", which impose a set of new challenges and offer novel opportunities for the actors involved. There is clearly a disruption in the spatial relationship between work and residence (McDowell 2003). How are the employees coping with these new challenges?

A closer look at labour in socially contested economic landscapes promises meaningful insights (Martin 2000). Labour has traditionally been treated in economic analyses as a location factor imposing costs and acting according to market logic, but more recently it has been seen as a socially constructed entity that not only behaves rationally but also emotionally and in the light of tradition (Smelser and Swedberg 2005; McDowell 2003). To put it in the words of Schmid (2004: 215): *"Labour is not a commodity like a sack of potatoes or a machine tool"*. Instead, it is actively engaged in creating new socio-spatial practises and structures as a fundamental part of its actions, either intentional or unintentional (Herod 1997). As a result, business structures can hardly be described as passive and merely reacting to economic laws. Spatial processes are shaped by perceptions, choices and ongoing power struggles between social actors, while most socio-spatial formations are contingent on geographical conditions on various spatial scales (see Tykkyläinen, chapter one in this volume). It is therefore not sufficient to know only the pure economic and social facts; the emotions, perceptions and experiences of employees constitute a set of necessary conditions for exploiting northern resources. In order to survive, employees produce geographies based on their own understanding of their situation, by deciding whether to work in the north or not. They do this under the influence of local contingencies and the legacy of the past; in other words, in a particular geographical location (Herod 1997).

Even though this new relational economic geography is not (yet) a comprehensive theoretical concept, it is commonly defined in terms of a higher complexity in the analysis of economic and social processes and its criticism of conventional economic analyses (Bathelt and Glückler 2003a). Ideas such as context and the embeddedness of economic processes, or the identity of the actors involved in these processes, are stressed and gain importance. Hence, it is impossible to treat the utilization of resources in isolation from its context of a set of wider social processes (Barnes and Sheppard 2000). According to Bathelt and Glückler (2003b) and Yeung (2003), economic analysis has to capture the shifting identities of actors within a relational and contingent setting. By focusing the analysis on actors, this study aims at learning more

about the formation of a socially constructed new economic landscape, which is, in part but necessarily, based on people's experience and opinions. Such a perspective reveals and considers the contingencies involved in industrial relations and the transition of northern Russia and highlights the variety of possible development paths (Tykkyläinen chapter one in this volume; Tykkyläinen and Neil 1995).

Employees of SeverTEK

The oil company ZAO SeverTEK located in Usinsk (Komi Republic) operates four oil fields in the Timan-Pechora basin. SeverTEK was founded in 1996 as a joint venture between Russia's Lukoil and Finland's Fortum oil companies. During the fieldwork in 2004, both companies owned equal shares in SeverTEK, but Lukoil acquired the remaining 50 per cent of the share capital from its Finnish holder for approximately USD 320 million in November 2005 and is now the sole owner (Lukoil 2006; Neste Oil 2005).

The company's main production site is at present the South Shapkino field, which is located about 180 kilometres northwest of Usinsk in the Nenets Autonomous Okrug (cf. Fig. 4.1.), but it also runs three fields in the Komi Republic, Pashshorskoe, Verkhnegrubeshorskoe and South Yuryakhinskoe. Oil production started in 2003, and by the end of 2005 the four fields had combined reserves of 216 million barrels and a yearly output of 1.5 million barrels (Lukoil 2006).

SeverTEK had a workforce of 589 employees in November 2004, with their homes all across Russia, although a significant proportion (166) lived in the Usinsk region. Most of the employees worked on the oil field and reached it by helicopter from Usinsk. The flight took about one and a half hours and was organized by SeverTEK. One rotational shift usually included 15 days at work followed by 15 days off duty (including the time needed for travelling to and from Usinsk). If employees on two shifts agreed on such an arrangement, this cycle could be extended to thirty-day rotations. Every employee at the oil field worked for 12 hours a day. The income level at SeverTEK, as in the whole oil industry, was and still is very high by Russian standards. In 2004 employees were receiving wages on average of USD 870 per month for workers and USD 1230 for white-collar staff (SeverTEK 2004), amounts that were about 3.5 times higher than the Russian average of USD 237 (BOFIT 2007; Rosstat 2006).

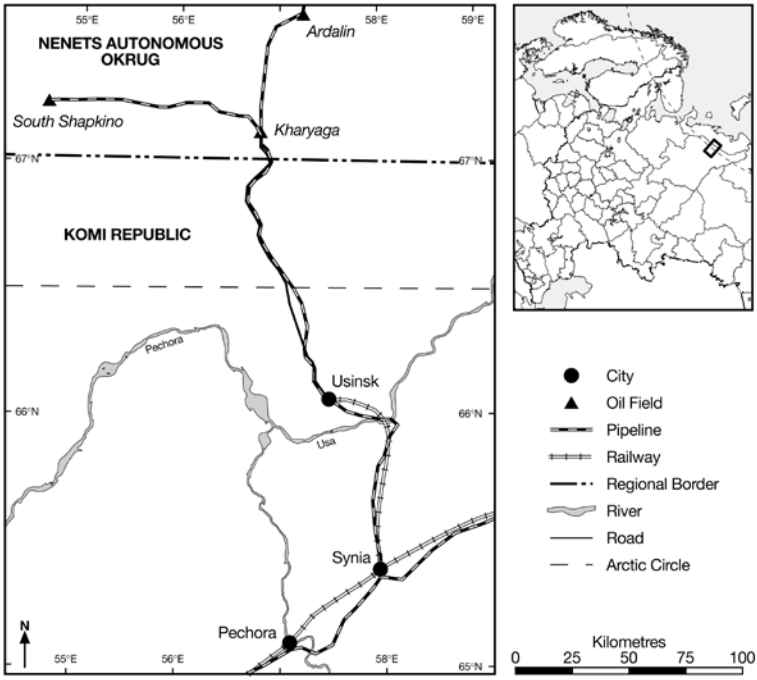

Figure 4.1. Area occupied by the SeverTEK oil production sites.

SeverTEK's main oil production and handling facilities are situated at and near the South Shapkino field (Fig. 4.2.), and it is here that an accommodation complex has been provided where the employees live during their shifts. Although the complex and its facilities are new and modern, the comforts offered are limited. South Shapkino is located in the tundra of the Nenets Autonomous Okrug, so that the harsh environmental conditions and extreme isolation from other settlements are dominant features of life there. The construction and maintenance of housing infrastructure in the north is very expensive and efficient use is therefore made of the space created. A maximum of 250 people can stay at the complex, which means that the individual space and privacy of each employee is limited.

SeverTEK provides free food and beverages, primary health care and a laundry service for its employees at South Shapkino, and tries to offer leisure time activities to meet their demands, although these are mostly limited to indoor activities (television, gym, table tennis etc.) due to the coldness of the winter and the remoteness of the oil field. Personal freedom and decision-making is further limited by the strict security regulations, e.g. regarding alcoholic drinks and contacts with the reindeer herders that pass by occasionally.

Figure 4.2. SeverTEK's South Shapkino site.

The research material used in the following analyses was collected by means of a survey conducted among SeverTEK's employees at the South Shapkino oil field. A self-administrated questionnaire in Russian was distributed to all the employees present at the oil field during two consecutive shifts, each of about 220 employees. Of the 440 employees targeted, 357 (81 per cent) participated in the survey and returned a completed questionnaire. Participation was voluntary and not linked to the individuals' working duties. Nevertheless, it was only possible to conduct the survey thanks to the co-operation received from SeverTEK, which supported the distribution and collection of the questionnaire and showed an interest in the research topic. Nevertheless, in view of the company's involvement in the research process, there is a potential for biased answers. It is possible that some employees did not express their real opinions and feelings because they knew that their superiors could read the answers. The analysis of the data did not reveal any direct signs of any such bias, and negative attitudes and opinions were frequently found, for example.

By introducing labour as a key factor, it is possible to embrace social processes at the oil field, i.e. within the formation of the new economic landscape of the Russian North. Labour all too often receives little attention in transition studies (Rainnie et al. 2002). The methodological approach applied here focuses on a very concrete, place-specific setting, reflecting the fact that

the validity of such an approach to research into developments in transitional peripheries is characteristically based on findings of decisive uniqueness with respect to locational conditions and interpretations of their impact on development (Tykkyläinen 2000). Nevertheless, due to the pronounced case study focus and the fact that no similar studies performed in Russia have been found with which to compare the results, this approach has a strong exploratory character.

Groups of employees and aggregating attitude variables

Based on variables depicting social background, work experience and the goals of their work, SeverTEK's employees are classified into five overlapping groups consisting of two classes each (Table 4.2.). The first group distinguishes the young employees (up to thirty years) from the older ones (over thirty years). Since long-distance commuting is often said to be especially attractive for young people, their attitudes are analysed here separately. The age limit of thirty years follows the definition of youth in Russian statistics. The next group criterion is occupational status. Blue-collar workers form one class and all the other (white-collar) employees are gathered into a second class. Workers' benefits differ generally, as well as concretely in the case of SeverTEK, from those enjoyed by white-collar staff, and the associated differences in income level, form of accommodation, responsibilities within the company and other aspects mean that it seems promising to look at the attitude patterns of these two classes separately. The third pair of classes allows us to look separately at those employees who live in a relationship and have children as opposed to those who have neither a partner nor children. Long-distance commuting is especially challenging for families due to the regular, sustained absence of the employees involved. This leads us to analyse in particular the situation and needs of those in the workforce who have families.

Supplementary to these three groups based on social background, two additional groups are analysed. The first splits the workforce according to former work experience. Those who have worked in another oil company or another company operating with long-distance commuting are distinguished from those without such experience. Given the appropriate personal background, employees can compare their present job situation with that in other companies and possibly reveal important details regarding their current work relations. The second group is formed based on the employees' achievements of work-related goals. While one class constitutes individuals who have concrete work-related goals (e.g. professional qualifications, improved lifestyle and

well-being, higher income) and believe that they will achieve these, all other employees (those with no particular goals and those who do not believe they will achieve their goals) are placed in a separate class. I assume that employees in the former group are most likely to be better motivated and have a positive attitude towards their work and their employer. Contradicting views and attitudes between the motivated class and less motivated employees may reveal which work features are important for sustaining a positive attitude towards working in the north.

