

# **“WHY ARE THEY LEAVING?”**

## **RESIDENTIAL SATISFACTION AND PROPENSITY TO MOVE AMONG THE INHABITANTS OF TWO COMMUNITIES IN THE PROVINCE OF MURMANSK**



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**Note:** All the photographs included in this thesis were taken by the author between January and February 2010. The map of the Province of Murmansk was also produced by the author. The author of the map in figure 1.1 is W.K. Dallmann (Arctic-council.org, 2011). The author of the maps in figures 2.4 and 2.15 is A.V. Kuznetsov (Xibiny.ru, 2007).

# 1. INTRODUCTION

In the two decades following the collapse of the Soviet Union, most communities located in the Russian Arctic experienced a considerable loss of population which, in some regions, continues to our days. In the Province of Murmansk, for example, the population decreased from 1,146,000 inhabitants in 1990, to 983,300 in 2000, to 836,700 in 2010: a staggering decline of 27.6% in the span of twenty years (FSSS, 2011). On one hand, this decline can be attributed to the negative natural growth affecting the Russian society since the early 1990s; on the other, this decline is ascribable to a consistent migration flow from the Russian Arctic towards central regions, such as Moscow and Sankt Petersburg. Notwithstanding the remarkable dimensions and the potential implications of outmigration in the Russian Arctic, the scientific literature available on the subject is still relatively scarce.

Of the few studies dealing with outmigration in the Russian Arctic, most tend to assume a contextual or locational perspective, and thus to explain current migration flows in the light of increasing regional disparities emerging in the Russian Federation (Karachurina, 2006; Akopov & Gadzhiev, 2008; Rautio & Tykkyläinen, 2008). According to these studies, the crisis that struck the Russian Federation after the fall of the Soviet regime had the most profound repercussions in peripheral regions, such as those located in the Arctic. In fact, during the Soviet era, the communities of the Russian Arctic relied heavily on the conspicuous investments and subsidies devolved by the state, in virtue of their inhospitable environment and their strategic relevance. During the transitional period, however, these subsidies were significantly curtailed, causing the provision of social and public services to undergo severe underfunding. At the same time, the substantial reorganization and rescaling of production activities in the Arctic regions generated widespread unemployment, underpayment, and poverty among the local population. The dramatic worsening of living conditions endured by the inhabitants of Russian Arctic communities, and the concurrent attraction exerted by core areas, are thus regarded as the main factors prompting outmigration in the Russian Arctic.

While there is a certain agreement over the role played by contextual and locational factors in fostering outmigration across Russian Arctic communities, there is still a shortage of information pertaining to the composition and characteristics of the migrating population, and to the actual motives and circumstances prompting local inhabitants to leave their community. To a certain extent, this shortage of information can be adduced to the fact that most studies, such as those mentioned above, interpret the phenomenon of outmigration solely in the light of objective indicators, such as economic performances and provision of social services, while subjective indicators are mostly neglected. In fact, the studies which assume an objective approach are generally intended to investigate how and why the phenomenon of outmigration varies between different regions or communities. Accordingly, little attention is devoted to investigate the actual effects of the decline of socio-economic indicators on the inhabitants of Russian Arctic communities, and to assess the actual relation between the poor living conditions reported in these communities and the decision to migrate. Therefore, the studies which assume an objective approach are not able to provide much information on how the inhabitants of Russian Arctic communities are affected by contextual factors, and on how they react to such factors.



Among the studies analyzing outmigration in the regions of the Russian Arctic, the studies carried out by Round (2005a, 2006) in the Province of Magadan represent one of the few efforts to investigate outmigration in the light of subjective factors. In the studies by Round, the focus of investigation is set on the individual perceptions and evaluations of the community of residence, and on the individual attitudes towards the community of residence and the prospect of migrating. By shifting the focus from the contextual to the subjective dimension, and by collecting first-hand information among the inhabitants of Magadan, Round (2005) recognizes two important factors affecting the decision to migrate. The first, which he labels “practical ties”, refers to the incentives that people have to remain in their community (such as house ownership, employment stability, and social capital) and to the constraints and uncertainties associated with the decision to migrate. The second, labeled “cultural ties”, refer to the emotional attachment and symbolical identification that the inhabitants establish with the place they live in.

As testified by the research carried out by Round in Magadan, the adoption of a subjective approach represents an opportunity for understanding the factors determining outmigration across Russian Arctic communities, for manifold reasons. In first place, by adopting a subjective approach, it is possible to include considering a variety of factors, such as social and emotional ones, which are generally neglected in the literature dealing with outmigration in the Russian Arctic. Moreover, by collecting first-hand information among the population of Russian Arctic communities, it is possible to obtain valuable information not only concerning the intention to migrate, but also concerning the quality of living conditions experienced by local inhabitants, and the social and emotional relationships they establish in the location of residence. Taking this into account, the adoption of a subjective approach could be instrumental in order to clarify how contextual factors affect the inhabitants of Russian Arctic communities, and thus to recognize which are the actual factors prompting or inhibiting the desire to migrate. At the same time, this approach could provide valuable information in order to discern which groups are more desirous to leave and which are more desirous to remain, and to explain such variations in the light of both contextual and subjective factors.

In the scientific literature, the desire to leave the location of residence is defined with the notion of *propensity to move* (Morris *et al.*, 1976) and analogous ones, such as *prospective residential mobility* (Newman, 1975), and *intention to move* (Ginsberg & Churchman, 1984). According to the definition proposed by Morris *et al.* (1976:309), “mobility refers to whether or not a move occurred, while propensity to move refers to desires, plans, inclinations or expectations about future mobility”. As the focus of research is set on the individual aspirations rather than on the effective mobility, scholars investigating propensity to move tend to assume a subjective perspective, and to include considering subjective indicators in addition to objective ones. Particularly, objective indicators are employed to represent the characteristics and features of the location of residence, and the individual and household background of the population investigated, while subjective indicators are “designed to assess people's satisfaction with various facets of their lives such as their satisfaction with family, work and house” (Newman, 1975:53). As made explicit by the same Newman (p. 61), “indeed, subjective indicators are relatively more important than objective indicators [...]. Perhaps even more noteworthy is the observation that subjective indicators add considerably to the explanation of mobility inclinations *over and above* that contributed by objective indicators”.

The utilization of objective indicators can be deemed to be essential in every study investigating the variations of propensity to move between different study locations, and across different groups composing the population. Accordingly, the employment of subjective indicators is not meant to substitute the utilization of objective indicators, but rather to extend and complement it. Pertaining to this, the *residential*

*satisfaction model* proposed by Speare (1974) is perhaps one of the most successful and celebrated efforts to collimate objective and subjective factors in a concise and exhaustive way. According to the model, which elaborates on previous contributions by Rossi (1955), Simon (1957) and others, the propensity to move should be interpreted as the response to an initial condition of dissatisfaction with the location of residence. In turn, the degree of residential satisfaction is regarded as the outcome of the interplay of both objective factors (i.e. locational, individual and household characteristics) and subjective factors. As argued by Speare, when the level of dissatisfaction reaches a certain threshold of tolerance, the individual will attempt to improve his or her situation by planning a potential move, and by collecting the resources that are needed to carry out the move; if these efforts are successful, the individual will eventually move to another location.

As we are going to debate more thoroughly in our literature review, the model proposed by Speare presents numerous strong points, but also weaknesses. On one hand, the introduction of the variable residential satisfaction as an intervening factor represents a solution to reconcile the role played by objective and subjective factors in influencing the propensity to move. Specifically, the model allows us to reinterpret the regime of causality between objective locational factors and residential mobility. On the other hand, however, the model has been criticized for its rationalistic approach: for assuming that the sense of dissatisfaction automatically determines the insurgence of the desire to move (Landale & Guest, 1985; Lu, 1998); and for overlooking the manifold constraints hindering people who wish to leave their home or their community from effectively doing so (Clark, *et al.*, 1979). Moreover, the model proposed by Speare fails to provide an exhaustive account of the subjective factors which may affect the degree of residential satisfaction, hence the propensity to move. In virtue of the strengths and weaknesses mentioned above, the notion of residential satisfaction could be indeed employed in the ambit of Russian Arctic communities, in order to appreciate the effective role played by objective and subjective factors in influencing the propensity to move among the local population. At the same time, however, it is necessary to define more clearly the notion of residential satisfaction, and especially, to determine which are the single subjective factors affecting its extent and distribution.