The questionnaire data are used to construct five mean variables from the 25 original ones, each based on the means of five original variables, as follows: long-distance commuting (LDC), life in the accommodation complex, SeverTEK as a company, co-operation with foreigners (Fortum), and the actual work itself (cf. Table 4.1.). The respondents assessed all the original variables in the questionnaire on a five-point (1-5) Likert scale in which low values stood for negative views and the high values for positive ones. The advantages of mean variables over direct analysis of the original variables are that they furnish more compressed information and extend the statistical possibilities (Bryman and Cramer 2004). Moreover, these five variables are constructed with a view to their potential explanatory power with respect to the questions posed for this research.

Table 4.1. Variables included in the construction of Likert scales for LDC, life at the site, the company, co-operation and work satisfaction. The columns on the right show the relative frequencies of given answers in rounded percentages, with the mode value in bold (SA=strongly agree, A=agree, N=neutral, D=disagree, SD=strongly disagree)

Statements	SA	A	N	D	SD
1. Long-distance commuting (N = 308)					
LDC is a modern way of organising work on a remote oilfield	25	**62**	9	3	1
My work schedule does not cause problems for family life	13	**45**	27	13	2
LDC is better than working and living at the same place	13	**44**	25	14	3
Family problems due to LDC can be overcome easily	11	**56**	19	12	3
My colleagues do not have problems in adjusting to LDC	3	21	**63**	13	1
2. Life at a remote production site (N = 317)					
The layout of the complex supports good working attitudes	14	**49**	30	6	1
It is convenient to live in the housing complex	18	**45**	30	5	3
There is no hostility in the accommodation complex	11	**47**	31	9	1
Few people are inconvenienced by their neighbours in the complex	11	**43**	34	11	1
The leaders of the complex care about the employees	17	**60**	16	6	1

3. SeverTEK (N = 301)					
It is a good firm to work for	28	**61**	10	2	0
It has a good reputation	27	**62**	9	2	0
There is enough accord between management and the others	8	**52**	33	7	1
It considers workers' matters to be important	17	**57**	20	6	1
The management system is good as it is	3	20	**52**	22	4
4. Co-operation with Fortum (N = 320)					
It is important that SeverTEK has a foreign partner	31	**54**	14	2	0
Co-operation is important for the SeverTEK	36	**53**	10	1	0
Co-operation brings foreign technology/expertise to Russia	24	**54**	19	2	0
Finland is a good country for co-operation	25	**53**	21	1	0
There is no need to change the co-operation partner	15	33	**51**	1	0
5. Work satisfaction (N = 312)					
Time passes quickly	14	**61**	18	6	1
My pay is adequate for my needs	2	16	19	**55**	8
My prospects in SeverTEK are good	1	26	**38**	29	1
I have enough influence on how I do my work	7	**50**	22	18	3
I have enough influence on what I do	4	23	21	**46**	7

The construction of the five mean variables is successful in capturing the situation within SeverTEK's workforce. The particular circumstances of long-distance commuting, accommodation at a remote production site and work at such a peripheral location in the north are not only challenging in the SeverTEK case but can be interpreted as being of a more general character. The look at SeverTEK as a company and at its co-operation with Fortum leads to case-specific results, but it can also be seen in the general context of introducing foreign capital and human resource management to the Russian North. Both notions, the case-specific information and its generalizations, help us to reach conclusions on the adaptation of labour to the economic landscapes of oil production in this region. The differences between the groups of employees are analysed directly by comparing the mean satisfaction variables by employee classes.

Perceptions and attitudes among different groups of employees

The differences between the classes in each group of employees were assessed using the Mann-Whitney test (Table 4.2.), which is a non-parametric test operating on ordinal data that compares two samples (Robinson 1998: 64).

Briefly, it uses the mean rank and size of each sample to calculate whether the difference in the mean variable between the classes in a group is statistically significant. The means of the Likert scores for each class of respondents and the statistically significant differences, identified by the Mann-Whitney test are marked in bold and italics in Table 4.3.

Table 4.2. Results of the Mann-Whitney test for differences in the mean variables between the classes of respondents.

Groups of employees	Summated Scale	N	U	z	p
Age group up to 30 **vs.** Age group over 30	LDC	298	8652.5	-1.51	.06
	Life at production site	307	9753.5	-0.44	.33
	SeverTEK	291	8587.5	-0.86	.19
	Co-operation	312	9672.0	-0.95	.17
	Work satisfaction	303	8690.5	-1.62	.05*
Workers (blue-collar) **vs.** staff (white-collar)	LDC	302	9247.0	-0.51	.61
	Life at production site	311	9162.5	-1.10	.27
	SeverTEK	295	8882.5	-0.84	.40
	Co-operation	314	9187.5	-1.89	.06
	Work satisfaction	307	6336.5	-5.10	.00***
Lives with partner and/or children **vs.** No partner and no children	LDC	280	7553.5	-0.64	.26
	Life at production site	288	8242.5	-0.12	.45
	SeverTEK	274	6763.5	-1.69	.05*
	Co-operation	290	7613.5	-1.71	.04*
	Work satisfaction	284	7630.5	-1.05	.15
Experience in another oil and/or LDC company **vs.** No previous experience	LDC	307	11086.5	-0.61	.54
	Life at production site	316	11120.0	-1.43	.15
	SeverTEK	299	9299.0	-2.30	.02*
	Co-operation	317	12302.0	-0.06	.95
	Work satisfaction	310	11683.0	-0.08	.93
Believes in achieving work-related goals **vs.** Does not believe in achieving these goals, or has no goals	LDC	296	7231.0	-2.79	.00**
	Life at production site	309	7170.5	-3.79	.00***
	SeverTEK	289	5926.5	-4.20	.00***
	Co-operation	307	8862.5	-1.20	.11
	Work satisfaction	300	8729.5	-0.79	.22

*Note: * $p \leq .05$, ** $p < .01$, *** $p < .001$*

Table 4.3. Groups of employees and their mean variables aggregated from the original 25 variables (see Table 4.1.)

Groups of employees and their classes	N	Mean variables calculated from the Likert scores of the five original variables				
		LDC	Life at site	Sever-TEK	Co-operation	Work satisfaction
Age group up to 30	101	3.49	3.64	3.76	3.95	***2.97***
Age group over 30	243	3.60	3.69	3.72	4.02	***3.08***
Workers (blue-collar)	239	3.56	3.65	3.71	3.96	***2.95***
Non-workers (white-collar)	110	3.59	3.72	3.76	4.08	***3.28***
Lives with partner and/or children	225	3.59	3.67	***3.70***	***3.96***	3.06
No partner and no children	95	3.55	3.68	***3.82***	***4.08***	2.98
Experience in another oil and/or LDC company	154	3.59	3.64	***3.66***	4.00	3.05
No previous experience	197	3.56	3.70	***3.78***	3.99	3.05
Believes in achieving work-related goals	241	***3.62***	***3.75***	***3.81***	4.01	3.06
Does not believe in achieving these goals, or has no goals	95	***3.46***	***3.49***	***3.53***	3.94	3.01

Note: ***Bold italic*** figures mark significant differences ($p \leq .05$) based on the Mann-Whitney test (details in Table 4.2.).

It has been argued that long-distance commuting is attractive to younger employees due to their career orientation and higher general mobility. Following this argumentation, the group of younger employees can be expected to yield higher average scores than their older colleagues, particularly concerning long-distance commuting arrangements and life at remote production sites. Interestingly, these assumptions cannot be proved by reference to the data from SeverTEK. Only when judging SeverTEK in general did the younger employees show a more positive attitude, but even that difference was not statistically significant. Only one difference between the age classes was significant, and that was in work satisfaction ($p = .05$). In conclusion, SeverTEK's personnel did not show any clear differences in their attitudes and perceptions in relation to age. Only a non-significant tendency for older employees to express more positive opinions was evident.

The two classes of blue and white-collar employees at SeverTEK exhibited a marked difference in work satisfaction ($p < .001$), which was much higher among the latter (Table 4.3.). This is likely to be connected, among other things, with the better income enjoyed by white-collar employees (see above) and possibly

a generally more rewarding job profile. An almost significant difference (p = .06) was seen in the opinions of these two classes of employees on co-operation with the Finnish partner Fortum, the white-collar employees again showing a more positive attitude. For the remaining three mean variables the outcome for both classes is indifferent. Thus the fact that the highly qualified staff (mostly white-collar) enjoy better commuting arrangements in SeverTEK (Spies 2006) interestingly does not lead to higher appraisals of long-distance commuting.

Those with families have to face additional problems in coping with their personal situation as an employee of a company operating at a remote site and with long-distance commuting. The literature on long-distance commuting points to the challenges which confront families in such work arrangements (Costa 2004; Storey and Shrimpton 1989). The regular absence of employees from home causes problems for partners and children, and it was therefore anticipated that those without a partner or children would have a better opinion of the arrangements for commuting and accommodation. As the results in Table 4.3. show, this expectation is not fulfilled for the present variables that deal with family matters. As shown in Table 4.1., the LDC mean variable contains answers to family-related questions, but these features lead only to non-significant differences. The mean variables for the appraisal of SeverTEK (p = .05) and co-operation ($p < .05$) show just significant differences in this group, but as these two features are not as directly concerned with family aspects, interpretation is difficult and the relevance of the outcome inconsistent with the theory-based assumptions.

Comparison between the employees with experience in other oil and/or long-distance commuting companies and those without such a background leads to significant differences in their assessments of SeverTEK ($p < .05$), the latter apparently having a better opinion of the company, or conversely, those who know the labour situation in other companies have a more negative attitude towards their present employer. This suggests that SeverTEK could arrange the work better, at least from the employees' point of view. In line with this conclusion is the observation that the inexperienced group of employees have a slightly better opinion of life at South Shapkino than the experienced group. The experience of its employees in other companies offers a potential to SeverTEK that could be easily tapped for improving work satisfaction. The remaining three mean variables (LDC, co-operation and work satisfaction) do not reveal any statistically significant differences between the experienced and inexperienced employees, i.e. working conditions were apparently either comparable in other companies or were not relevant (e.g. international co-operation for employees of exclusively Russian companies).

The last comparison between classes of employees is between those who have concrete work-related goals and believe that they will be able to achieve

them and those who have no such goals or doubt whether they will achieve them. Since those striving towards their goals are likely to be more satisfied and motivated than the others, these two groups were designed in order to reveal the significance of goal-oriented motivation. As expected, all five work features yield higher averages on the mean variables for the first class. Also, the greatest differences between classes anywhere in the groups were found here, which demonstrates the high relevance of goal orientation and motivation. The differences are most marked, and statistically significant, in the case of long-distance commuting ($p < .01$), life at South Shapkino ($p < .001$) and opinions of SeverTEK ($p < .001$). A general positive attitude towards the job and the expectation of being able to fulfil one's personal goals will apparently help employees to be open-minded towards the challenges of LDC and accommodation at a remote production site and to view the employer in a more positive light, which is understandable since the employment is after all a precondition for reaching those goals. The co-operation with Fortum and work satisfaction are variables on which there are only non-significant differences between the two classes.

Human resource policy and the future of isolated production sites

A synthesis of these findings leads in a strict sense to insights into the conditions at SeverTEK only. There is nevertheless reasonable scope for generalization on LDC circumstances in Russia's resource peripheries, as a similar business environment prevails throughout. The results obtained here may therefore be of relevance on a wider scale, although the exploratory character of the investigation has to be considered when constructing the results.

The analyses reveal that presence or absence of work-related goals is the main factor that affects the perceptions and attitudes of the employees within this research setting. If the presence of work-related goals and a belief in fulfilling them is considered an indicator of positive overall attitudes and motivation on the part of employees, as assumed in the above analyses, then one main conclusion must be the importance of maintaining and sustaining a motivated and satisfied workforce. It has been shown repeatedly that those with clear goals in their work are able to deal better with their situation in SeverTEK. They appear to be able to handle long-distance commuting better, they have less problems with living at the remote oil field and have an optimistic opinion of their employer.

The influence of occupational status is also an important factor that affects work satisfaction. Actual working conditions may be much worse or more difficult for workers than for white-collar employees, and since blue-collar workers are by far the biggest group of employees in most oil companies, the relieving of their relative dissatisfaction should be considered to a greater extent in the companies' human resource policy. A more detailed analysis of the reasons behind this finding is needed. Aspects such as income, prospects and the organization of work are important in the make-up of the aggregate mean variable of work satisfaction, and hence are of relevance for explaining the differences.

Long-distance commuting is surprisingly positively assessed, in spite of its profound implications for many aspects of work and private life, and the same is true of life in the accommodation complex, which is intrinsically tied to long-distance commuting. Furthermore, the older employees at SeverTEK showed a greater satisfaction with their employment situation and with long-distance commuting. Unexpectedly, family status was of little importance when discussing LDC and related aspects.

The present findings suggest that the employer has limited possibilities for shaping the perceptions of its workforce, but here again it is important to remember the significance of goals, attitudes and motivation, as these are reflected in the respondents' appraisals of their employer. Those employed by SeverTEK who have no family ties or previous experience of such work seem to have a better opinion of their employer. This leads us to conclude that SeverTEK could do more to support family members and make use of the insights provided by those with experience in other companies in order to improve its own internal organization.

The results allow certain concrete recommendations to be made to SeverTEK. It would be advisable for the management to take better care of their young employees, those with families and children, workers and the experienced part of the workforce, as a general tendency for lower satisfaction among these groups is to be seen throughout the results. Since the job satisfaction and motivation of the young employees is likely to gain in importance in a business environment where there is a growing lack of qualified staff, their needs should not be neglected. The same applies to the situation of blue-collar workers, who usually form the majority in a company operating on the LDC principle, and to the views of the experienced employees. It would be useful to listen to them and make use of what they have to say in order to improve corporate performance. Overall, the results contain information that is of relevance beyond the internal structures of SeverTEK. Companies operating under similar conditions may be able to influence the overall satisfaction of their staff by selecting only highly motivated employees and providing them

with a realistic impression of the working situation beforehand. Although this might sound like trivial advice, the importance of goals demonstrated here underlines its relevance. It could help in avoiding problems before the employment has even started.

This case study shows that the economic landscapes that are now forming in the Russian North can at least in part be based on long-distance commuting as a means of labour organization. Employees widely accept this arrangement. This is in itself an important conclusion for Russia's resource peripheries, which will most likely come to rely more and more on access to distant labour, and hence long-distance commuting, in the future. It offers good potentials for the current directions of development and for the future expansion of economic activity in the Russian North, for no opposing mindsets, at least, were exposed in the course of the present investigation.

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Article III

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POTENTIALS FOR MIGRATION AND MOBILITY AMONG OIL WORKERS IN THE RUSSIAN NORTH

by
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ABSTRACT. High population mobility, mainly in the form of out-migration, is a characteristic feature of the post-Soviet Russian North. As subsidies from the centre were significantly cut, living standards and the number of inhabitants in many Russian peripheries declined considerably. Nevertheless, there are also prospering regions and industry sectors in these parts of Russia, which are often related to and dependent on the exploitation of natural resources. After introducing general Soviet and post-Soviet mobility and migration patterns in the north of Russia, this article examines the mobility behaviour of oil workers. The analyses are based on a case study of an oil company (SeverTEK) from the Komi Republic and incorporate different statistical approaches. The purpose of the study is to assess past, present and future mobility behaviour of those in northern regions who are benefitting from post-Soviet transition and will most likely contribute most to a positive development of the Russian North. The results show that the surveyed employees of SeverTEK have migrated in the past mainly from Siberia, the Far East, and the now independent countries of the former Soviet Union to northern and central parts of European Russia. The present mobility behaviour is strongly characteristic of shift work employment with long-distance commuting. An analysis of intended migration indentifies strong potentials for future migrations among the oil workers of the case study. It appears that many employees are ready to leave northern regions as soon as their job situation allows it. Therefore, unlike in other resource peripheries such as Western Australia, long-distance commuting is in Russia not used as a decentralization measure; instead it offers opportunities for reducing the problematically high population density of the post-Soviet North.

Key words: Russia, Russian North, peripheries, mobility, migration, oil industry

Introduction

Migration and a high mobility of the population of the Russian North is an important feature of the ongoing post-Soviet transition. The dissolution of the Soviet Union and the end of the command economy resulted in a profoundly changed perception of the vast peripheries in the north and east of now independent Russia. Major cornerstones of the new understanding of the Russian North were the neutral consideration of cost associated with the Soviet approach and the realization that the population in this part of Russia is too large. Decreasing subsidies and governmental programmes and attempts to reduce the population, inevitably led to increasing mobility and out-migration from most northern parts of the country. Later the energy and raw material boom of the new millennium had its influence on the mobility pattern as many northern resource peripheries recovered and strengthened their position during the post-1998 Russian economic upsurge. Just as was the case during the Soviet era, migration is a prominent feature of post-Soviet Russian society (Lonkila and Salmi 2005).

The following case study on migration and mobility pattern among employees of remote resource industries contrasts past, present and possible future trends, and analyses their implications for peripheries. Since the production sites are often so distant from inhabited places and in areas that are characterized by harsh and inhospitable environmental conditions, for example, far north in the Arctic, the migration and mobility takes place to, from and within regions that are usually considered to be outside of the human settlement area. Studying these patterns contributes to an extended understanding of migration and mobility processes in general, and enables us to assess a modern concept for efficient spatio-social structures that recalibrates the interdependencies between the core and the periphery. In order to exploit the remote resources, an increasing number of enterprises apply new labour schemes that are mainly characterized by long-distance commuting of employees between the production sites and their homes. This approach depends on innovative labour policies for concentrated work schedules, efficient transportation, and reflects faster cycles of resource utilization as well as changing values for and perceptions of lifestyle and housing issues and thus, boosts more efficient settlement structures (Tykkyläinen 1996; Howlett and Brownsey 2008). For Russell (1999) these are radically spatialized work relations that offer new opportunities but, at the same time, also impose significant challenges on the individuals involved. Thus, a wide and heterogene-

ous set of economic and social-individual factors is shaping the economic landscape in and through which the exploitation of the natural resources takes place and, ultimately, change the spatial structures of the areas. The importance of actors and their decision-making, coping and struggling for economic and labour processes as well as for regional development in a relational and contextual setting has been shown elsewhere (Bathelt and Glückler 2003; Tykkyläinen 2008). The significance of the labour force for actively shaping its environment has been especially recognized by Herod (1997) and Martin (2000). Therefore, the focus of the following study is on individuals, workers that are employed in a remote resource extracting enterprise, and their perceptions of the employment situation and their (re)actions in the form of mobility and migration. The aim is to unravel relevant processes initiated by the labour force and identifying possible future development paths for resource peripheries by enhancing former studies (Spies 2006, 2008) based on an in-depth analysis of relevant migration and mobility issues.

Due to its geographical location in the north, its vast territory and its rich resource endowment, Russia possesses a significant resource periphery. Other countries also show examples of increasing utilization of remote natural resource deposits. The conditions in Canada are closest to those in Russia; the country is huge in territory, extends far north, and is resource rich. Of course, Canada's northern regions were not developed according to Soviet principles and therefore do not have a population density as high as the Russian North. However, the resource industry in Canada is also extending its activities into more remote areas and long-distance commuting is an important aspect of this development (e.g. Ritter 2001; Veiga *et al*. 2001; Costa 2004; McAllister 2008). In Australia, characterized by very different natural conditions, long-distance commuting is also common and applied by numerous enterprises (e.g. Houghton 1993; Storey 2001; Watts 2004). From an international perspective, this article contributes to research literature on peripheral resource communities by introducing a Russian case study related to long-distance commuting and its consequences. In the Russian context this issue has been made subject to very little research (White 2007).