According to Weidemann and Anderson (1985), the notion of residential satisfaction can serve two distinct and complementary purposes. As already discussed, the notion of residential satisfaction can be employed as a predictor of mobility behaviors, as in the studies by Speare (1974) and by others (Bach, 1977; Newman & Duncan, 1979). In addition to this, the notion of residential satisfaction can be employed as a “criterion of residential quality” (Adriaanse, 2007), in order to assess how people evaluate their location of residence, and which are the factors affecting such evaluation (e.g. Marans & Rodgers 1975; Bonaiuto *et al.*, 1999; Amerigo & Aragones, 1990, 1997; Parkes *et al.*, 2002). On one hand, this approach is directed to investigate how the degree of residential satisfaction varies among people living in different locations or belonging to different groups. On the other hand, this approach aims to explain the reasons underpinning such variations, by analyzing how people evaluate single aspects ascribable to the location of residence. For this purpose, these studies employ extensive sets of subjective variables, representing the various aspects which may potentially affect the subjective evaluation of the dwelling, the neighborhood and/or the community, depending on the range of analysis. On one side, these variables are instrumental in order to assess and compare the effect of single subjective factors on the degree of residential satisfaction, and thus to recognize which are the prominent factors influencing the evaluation of the location of residence. On the other, these variables allow to discern how single subjective factors affect the degree of residential satisfaction depending on the objective characteristics of the environment, and according to the individual and household background.

As we can appreciate from the extensive literature dealing with residential satisfaction, the selection of an appropriate set of subjective indicators depends, to a great extent, on the specific purposes and contexts of research. In first place, the selection of subjective indicators can vary considerably depending on the range of analysis, as some studies investigate the factors affecting home or housing satisfaction (Amerigo & Aragones, 1990, 1997), while others focus on the factors affecting neighborhood (Bonaiuto *et al.*, 1999, 2003; Sirgy & Cornwell, 2002) and community satisfaction (Brown, 1983; Fried, 1982, 1984). However, it is common that studies investigating home satisfaction include considering aspects relatable to neighborhood and community satisfaction, and vice versa. Furthermore, the selection of subjective indicators may vary according to the peculiar characteristics of the locations and population investigated, in order to take into account any factor which may affect residential satisfaction in a specific context. Accordingly, when investigating residential satisfaction in the context of Russian Arctic communities, the selection of an appropriate set of subjective indicators should take into account the potential effect of certain factors, such as extreme environmental conditions and relative isolation, which are generally neglected in mainstream literature dealing with residential satisfaction. Finally, the selection of indicators may vary depending on the methodological and conceptual approach adopted in the single study.

In spite of the great variety of indicators proposed in the literature dealing with residential satisfaction, it is possible to recognize three main typologies of subjective factors, corresponding to three distinct and interrelated dimensions of residential satisfaction. The first of these dimensions, which we label *convenience satisfaction* following a definition by Fried (1984), pertains to the subjective evaluation of a variety of aspects concerning the degree of functionality, practicality and habitability of the location of residence. At the home level of analysis, the degree of convenience satisfaction may depend on the perceived quality of housing infrastructure, on the degree of maintenance, on the quantity of space available, etc. (Amerigo & Aragones, 1997) At the neighborhood and community level, convenience satisfaction may vary according to diverse factors, ranging from economic and occupational conditions (Marans & Rodgers, 1975; Rodgers, 1980; Allen *et al.*, 1991), to the availability of public services and other amenities, such as cultural and recreational facilities (Wasserman, 1982; Fried, 1984; Parkes *et al.*, 2002). In addition to this, convenience satisfaction could also be related to the subjective evaluation of the quality of the environment, namely in reference to sources of environmental pollution, and to the availability of green and natural areas (Bonaiuto *et al.*, 2003; Howley, 2009).

The second dimension of residential satisfaction that we extrapolate from the literature, which we label *social satisfaction*, refers to a variety of factors concerning the social relationships that people establish in the ambit of the location of residence. In this frame of reference, several studies have taken into account the relation between residential satisfaction and the quantity of relatives and friends living in the same neighborhood or community (Fried, 1984; McAuley & Nutty, 1985). Moreover, there are studies which included considering how residential satisfaction varies according to the subjective perceptions and attitudes towards fellow neighbors and community members (Bonaiuto *et al.*, 2003; Adriaanse, 2007), and depending on the degree of involvement in local associationism and politics (Fried, 1984; Allen *et al.*, 1991). In this frame of reference, the literature of residential satisfaction can be thus supplemented with other notions proposed in the field of sociology, social psychology and human geography, such as social cohesion (Lott & Lott, 1965; Cartwright, 1968; Hogg, 1992; Friedkin, 2004), social capital (Loury, 1977; Bourdieu, 1980, 1985; Coleman, 1988; Portes, 1998), sense of community (Sarason, 1974; McMillan & Chavis, 1986) and community attachment (Kasarda & Yanowitz, 1974). Specifically, this digression is suggested by the shortage of research investigating such notions in the ambit of Russian Arctic communities, and by the lack of documentation concerning the social habits and the lifestyle of the population living in these communities.

In addition to convenience and social satisfaction, it is possible to recognize a third dimension of residential satisfaction, *emotional satisfaction*, which refers to the manifold bonds linking people to their place of residence. Pertaining to this, there is a considerable amount of evidence showing that the physical characteristics of the location of residence may evoke different aesthetical and emotional appraisals among the resident population, ultimately affecting the subjective evaluation of the location of residence (Bonaiuto *et al.*, 2003; Matsuoka & Kaplan, 2008). In addition to this, there are studies showing that the degree of residential satisfaction can be profoundly affected by the degree of attachment to and identification with the place of residence, both from a physical and a social point of view (Riger & Lavrakas, 1981; Fried, 1982). The necessity of taking into account emotional factors when investigating residential satisfaction is further supported by the literature dealing with notions such as sense of place (Tuan, 1977; Steel, 1981), place attachment (Shumaker & Taylor, 1983; Low & Altman, 1992), and place identity (Proshansky, 1978; Twigger-Ross & Uzzell, 1996), which discuss the emotional bonds that people establish with physical places. Once again, by reviewing contributions which do not explicitly refer to the notion of residential satisfaction, we intend to compensate the shortage of documentation concerning the lifestyle of the people living in Russian Arctic communities.

In consideration of the shortage of literature dealing with outmigration in the Russian Arctic, and in the light of the potential benefits enabled by the adoption of a subjective approach in this ambit of research, the aim of the present study is: *to investigate how subjective factors affect the degree of residential satisfaction and the propensity to move among the inhabitants of two communities located in the Province of Murmansk, i.e. the city of Kirovsk and the settlement of Nikel*. More specifically, the present study is devoted to pursue three main purposes. The first is to assess the extent of propensity to move among the inhabitants of the two communities taken as study cases, and to appraise how the propensity to move varies according to the community of residence, and to the individual and household background. The second purpose is to assess how the inhabitants of these communities evaluate their location of residence, both from a convenience, social and emotional perspective, and to investigate how such evaluation varies depending on locational, individual and household factors. The third purpose is to assess the actual relation between the degree of residential satisfaction and the propensity to move. Consistently with these objectives, the present research is committed to answer the following research questions:

**RQ 1:** *To what extent are the inhabitants of Kirovsk and Nikel willing to leave their location of residence?*

**RQ 2:** *To what extent are the inhabitants of Kirovsk and Nikel satisfied with their location of residence?*

**RQ 2a:** *How do the inhabitants of Kirovsk and Nikel evaluate their location of residence with regard to convenience aspects?*

**RQ 2b:** *How do the inhabitants of Kirovsk and Nikel evaluate their location of residence with regard to social aspects?*

**RQ 2c:** *How do the inhabitants of Kirovsk and Nikel evaluate their location of residence with regard to emotional aspects?*

**RQ 3:** *How does residential satisfaction vary depending on the evaluation of convenience, social and emotional aspects?*

**RQ 4:** *How does propensity to move vary depending on residential satisfaction, and on the evaluation of convenience, social and emotional aspects?*

In order to provide a valid and exhaustive answer to these questions, we carried out a survey in the form of self-completion questionnaires among the inhabitants of Kirovsk and Nikel. Specifically, the survey was intended to obtain first-hand information from the inhabitants of these communities in regard to: their individual and household background; their propensity to leave home and the community; and their evaluation of the dwelling and of the community of residence in relation to different aspects (i.e. convenience, social, and emotional). Initially, it was our intention to maintain the highest degree of randomness in the sample, for obvious reasons of validity and reliability; however, as we are going to detail in chapter 4, the possibility to do so was limited by various practical issues. Consistently with these difficulties, we then decided to carry out a snowball sampling, i.e. to deliver and collect our questionnaires through intermediaries chosen among the local population. Thanks to this sampling method, we were ultimately able to obtain 200 valid responses, 100 in each community (response rate: 60.6 %).

The decision to ground our research in the Province of Murmansk responds to conceptual as well as practical exigencies. From a practical point of view, the Province of Murmansk represents an ideal environment of research, thanks to the relative vicinity and good connections between Murmansk and major Russian metropolises, and between Murmansk and other communities located in the Province. Also from a conceptual point of view, the Province of Murmansk can be deemed to represent an optimal context for investigating the phenomenon of outmigration in the Russian Arctic, principally in virtue of the remarkable loss of population occurred in the Province in the last two decades. In addition to this, the Province of Murmansk presents a geographical and historical background which is not very dissimilar from the one of other regions located in the Russian Arctic. Moreover, the population of the Province of Murmansk appears to endure the same economic difficulties and social issues which have been affecting the population of the Russian Arctic since the fall of the Soviet regime. Namely, according to the study by Akopov & Gadzhiev (2008), the socio-economic development of the Province of Murmansk appears to follow a trajectory which is comparable to most other regions located in the Russian Arctic. In the light of these analogies, we thus retain the Province of Murmansk to be a valid context of research in order to investigate the factors affecting propensity to move and residential satisfaction in Russian Arctic communities.