A utilitarian perspective on the issue reveals a final argument for the necessity for focusing on remote resource communities. Many commodities are in short supply and persistent high prices push the resource-extracting industries into ever more remote regions of the world. For example, it is considered certain that the Arctic will play a major role in the supply of many natural resources (Bird *et al*. 2008; Seidler 2008). For Russia the north is particular important since most of its natural resources are extracted there (*Barents Observer* 2006b). Given this major importance of remote areas in general and northern peripheries in particular for the world's supply of natural resources, all approaches and insights helping to bring commodities to the markets in a relatively efficient manner are urgently needed. Looking at local and regional practices in the resource peripheries and the actors immediately involved widens our understanding of the situation and contributes to more suitable future concepts of remote resource extraction activities.

This article deals with a study on the labour-force's views on mobility and migration. Based on a case study from the oil industry in northern Russia – a branch characterized by high labour mobility due to the often very remote production sites – insights on past, present and also anticipated future migration behaviour of the workers are investigated. The chosen approach considers and asks for (1) the migrational background of the workers; (2) their present place and type of residence; (3) preferences for settlement and dwelling types; and (4) plans for future migration or other types of mobility. The central research focus is thus on individual preferences and the main goal is determine future mobility in northern Russia based on the observed past and present practices. Well-advised strategies and policies for dealing with the challenges of the Russian North should recognize and consider the perceptions and preferences of the directly involved individuals in order to increase their acceptability, applicability and sustainability. This is especially important when it comes to the involved actors in one of the most prominent industries of the Russian economy. An important question to be addressed is whether those involved in the oil industry show similar mobility behaviour as do other inhabitants of northern regions.

The analyses in this article are based on a survey conducted in autumn 2004 of employees of the oil company ZAO SeverTEK. This Russian oil company, established in 1996 and now owned by Lukoil, is based in Usinsk and operates several oil fields in the tundra of the Komi Republic and the Nenets Autonomous Okrug. During the field work, the company had 589 employees. Many (166) reside in the Usinsk area, but most have their homes spread

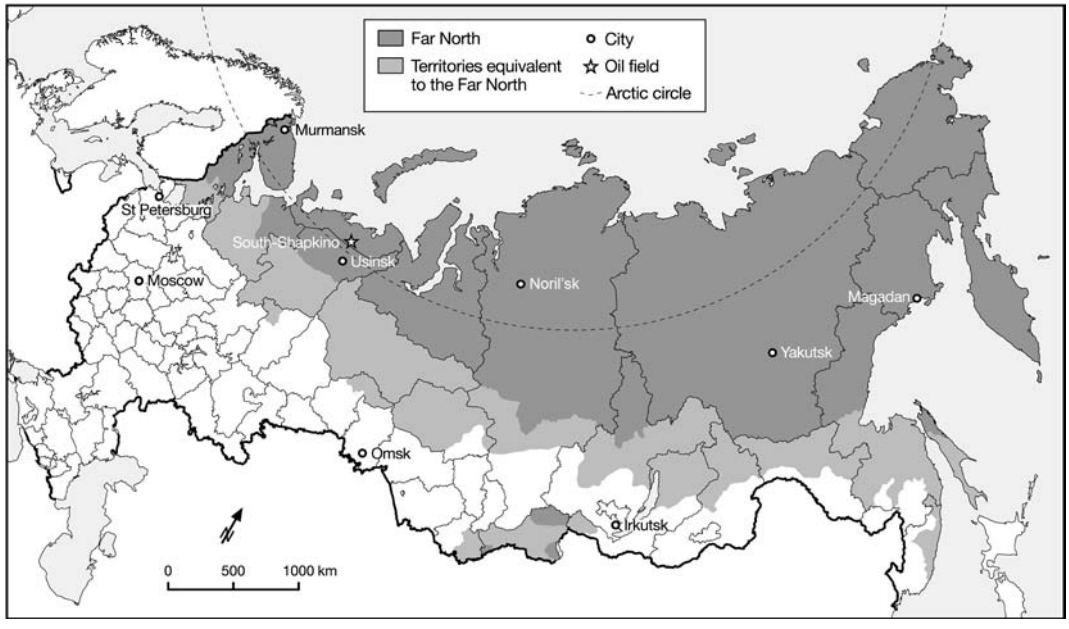

Fig. 1. The Russian North.

around Russia and commute from their place of residence to Usinsk for work duties. A long-distance commuting scheme is applied. During the shifts most employees stay in an accommodation complex close to the South-Shapkino oil field, which can be reached by helicopter from Usinsk in about 75 minutes. The survey was designed for all employees working at the oil field and was distributed to two subsequent shifts at South-Shapkino, each of which had about 220 members. Of the potential 440 respondents, 357 (80%) participated in the survey and returned the completed questionnaire.

In order to enable the reader to interpret the results from the case study adequately, the first part of the article introduces the general migration and mobility patterns in Russia's northern peripheries. The analysis of the survey data and the discussion are then presented. However, before moving on, the concept of the Russian North used in this study needs to be defined. The literature on this region does not always refer to the same geographical area. Most authors follow the official definition of the 'Far North and territories equivalent to the Far North' (e.g. Blakkisrud and Hønneland 2006), a region expanding significantly beyond the geographical north, as depicted by Fig. 1. This Soviet-era concept of the Russian North is at present subject to administrative reorganization and likely to be reformed in the near future (*Barents Observer* 2007). Nevertheless, it is the best available option and, hence, it is used in this article.

Migration and mobility in Russia's northern peripheries

The Soviet era – population inflow

The systematic development of the northern regions in order to exploit its resources for the benefit of the economy only started after the transition from Tsarist to Soviet rule (Blakkisrud 2006). The inaccessibility of those resources – a result of remoteness, inadequate infrastructure, lack of a local labour force, as well as very harsh natural conditions – had so far prevented attempts at utilization. The contempt of these limitations by Soviet planners supplied the Soviet Union with a wide range of different natural resources, highly demanded by the growing domestic industry and needed for the Soviet quest for autarchy (Klüter 2000).

Logunov (1999, p. 14) labels the Soviet approach in the Russian north as 'development through settlement', which happened on a grand scale. As a result, the settlement structure and the population density in the northern peripheries are unparalleled within the Circumpolar North (Göler 2005; Blakkisrud 2006). In spite of the relatively

dense population, the north was never evenly inhabited. Rather, settlements concentrated around the natural resource deposits often remained 'isolated islands of Soviet civilization' (Blakkisrud 2006, p. 28), dependent on external supply and disconnected due to missing infrastructure (Hill and Gaddy 2003). Commonly, these settlements were built as company towns, directly linked to and dependent on one or a few companies. Those companies had far-reaching responsibilities for the inhabitants that extended beyond their core operations, for example, childcare or having to look after those who retired from work.

Post-Soviet transition – population outflow

The Russian North within the Soviet Union relied strongly on the principles of a centrally planned economy. Not surprisingly, it was hit especially hard by the introduction of market mechanisms at the beginning of the 1990s (Blakkisrud 2006). The liberalization of prices led to a completely new situation for northern regions and many of the old practises for supplying remote settlements were soon found to be unsuitable. Transportation costs increased rapidly, with severe consequences for all remote regions dependent on external supply (Round 2005). High inflation resulted in a reduction in the value of savings, and the gradual reduction of many non-monetary northern benefits caused further hardships. Additionally, many companies started ignoring their societal responsibilities inherited from the Soviet system. Consequently, the supply situation, the real income, and the standard of living of many inhabitants decreased considerably (Göler 2005).

The introduction of open competition on the national and international levels and the liberalization of trade also contributed to the problems of many industrial enterprises. Companies in a few locations and active in a few branches (e.g. the oil and gas industry in the Yamal-Nenets and Khanty-Mansi Autonomous Okrugs) could withstand the new pressures. Elsewhere, numerous companies started running at a loss, which had devastating consequences in many company towns lacking any other long-term economic base to rely upon (Blakkisrud 2006). Spatial fragmentation, as a result of concurrent regressive and progressive developments, is therefore an indication of transition in the north of Russia (Dienes 2002; Göler 2005).

Within a few years, many inhabitants of the Russian North found themselves in a totally new situation. After being part of the Soviet northern conquest and contributing to the development of the society, the uncertainties of transition challenged the existence of these northern communities. Now, after decades of in-migration organized by the state, the northern regions suddenly were considered as being overpopulated. The changed preconditions resulted, among others things, in a new pattern of mobility and migration.

Internal migration within Russia has decreased since its post-Soviet peak level in the mid-1990s (Stadelbauer 2003). Only two per cent of the population have moved within Russia annually since 1991, in the 1980s the corresponding figure was three to four per cent (Andrienko and Guriev 2004). There are two major migration streams that have been in motion ever since the disintegration of the Soviet Union (Heleniak 2003). One is the 'large-scale exodus from Siberia, the Far East and the North towards central and southwest Russia' (Heleniak 2003, p. 333). [1] Consequently, nearly all parts of the Russian North have lost a considerable number of inhabitants. In total, the Russian North lost about 17 per cent of its population between 1990 and 2006 and only 10. 6 million people inhabited the area in 2006 (*Barents Observer* 2006b). However, regional differences are significant. The most extreme cases of population loss in the period 1990 to 2007 are the Magadan Oblast and the Chukotka Autonomous Okrug, from which 57 and 68 per cent of the inhabitants had left, respectively (ROSSTAT 2008). The populations of a few regions have grown in the same time period; for example, the population of the Khanty-Mansi Autonomous Okrug grew between 1990 and 2007 by 17. 6 per cent (ROSSTAT 2008). While the out-migration has lost momentum since the beginning of the 21st century, the general north to south, east to west and periphery to centre patterns of migration are still important characteristics of today's out-migration from the northern parts of Russia (Göler 2005).