The decision to select the city of Kirovsk and the urban-type settlement<sup>1</sup> of Nikel as study cases is due to multiple reasons. In first place, both communities have experienced a remarkable loss of population in the last two decades, which has not yet reversed as of 2010. Namely, between 1989 and 2010, the population of Kirovsk dropped from 43,500 to 29,800 inhabitants (-32 %), while in the same period, the population of Nikel decreased from 21,800 to 12,800 inhabitants (-41 %) (FSSS, 2011). At the same time, the two communities present remarkable differences, which allow us to analyze the effect of diverse locational factors on the propensity to move and on the degree of residential satisfaction among the population of Kirovsk and Nikel. In this regard, the most salient differences concern the dimensions and relative location of the two communities, as well as the number and quality of public services, retail and other amenities available in Kirovsk and in Nikel. In fact, Kirovsk has a population that is more than double the one of Nikel, and is more centrally located and better connected to major regional and national centers. The comparison between the two communities is made more interesting by the presence of peculiar features, which can be deemed to affect the quality of living conditions of local inhabitants. Specifically, the population of Nikel can be deemed to be majorly affected by the dramatic levels of pollution emanated by mineral and industrial activities located in proximity of inhabited areas, whereas in Kirovsk polluting activities are mostly located outside the city limits. In virtue of the characteristics aforementioned, the communities of Kirovsk

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<sup>1</sup> The official definition of “city” and “urban-type settlement” reflects the administrative status of the community.

and of Nickel could provide valid terms of comparison in order to assess the actual relation between contextual factors and propensity to move.

Following this introduction, the present research is structured as follows. In the second chapter, we present more in detail the regional context in which our research takes place, i.e. the Province of Murmansk, as well as the two communities we have taken as study cases, i.e. the city of Kirovsk and the settlement of Nickel. In the third chapter, we review the literature dealing with the notions of propensity to move and residential satisfaction, and we discuss how these could be influenced by a variety of convenience, social, and emotional factors. Following this, in the fourth chapter, we present our methodological approach, and we detail the strategies and procedures that we employ in order to retrieve information among the local population. In the fifth chapter, we present and analyze the results obtained in the survey in order to provide an exhaustive answer to the research questions posed above. Finally, in the sixth chapter, we summarize the outcome of our analyses, and we discuss the limitations of our research, as well as the potential applications for future research investigating outmigration and living conditions among the population of Russian Arctic communities.

**Figure 1.1** - Map of Arctic regions. The Province of Murmansk is highlighted in red.



**Source:** Arctic-council.org (2011). Author of the map: W.K. Dallmann (2011).

## **2. THE PROVINCE OF MURMANSK AND THE COMMUNITIES OF KIROVSK AND NIKEL**

As already argued in the introduction, the phenomenon of outmigration affecting Russian Arctic communities in the last two decades cannot be understood without referring to the peculiar context in which the phenomenon occurs. In fact, the remote location and extreme environmental conditions of these communities, together with the poor economic and living conditions reported across the Russian Arctic after the collapse of the Soviet Union, cannot be neglected while considering the potential factors determining outmigration. In this frame of reference, the analysis of contextual factors affecting outmigration cannot omit to take into account specific aspects concerning Russian culture and society, such as high rates of divorce, alcoholism, and low expectancy of life among men. Accordingly, in order to define the theoretical and methodological instruments which best suit the context of our research, it is first necessary to obtain a clear picture of the geographical and historical dimension in which our research takes place, and to gather insights concerning the economic and socio-cultural background of the local inhabitants. For this purpose, the present section is organized in four parts: in the first, we detail the reasons underpinning the study case selection; in the second, we provide a brief description of the Province of Murmansk; and in the last two sections, we present the communities of Kirovsk and Nikel.

In order to provide an exhaustive account of our context of research, we consulted a multitude of different sources, most of them available exclusively in Russian. In this frame of reference, the resources made available online by the Federal Service of State Statistics (FSSS, 2011) are of great help; however, their utilization is sometimes difficult. For example, the indicators describing the socio-demographic and economic background of single communities may differ from year to year, and from town to town. In order to overcome the issue, we supplemented these resources by consulting other institutional and touristic sites on the internet, which are listed in the sources chapter at the end of this dissertation. More information was gathered during the field work in Kirovsk and Nikel, especially by conducting informal interviews with the local population. In this occasion, it was also possible to collect pictures to be included in this research.