The decreasing speed of population loss is not a consequence of a sudden improvement of the living conditions in northern regions. Instead, it can be explained by a saturation situation. Everybody willing and able to leave has left by now. Accordingly, the retreat of population from the Russian North is now at an advanced stage (Göler 2005). The present situation is therefore characterized by cost considerations of migrants. Many simply cannot afford to leave and remain 'trapped' in the peripheries (Heleniak 1999; Wein 1999; Thompson 2004; Round 2006).

According to Heleniak (1999, p. 175) the destination areas of out-migration are rather dispersed throughout Russia, but there is a 'certain distance-decay relationship'. Major receiving regions were in southern Siberia, along the border of the European North and several regions along the Volga and the North Caucasus (Heleniak 1999). Hill and Gaddy (2003) see little evidence of the direct departure of many people from northern to southern Russia or other places that are more hospitable. [2] Instead, they identified a tendency of migrants leaving the most remote settlements for bigger cities, often nearby, in the Urals or in Western Siberia. In general, the migration processes seem to be rather haphazard and the present population density remains high by circumpolar standards. Therefore, the Russian state has repeatedly aimed at ending uncoordinated and unsupported migration processes and is establishing resettlement programmes[3] in order to achieve cost savings (Thompson 2004). However, some of those programmes have led to an increased out-migration of exactly the people that the authorities want to stay (i.e. young and economically active inhabitants), while many pensioners have opted to stay (Thompson 2004). Russia still consists of an elderly core and a young periphery (Heleniak 2003). Recent developments have nevertheless already changed the demographic composition of both areas; for example, the average age of the population in the North has moved closer to the average age of all Russians (Heleniak 2007). This process is undermining the economic viability of the northern periphery rather than increasing its sustainability since tax payers are leaving and those dependent on state support are staying. Due to the growing need for, and the lack of a skilled labour force in Russia, it will become increasingly difficult to replace those who have left the peripheries (Mukomel 2006). It is, therefore, important that the resettlement programmes are administered in a way that leads to selective out-migration of the elderly and economic dependent inhabitants.

Still overpopulated? Future mobility potentials

The changed perception of the Russian North leads to demands for a more efficient organization of the exploitation of natural resources, which are still vitally important for the Russian economy. Nonetheless, many inhabitants still see themselves as 'patriots of the north' (Round 2005, p. 719) and maintain the Soviet mentality (Thompson 2002). Additional to the practical hardships of life in Russia's peripheries, these people now have to handle the fact that they are considered as a problem by authorities, or even as human ballast (Wein 1999; Thompson 2004).

Given the profound social and economic changes and the following practical and psychological hardships plus the remaining general overpopulation of northern regions, it is very likely that further migration potential exists there. It is, nevertheless, very difficult to estimate the extent of the future migration. The amount of people leaving the Russian North depends on a number of factors, such as the level of investment, enterprise restructuring, governmental policies for supporting those who want to leave, and economic development in the destination areas and in the whole of Russia (Heleniak 1999). Thompson (2004, p. 79) reports, for example, how the investments by Governor Abramovich in Chukotka changed the perception of the future among the local population: 'There is a sense that anyone who leaves Chukotka now may miss its renaissance'.

Survey data (Heleniak 1999; Göler 2005) show for several northern regions that a significant part of the inhabitants would like to leave. There are differences in the mobility potential, for example between inhabitants of urban and rural areas, ethnic groups, or different age groups. Similarly, there are several main reasons for the aspiration to leave. According to the survey data, the most important reasons are that the stay in northern regions was initially planned to be temporary only, returning to their region of origin or relatives, the harsh northern climate, lacking educational opportunities, and general personal or material problems. Other studies (Wegren and Drury 2001; Andrienko and Guriev 2004) stress the higher significance of regional differences in economic factors (income level, unemployment, level of privatization, public services, etc.) compared to social concerns. In the future, ecological problems might gain importance as an additional reason to leave (Burke 2000). According to the *Barents Observer* (2006a), 11 million Russians wish to leave the Russian North. [4]

In order to estimate the future migration pattern in the Russian North, the few prospering regions and branches of industry (such as the oil and gas industry[5]) also have to be considered. It is therefore likely that labour shortages will occur locally, creating an incentive for migration to northern regions (Heleniak 1999). Official policy reacts to this development by calling again for selected migration

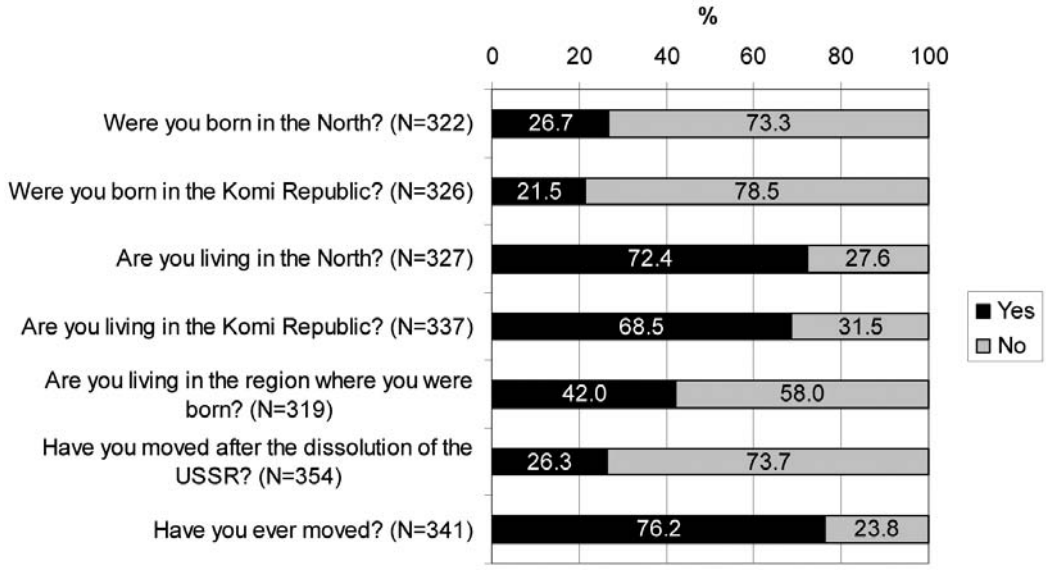

Fig. 2. Migration and mobility background.

to 'promising' settlements in the Russian North, apparently a return to old Soviet terms (Denissenko 2004).

Migration and mobility: past, present and future trends

The changed perception of the Russian North and the cost associated with maintaining a large population, resulted, as explained previously, in a quest for an alternative concept for this part of the country. Being a Northerner, or *severiane* in Russian, is not the same anymore as it used to be during Soviet times. Today, this term clearly carries stronger negative connotations. Nevertheless, there are also regions and industries that do not face difficult times. Their inhabitants may even be winners of the post-Soviet transition. As noted above, the regions involved in the oil and gas business are often doing well. How do their inhabitants view mobility and migration? It is likely that these places and their inhabitants will contribute significantly to the well-being of the Russian economy and society in the years to come. Therefore, it is important that the experiences and preferences concerning past, present and future mobility and migration of the winners of transition are recognized.

Before delineating the observed migration and mobility patterns in northern Russian in detail, they need to be positioned within a wider and more general framework. Traditionally migration theory considers the decision of individuals to move as an economic act. In this understanding of migration, numerous material incentives cause a cost-benefit calculation that eventually initiates mobility behaviour. Traditional concepts and theories of migration accordingly argue in terms of (dis)equilibrium, gravity and rational choice (Bähr 1997; Borjas 2001). More recently the focus shifted from this approach, which positions an abstract *Homo oeconomicus* at its centre, to a wider understanding of the causes and effects of migration that includes culture, identity or ethnicity as decisive factors, and depicts migration as non-rational and as a struggle of individuals in a multi-faceted and contextual reality (Brettell 2000; Olwig and Sørensen 2002). Within this framework the analytical focus of migration studies shifts from a mere comparison of push and pull factors of places of origin and destination, to highlighting movements by individuals between these places in order to sustain a livelihood (Olwig and Sørensen 2002). This brings together conceptual understanding of people and places, and alters their interdependencies (Hannam *et al*. 2006). Livelihood strategies applied by migrants are influenced by economic factors as well as by social institutions and networks. They are therefore inher-

ently spatially embedded and, hence, require an awareness of a wider spatial context (Olwig and Sørensen 2002). This is especially so as multiple and intersecting mobilities aiming at inclusion in social systems at different geographical locations are increasingly common and are changing the established pattern of economic and social life, even of those remaining immobile (Halfmann 2005; Hannam *et al*. 2006). Multi-placement at more than one locality leads to the 'migrants' deep involvement in geographically extensive yet socio-economically close-knit fields of relations' (Olwig and Sørensen 2002, p. 5).

The past, present and future migration and mobility patterns in northern Russia are based on both economic and social factors. As has been shown by Bolotova and Stammler (forthcoming) most of the immigration to northern Russia was initiated by material incentives arranged by the state, but the initial plan for staying temporarily often changed into permanent residence due to emotional place attachment. The relevance of multi-placement with concurrent integration of individuals at more than one locality, for example in the form of long-distance commuting, and a changing culture of mobility and migration in northern Russia are identified by White (2007). This illustrates that any approach to studying mobility and migration in this region has to capture macro and micro level factors and their linkages. Identifying migration as a system of interdependent and intermingled forces of various kinds with spatial and temporal dimensions facilitates such a comprehensive endeavour (Kritz and Zlotnik 1992). As shown by Vuorinen (2008), defining migration as a system is well suited to research on northern Russia and this understanding is therefore used as a conceptual base for the following analyses.

Former migrations

The staff of SeverTEK has extensive experience of migration. As Fig. 2 shows, more than three-quarters of all employees have moved at least once in their lives and more than half now live in a different region to the one they were born in. Most of this migration took place during the Soviet time. Therefore, the staff of SeverTEK was predominantly recruited from a labour pool that was already residing in the Russian North and probably had also worked in the oil industry before. It is likely that many of them moved during the planned Soviet in-migration to the north of the country. Roughly, one-quarter was born in northern regions and even less in the Komi Republic, where SeverTEK's head office and some production sites are located. A look at the current place of residence shows that the proportions between those living in northern regions and those residing elsewhere has almost reversed if compared to the distribution of birthplaces. Now about 75 per cent live in the Russian North and almost 70 per cent in the Komi Republic.