### **2.1 STUDY CASE SELECTION**

The selection of suitable communities to be treated as study cases is limited by manifold issues related to the impracticality of carrying out field investigations in a peculiar context such as the Russian Arctic. In first place, we excluded the most isolated and remote communities from the list of possible study locations, because of the high costs and the time necessary to reach these areas; and because of the disruptions to

communications and transportations that may occur during harsh climatic conditions in winter months. Besides these, we excluded the communities located in the so-called “closed districts”<sup>2</sup>, in virtue of the special regime governing the access of foreign visitors to them. Furthermore, the selection of eligible study locations, as well as the number of communities to be investigated, is further limited by the regulations concerning the length of stay and internal mobility of foreign citizens within the Russian Federation.

Because of such limitations, we decided to set our research in the Province of Murmansk. Located almost entirely beyond the Arctic Circle, at the border with Norway and the Finnish Lapland, the Province of Murmansk can be easily reached by plane, rail and road from Sankt Petersburg and Moscow. Notwithstanding its bordering location and the integration in the national transportation networks, however, the Province of Murmansk presents numerous characteristics common to other Arctic regions. In fact, besides sharing similar environmental and climatic conditions, the Province of Murmansk manifests remarkable signs of the crisis affecting the Russian Arctic in the last two decades, such as economic recession, worsening of living conditions, outmigration and depopulation. Specifically, according to Akopov & Gadzhiev (2008), the socio-economic development of the Province of Murmansk in the post-Soviet era is analogous to most of the other regions in the Russian Arctic, especially to: the Republic of Karelia; the Province of Arkhangelsk; the northern districts of the Territory of Krasnoyarsk (former autonomous districts of the Taymyr and of the Evenki); the Sakha Republic; the Province of Kamchatka; the Province of Magadan; and the Province of Sakhalin. Taking also into account the dimensions of current migration trends affecting the Province of Murmansk, and the shortage of scientific literature investigating these trends, we evaluated this Province to be a valid and profitable environment where to set our research.

After choosing the Province of Murmansk as the context of our research, we proceeded to gather information about the various communities located in the Province, in order to select two communities where to administer our survey. Besides the information that we managed to collect through the internet, the selection of our study cases was also inspired by a series of talks with Dr. Paul Fryer, lecturer at the department of Geography at the University of Joensuu (Finland), who conducted numerous studies in the regions of Northwestern Russia. With the information at our disposal, it was decided to carry out our investigations in the city of Kirovsk, and in the town of Nikel.

The decision to set out investigations in Kirovsk and in Nikel is motivated by different reasons. In first place, the city of Kirovsk and the settlement of Nikel perfectly fit with the “archetype” of contemporary Russian Arctic communities. Namely, Kirovsk and Nikel display certain salient features, such as an economy based on mineral extraction and refinement, a Russian ethnic majority, and rigid climatic and environmental conditions, which can be recognized in many other communities located in the Russian Arctic. Most important, Kirovsk and Nikel represent an optimal study location in order to investigate migrating phenomena in the Russian Arctic, as both experienced a considerable loss of population during the 1990s and 2000s. In Kirovsk, the population decreased from 43.500 inhabitants in 1989, to 29.800 in 2010 (-31.5%); in the same period, Nikel population declined from 21,800 to 14,800 inhabitants (-32.1%). The progressive depopulation affecting Kirovsk and Nikel in the post-Soviet period is well portrayed in numerous pictures available on the internet, which show abandoned residential blocks, rotting infrastructures, and obsolete industrial complexes.

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<sup>2</sup> The “Closed Administrative-Territorial Formations” (*ZATO, Zakrytye Administrativno-Territorial'nye Obrazovaniya*) are special districts located in the Russian Federation, in which the access of both national and foreigner visitors is restricted. The special regime characterizing the ZATOs refers to the presence of strategic military, nuclear, or scientific compounds. As of 2010, the Province of Murmansk hosts seven ZATOs: Vidyaevoy, Zaozersk, Ostrovnoy, Polyarny, Severomorsk, Gadzhievoy, and Snezhnogorsk.