Figures 3 and 4 show the results of former migrations in terms of the differences in the regional distribution of birth and living places and illustrate the migration patterns of the past. Most obviously is the concentration of living places in the Komi Republic. The population gain of this region is fed by an almost complete out-migration from Siberia and the Far East. In addition, the now independent states of the former Soviet Union experienced out-migration. In particular, there were many employees who were born in the Ukraine and Kazakhstan who now reside in Russia. The central and southern parts of European Russia, in contrast, did not witness similar out-migration.

Present mobility: rotational shift work

The present mobility of SeverTEK's workforce is strongly influenced by the employment in a long-distance commuting company. Long-distance commuting is a typical form of labour mobility in the Russian North and referred to as the *vakhtovyi* method in Russian. It is applied by many companies that operate in isolated areas without adequate local supply of labour and lacking the potential to attract labour to move in permanently. The principle behind long-distance commuting is that accommodation at the production site is provided for workers, not for their families. The workforce lives and works at the production site for intense work periods before returning home for a rest period (Storey 2001; CME 2005). The result is a clear spatial and temporal separation between home and place of work.[6] Consequently, dual or multi-locational identities among those involved in long-distance commuting employments are increasingly common (White 2007). The challenging working conditions are nevertheless often dealt with successfully by the employees and the often-said extreme circumstances are deconstructed into normality by coping strategies (Eilmsteiner-Saxinger forthcoming).

Long-distance commuting is indispensable for

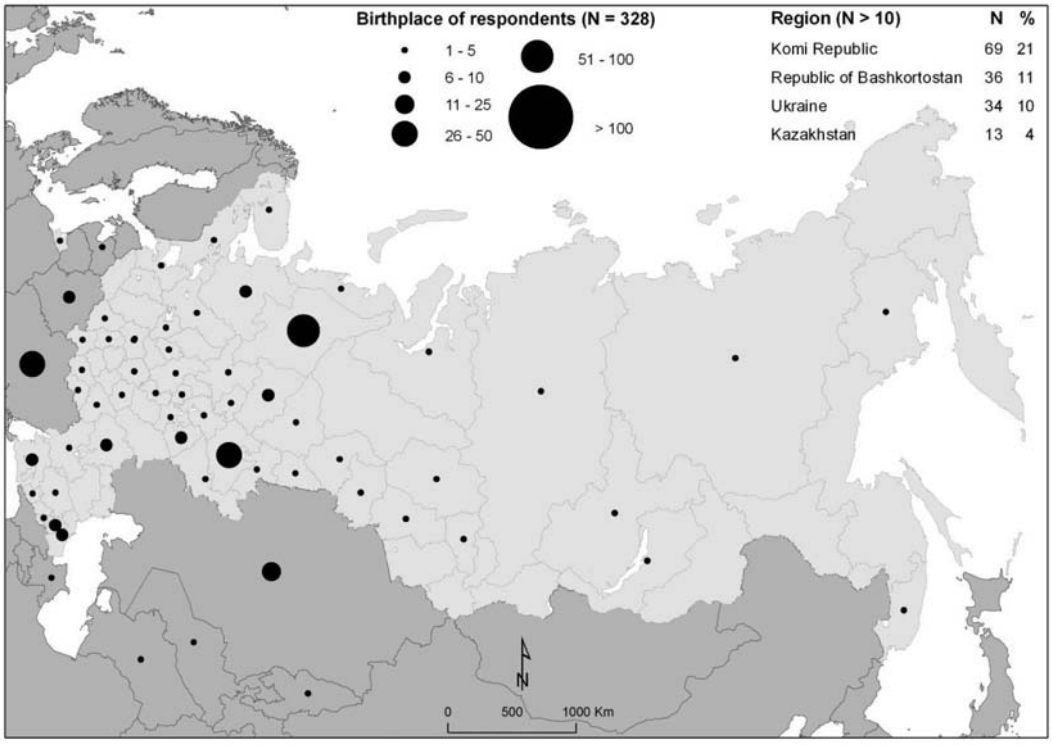

Fig. 3. Birthplace of the respondents.

many industries in Russia's northern and eastern peripheries. Important reasons are labour preferences for living in the south and a lack of highly skilled employees (Naskova 2004). The movement of many natural resource extracting companies in the north and east of the country into even more remote places indicate that the number of long-distance commuting operations will grow.

As Fig. 4 shows, the employees of SeverTEK live in many parts of Russia and some even live in other countries. From their living places, they have to travel first to Usinsk, if they live elsewhere, and then to the South-Shapkino oil field at the beginning of each rotational shift. The shifts at SeverTEK usually last 15 days during which the employees stay at the oil field, followed by 15-day periods of rest at home. Upon agreement shifts can be extended to 30/30 day rotations. The journeys to Usinsk have to be organized by each employee individually and most have to pay out of their own pockets. The transportation from Usinsk to the field South-Shapkino is organized by SeverTEK. Of all employees, 166 live in Usinsk and have a relatively uncomplicated journey. Many others face longer and more expensive journeys. The average commuting distance in SeverTEK is over 1000 kilometres and the maximum distance is 10 000 kilometres (based on the own estimation of the respondent). Some 48 per cent of respondents had a journey of less than 300 kilometres, which marks roughly the wider Usinsk area. About 20 per cent commute between 300 and 1000 kilometres (roughly North-West Russia), and 32 per cent commute more than 1000 kilometres. The employees are thus very mobile and characterized by regular and extensive travel efforts.

Present place and type of residence

Having shown above that the majority of SeverTEK's employees lives close to their workplace in the Komi Republic as well as in southern and central parts of European Russia, this part of the article provides more detailed information on characteristics of the present stay at the place of residence. An informative aspect is the length of the

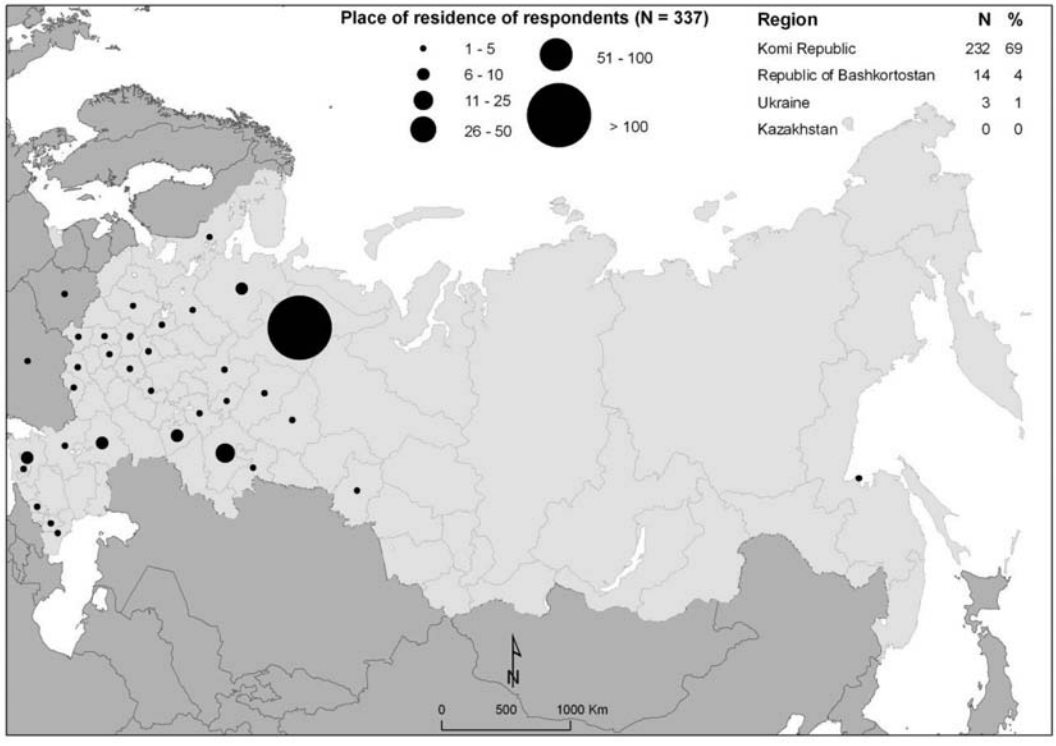

Fig. 4. Place of residence of the respondents.

ongoing residence. On average, the employees have lived 21. 5 years in their current place of residence. The distribution of the cases is rather normal, slightly skewed towards shorter stays, and ranges between one month and 54 years. These numbers do not provide evidence of a particularly mobile workforce.

The most common type of residence is in apartment buildings with more than two storeys (75%). Since the architecture in northern resource towns in Russia, such as Usinsk, is dominated by big apartment houses, this fact is not surprising. There are only a few alternative types of dwellings available. Of those living in other housing (single occupancy, 14%; apartment houses with at most two storeys 9%) significantly less live in northern regions ($\chi^2 =$ 12. 13, df = 1, $p <$. 01) and probably fewer have ever moved ($\chi^2 = 3.7$, df = 1, $p = .06$).

What other issues are important for the choice of the place of residence? Figure 5 presents important pull and push factors of the places chosen by the employees to live in. In order to rank the factors according to their importance a binominal test specifies whether and how strongly the distribution of the answers differs from a theoretically expected pattern (Rogerson 2006). The test assesses if more than an expected share (two-thirds) of the respondents consider the factors either as a major or as a minor reason for choosing their place of residence. The probability values in Fig. 5 refer to the discrepancy from this expected result and the factors can be grouped according to these values in three main clusters. The upper part of the figure shows factors that are certainly considered by more than two-thirds of the respondents, followed by one factor that shows an indifferent distribution. The lower part of the Fig. 5 contains those factors that are certainly considered by less than two-thirds.

Figure 5 illustrates the importance of work related features for the choice of the place of residence. A clear majority of the respondents interprets local attachment to their home places as an effect of their ongoing employment. The recognition of the positive influence of the oil industry on local development, stated by nearly as many as a consideration for their choice, probably helps in coping with this

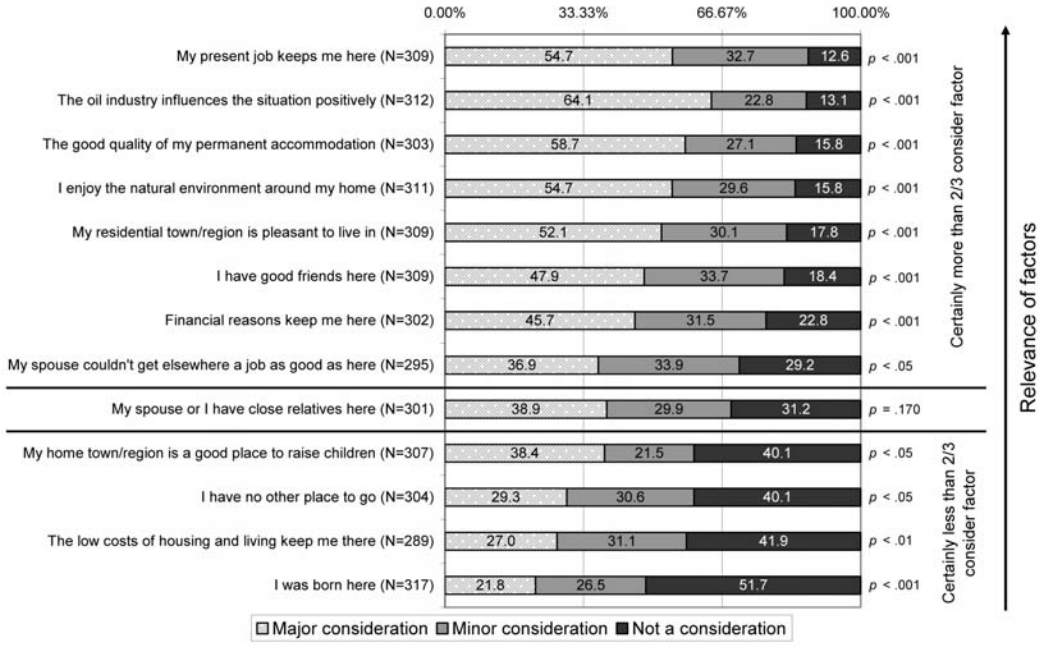

Fig. 5. Factors influencing the choice of the place of residence.

forced immobility due to the current job. In addition to work related aspects, general pull factors are also important. The quality of accommodation, the way of life and the environment are often considered as attractive features by the respondents.

Economic factors are also considered, and a majority states that those keep them at their present place of residence. This could be a sign of inhabitants being trapped in the Russian North due to financial restrictions. Then again, over 40 per cent did not consider low housing and living costs in choosing the place of residence. Either they see no alternative to living in an expensive place, for example in northern regions, or financial questions are not relevant to them. Indeed, employees of the oil and gas industry are receiving much higher salaries than most others in the Russian society (ROSSTAT 2006). For them factors other than financial ones probably have greater weight in the location decision.

Besides the cost argument, the missing preconditions for children to grow up in a healthy environment are rather negatively assessed. Therefore, it could be difficult for many respondents to reconcile family issues and work requirements. Less than two-thirds, but still almost 60 per cent, feel like they have no other place to go. Their location decisions are apparently involuntary and possibly also connected to the problem of being trapped. Finally, it seems that a more important factor than being born in a particular place is the proximity to friends and family.

Preferences for settlement and dwelling types

When asked for their preferences for settlement types, the respondents can be divided into three main groups (Fig. 6). About one-quarter of SeverTEK's employees think that the oil industry is important for local and regional development and would prefer to live in an oil town. This wish is probably based on good experiences of many employees at their present place of residence, which is often Usinsk, the 'oil capital' of the Timan-Pechora oil province. Many oil towns are among the wealthiest places in Russia. Therefore, the respondents' choices are not a surprise.

The second main group of the employees would opt to live in a large city in Russia. The third main group, of almost the same size, prefers a smaller rural town. The reasons for these choices are probably manifold and based on personal preferences. It is therefore difficult to interpret these results conclusively. The same applies for the five per cent of the

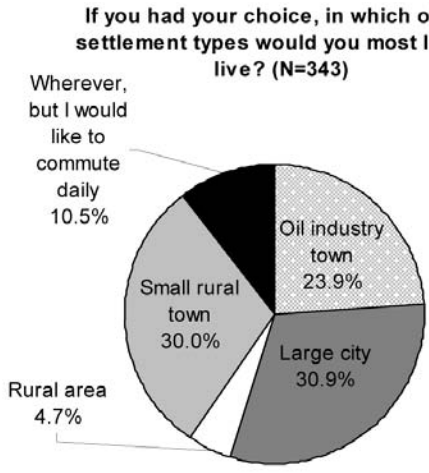

Fig. 6. Preferences for settlement types.

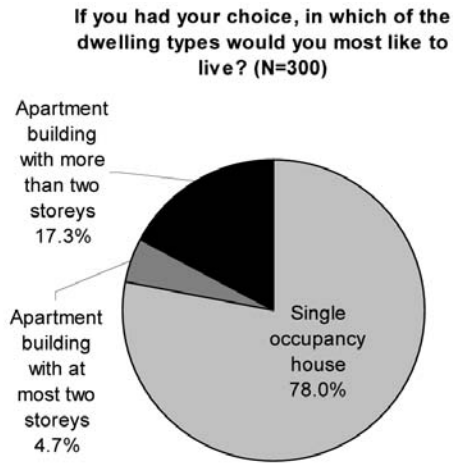

Fig. 7. Preferences for dwelling types.

employees who wish to live in the countryside. Finally, over 10 per cent of the staff is more concerned with the distance travelled to work rather than their place of residence. For them the most important goal is the possibility to commute daily between home and work rather than commuting longer distances at intervals between the 15 or 30-day shifts.

The employees' first choice for a dwelling type is, not surprisingly, a single occupancy house (Fig. 7), which is probably for many the most comfortable and prestigious form of housing. Less than one-fifth prefer to live in big apartment houses. Neither are smaller blocks of flats a preferred dwelling type. Big apartment buildings are the most common dwelling type in Russia's northern peripheries. Many SeverTEK employees will need to move in order to fulfil their dreams of living in a single occupancy house. Since multi-storey apartment buildings are also the most common accommodation type in urban settlements in other parts of Russia, alternative forms of housing can be found mainly in rural areas. The number of respondents wanting to live in small houses is nevertheless far greater than the number wanting to live in the countryside. The demand for single occupancy houses in urban areas is greater than the supply.

Plans for future migration and mobility

The respondents also revealed their plans for future migrations (Fig. 8). Even though intentions do not always lead to actions, they are the best available indicator of future behaviour for the purpose of this study. A similar approach has been applied for example by Eldarov *et al*. (2007). When asked if they intend to change the place of residence after their employment with SeverTEK, almost two-thirds stated that they do intend to move. Over half of the staff would like to leave the region, and less than 10 per cent intend to move within the same region of the Russian Federation. Of the employees who are living in the Russian North, about 20 per cent indicated that they wish to stay in the region, whereas of the employees living outside of this part of the country almost 80 per cent indicated that they wish to stay in the region where they are currently living.

Figure 9 presents the preferences for destinations of future moves. The chosen categories in this figure are not strictly defined and are not mutually exclusive, for example, a regional capital can be in a northern or southern region. Rather, they are meant for specifying personal preferences and each respondent could opt for one category only. The results are that those who live outside the northern regions typically intend to remain at their present place of residence, while most of those who wish to move consider the south the more attractive destination. Southern destinations are strongly favoured by both, those who reside presently in the north and those already living in the south, and only a few prefer a northern region as a destination for a future move. For a significant part of the respondents, the characteristics of the chosen destination are more important than its geographical location. About one-quarter of those who

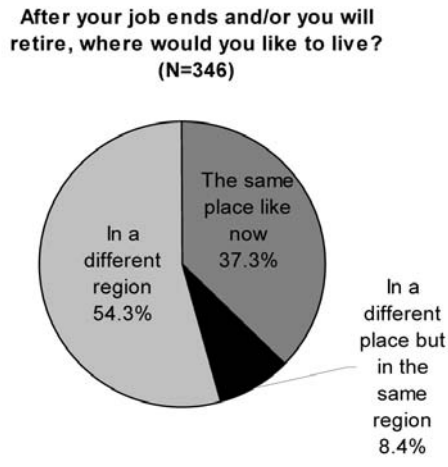

Fig. 8. Plans for future migration.

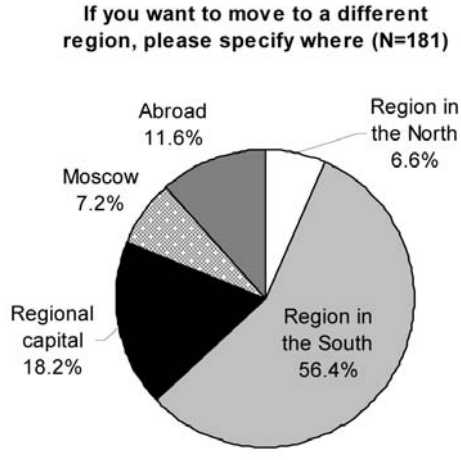

Fig. 9. Destinations of future migration.

plan to move, target their mobility to a big city, that is, Moscow and other regional capitals. Some others see themselves living abroad in the future.

Overall, it can be expected that many among the staff of SeverTEK will move after their employment ends. Hence, there is a potential for future migration and mobility. Figure 10 shows factors that affect the individuals' decisions to leave their present homes. They are sorted according to their relevance based on a binominal test that was applied according to the same principles as related to Fig. 5. A major issue is the desire to live somewhere with a better climate and in a more hospitable natural environment. A higher quality of life compared to the present place of residence is in general an important goal. Therefore, the new locations should offer better health care institutions, more leisure time opportunities, and the proximity of family and friends. The desire to experience something new or returning back to one's home region are also relevant reasons for future moves. The bottom line of Fig. 10 shows that an improvement of the supply situation with better shopping services is the least important reason among the given options, particularity as a major consideration for migration decisions.