Apart from the opportunity of obtaining information on Russian Arctic communities in general, the selection of our study cases is also supported by practical and methodological considerations. From a practical point of view, both Kirovsk and Nikel can be reached in a few hours from the provincial capital, Murmansk, and can be visited by foreigners without any special restriction. Furthermore, the dimensions of Kirovsk and Nikel are suitable for the administration of a survey, which may require the participation of hundreds of interviewees, and which might be affected by high rates of non-response. From a conceptual point of view, the different dimensions of our study cases, with Kirovsk being twice more populated than Nikel, enable us to propose a comparison between small-size communities and medium-size communities. In our expectations, this comparison shall provide useful insights concerning the relations between community size on one hand, and propensity to move, satisfaction with living conditions, social capital, and emotional attachment on the other hand. Moreover, the comparison allows us to better circumstantiate and evaluate the information that we obtain from the single study cases, and to control the role played by the specific characteristics of the single communities.

## 2.2 THE PROVINCE OF MURMANSK

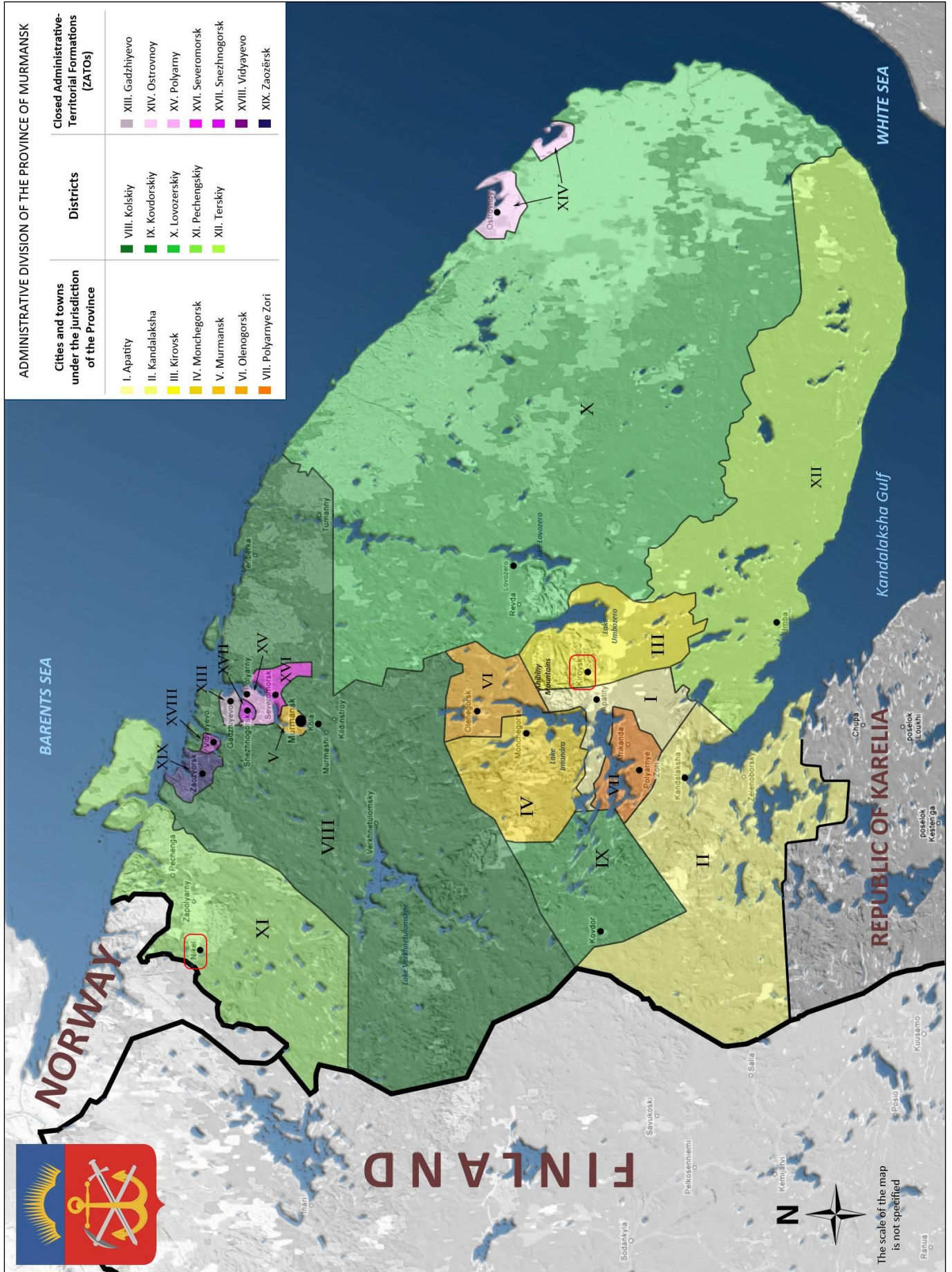
The Province of Murmansk (*Murmanskaya Oblast*) roughly coincides with the Kola Peninsula, located in the north-western edge of the Russian Federation, and covers an area of 144,900Km<sup>2</sup>, most of which is situated beyond the Arctic Circle. It borders with Norway and Finland on the west, the Republic of Karelia on the south-west, and is washed by the waters of the Barents Sea and the White Sea on all other sides (see map). Due to its northerly location, climatic and environmental conditions are rather harsh, especially in the inland, while the coasts are made milder by the effect of warm Atlantic currents. Summers are long and fresh, and beyond the Arctic Circle the sun remains above the horizon for days or weeks. On the contrary, winters are long and rigid, characterized by average temperatures below 0° C for several months and prolonged periods of darkness. Precipitations are higher during the summer months while winters are rather dry, although strong winds and blizzards are frequent (see table 2.1). The prevalent landscape is the taiga, which shades into the Arctic tundra in the northernmost areas. The monotony of the landscape is interrupted in the central and western districts by the presence of numerous lakes, the main of which is the Imandra, and modest reliefs, such as the Khibiny and the Lovozero Tundra, peaking at 1,120 m of altitude.