A logistic regression model provides further in-

Table 1. Predicting future mobility behaviour [a]

Predictor	Coefficient	Standard error	Wald test	Significance
	Significant variables			
Age	–0.057	0.022	6.687	.010
Living in the Russian North	1.619	0.693	5.461	.019
Place of residence is birth place	–1.064	0.513	4.299	.038
Commuting distance	–0.001	0.000	4.008	.045
	Control variables			
Moved in post-Soviet time	–0.697	0.421	2.740	.098
Born in the Russian North	–0.740	0.586	1.597	.206
Lives with partner and/or children	0.663	0.539	1.512	.219
Lives in favourite dwelling type	–0.466	0.423	1.210	.271
Blue-collar employee	–0.349	0.484	0.519	.471
Born in Russia	–0.170	0.546	0.097	.756
Constant	3.196	1.386	5.315	.021

[a] Dependent variable is whether the respondent intends to move in the future (N = 217; 62.7 % of all respondents). R^2 = .476 (Nagelkerke). Model χ^2 (10) = 92.894, p < .001.

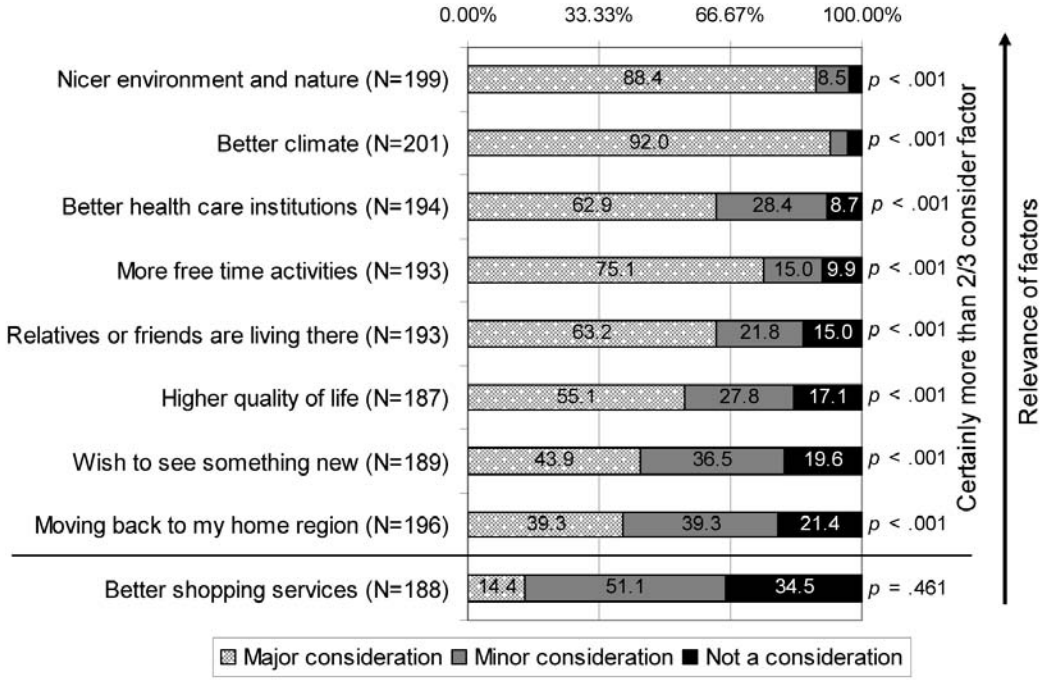

Fig. 10. Reasons to move to a new place of residence.

formation on the employee characteristics that are likely to lead to mobility behaviour in the future. The model (Table 1) incorporates ten potentially relevant predictors and aims to identify their influence on the dependent variable, which is whether or not the respondents intend to move after their employment at SeverTEK ends. Several general features like age, family status and type of employment (blue vs. white collar) are included due to their well-documented relevance for migration matters (O'Loughlin *et al*. 2007). [7] Generally, young, well-educated and single individuals are the most likely to move. The remaining predictors are case specific and are linked to different mobility issues relevant for the case study (place of birth and residence, former mobility, preferences for dwelling type). It is expected that those living in the northern regions, those born outside of Russia, and all respondents that moved before are more likely to show higher mobility potentials. On the other hand, the respondents who are living in their favourite dwelling type and living in their birth place are less likely to move. Two predictors were included into the regression model without any clear prediction for their influence on future mobility (commuting distance and born in the Russian North). Commuting distance could have an increasing effect on mobility as those who currently have a highly mobile lifestyle (long commuting distance) may also be more mobile in the future. On the other hand, the end of the employment in SeverTEK will not necessarily lead to an immediate need for mobility for this group.

As documented in Table 1, four of the ten predictors show a significant relationship with intended future moves. As such, the applied model is significant and explains almost 50 per cent of the decision-making processes concerning future mobility. According to the results younger employees are, as expected, considering future changes of the place of residence more often (indicated by the negative coefficient for the age variable). This result highlights the risk for an unwanted and disproportionate departure from the north of exactly those that could contribute most to its development in the future, the young and economical active with the main part of their careers ahead of them. A factor as influential as age is residence at one's birth place. Those who currently live in their place of birth do not intend to move as others – presumably due to place attachment. Finally, increasing commuting distance also reduces the intention to move. It seems that those who organize their

working life involving longer commuting distances were more successful in finding pleasant places to live in or are frequently prepared to commute long distances in order to live in their preferred location. Many of these respondents are probably living outside the Russian North and have to commute from other regions. This interpretation is in line with the result for the last significant predictor. Employees living in northern regions are more likely to desire a departure from their present place of residence after their job ends.

A look at the non-significant predictors in the model also offers interesting results. Those born outside Russia obviously do not wish to return to their native homes. Most of them are from other parts of the former Soviet Union and it seems that the return migration between these now independent countries is predominately an issue of the past. It is also noteworthy that the dwelling type was not a significant predictor. The dominance of big apartment buildings in Russian urban settlements, also in northern cities, and the despair of finding any alternatives may have caused this outcome.

Conclusion

Soviet in-migration to the Russian North, in order to develop the area and exploit natural resources, has a higher relevance for the migrational past and present distribution of living places of the respondents than post-Soviet transition and out-migration from the area. Since two-thirds of the respondents state that they intend to move after their employment in SeverTEK ends, there is a significant potential for future migration, also for the time beyond the post-Soviet transition phase. The supply of qualified employees and efficient organization of labour processes will continue to be issues of concern for the resource extracting industries in the Russian North.

The mobility of SeverTEK's employees is only partially consistent with common mobility patterns found among the population of the post-Soviet Russian North. Many respondents have lived and still live a mobile way of life. Nevertheless, there are no signs of a post-Soviet 'exodus', as described for the Russian North in general. Thus, those involved in the oil industry show different mobility behaviour than many others in Russia's peripheries. The oil sector offers vital incentives to development and is at least able to counterbalance general motives for out-migration. This conclusion is certainly valid beyond the present case study. Therefore, the future of the Russian North will presumably be distinguished by simultaneous population outflows, since there are major mobility potentials, and inflows that are attracted by incentives from key sectors.

It seems that many employees made a rational choice for living in northern regions because of their employment, and that they are ready to leave as soon as the job ends. Long-distance commuting is apparently a good method to combine the advantages of employment in the northern oil industry with residence in a pleasant location. Many inhabitants of the Russian North could achieve some of their goals with respect to their preferred housing type or preferred location of residence by engaging in commuting shift work. Long-distance commuting is therefore an attractive alternative for many employees, and this work/living arrangement may become increasingly common. From the employers' perspective this mediation function contributes to a successful business environment by opening the periphery for highly educated staff that might hesitate to move to northern regions permanently. Long-distance commuting is therefore clearly a means of achieving more efficient spatial structures in the Russian North, a phenomenon similar to those in many other resource peripheries worldwide. It seems advisable that this labour scheme is applied even more widely by the resource industry, since it apparently is in line with emerging new values for life and work styles and all the main stakeholders benefit from its implementation.

The presented case study demonstrates that the preconditions for applying long-distance commuting in Russia's northern resource periphery also differ from other remote resource rich areas in the world. The most important determinant in this respect is the former Soviet development strategy for the North that resulted in a periphery characterized as substantially remote, but at the same time also as fundamentally urban. The common understanding that periphery equals rurality falls short, which has implications for long-distance commuting and the rationales behind it. Australia, for example, implements a decentralization policy and the resulting discourse is marked strongly by the problem of missing linkages between peripheral areas and their local resource industry, which usually recruits its labour from urban centres elsewhere (Storey 2001). In Russia, long-distance commuting serves an almost completely opposite purpose. Here it is considered as a means to reduce the population in resource peripheries and to enable the labour force to leave the periphery and settle in more hospitable

areas. This study confirms the potentials of long-distance commuting for regional development and restructuring under such preconditions. Since previous studies usually draw their conclusions based on fundamentally different requirements, this work therefore opens an additional perspective on commuting operations in resource peripheries.

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Notes

1. The second stream is the return migration of ethnic Russians to Russia from other parts of the former Soviet Union.
2. The seeming contradiction between the loss of population as introduced in this article and this statement is a consequence of the different definitions of the Russian North.
3. For details on resettlement programmes see for example Thompson (2002), Hill and Gaddy (2003), Paton Walsh (2003), Göler (2005), Round (2005).
4. According to the *Barents Observer* (2006b) the total population of the Russian North in 2006 was only 10. 6 million. Apparently, different understandings of the region are again the cause of statistical contradictions. Nevertheless, these numbers give a rough understanding of the potential for out-migration.
5. Good examples for the positive influence of the oil and gas industry for regional and local developments are presented in *The Economist* (2005) and Berry (2006).
6. For more details on long-distance commuting see Spies (2006).
7. Gender was not included in the analysis due to the predominance of male respondents (322 of 357).

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