**Table 2.1 – Climate in the city of Murmansk**

|                    | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP  | OCT   | NOV   | DEC   |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|
| Record high (°C)   | 7.0   | 6.6   | 9.0   | 16.9  | 27.2  | 30.8  | 32.9  | 29.1  | 24.2 | 15.0  | 9.6   | 7.2   |
| Avg. high (°C)     | -7.3  | -6.8  | -2.4  | 1.8   | 7.3   | 13.7  | 17.2  | 14.7  | 9.5  | 2.9   | -2.9  | -5.7  |
| Avg. low (°C)      | -13.9 | -13.0 | -8.6  | -4.4  | 0.8   | 5.6   | 9.0   | 7.8   | 4.3  | -1.1  | -8.0  | -11.8 |
| Record low (°C)    | -39.4 | -38.6 | -32.6 | -21.7 | -10.4 | -2.5  | 1.7   | -2.0  | -5.4 | -21.2 | -30.5 | -35.0 |
| Precipitation (mm) | 28    | 22    | 20    | 23    | 31    | 57    | 65    | 68    | 52   | 45    | 41    | 34    |
| Rainy days         | 0     | 0     | 0     | 3     | 9     | 17    | 20    | 21    | 19   | 8     | 1     | 0     |
| Snowy days         | 23    | 21    | 20    | 14    | 7     | 0     | 0     | 0     | 0    | 9     | 19    | 24    |
| Sunshine hours     | 0     | 33.9  | 120.9 | 183.0 | 192.2 | 228.0 | 235.6 | 155.0 | 90.0 | 46.5  | 6.0   | 0     |

Source: Pagoda.ru.net (2011); Hong Kong Observatory (2011)

Figure 2.1 - Map of the Province of Murmansk. The communities of Kirovsk and Nikel are highlighted in red.



Because of the environmental conditions of the area and its remoteness, a permanent settlement of the Province of Murmansk did not begin until the 12<sup>th</sup> century, when the Russians of Novgorod and the Norwegians were racing for the control of the region. At that time, the puny indigenous population of the Kola Peninsula consisted of nomadic Sami tribes living on reindeers herding. In the following centuries, territorial disputes were finally resolved in favor of the Russians, who started the colonization of the Peninsula and founded the first permanent settlements, Umba and Varzuga, in 1466. Albeit a continuous immigration from southern regions of Russia and the foundation of new colonies on the northern coast, the Kola Peninsula remained scarcely populated until the 20<sup>th</sup> century, when the region assumed an increasing strategic and economic role.

In 1916, the city of Murmansk<sup>3</sup> was founded to function as a year-round, ice-free port on the shores of the Kola Bay, providing secure connections between the Tsarist Empire and the western allies during the Great War. In 1920, following the Revolution and Civil War, the Bolsheviks eventually rose to power in the Province. At the end of the decade, the Stalinist regime began ambitious projects to start mineral and metallurgical activities, in concomitance of the vast mineral deposits of apatite, alumina and iron ore of the central districts. In order to accomplish their plans, the Stalinist regime carried out a campaign of immigration and urbanization of the Province, causing the population to increase from 32,000 units in 1926, to 567,700 in 1959. Such an increase was mainly achieved through campaigns of deportations in labor camps, which lasted with alternating intensity until the death of Stalin in 1953.

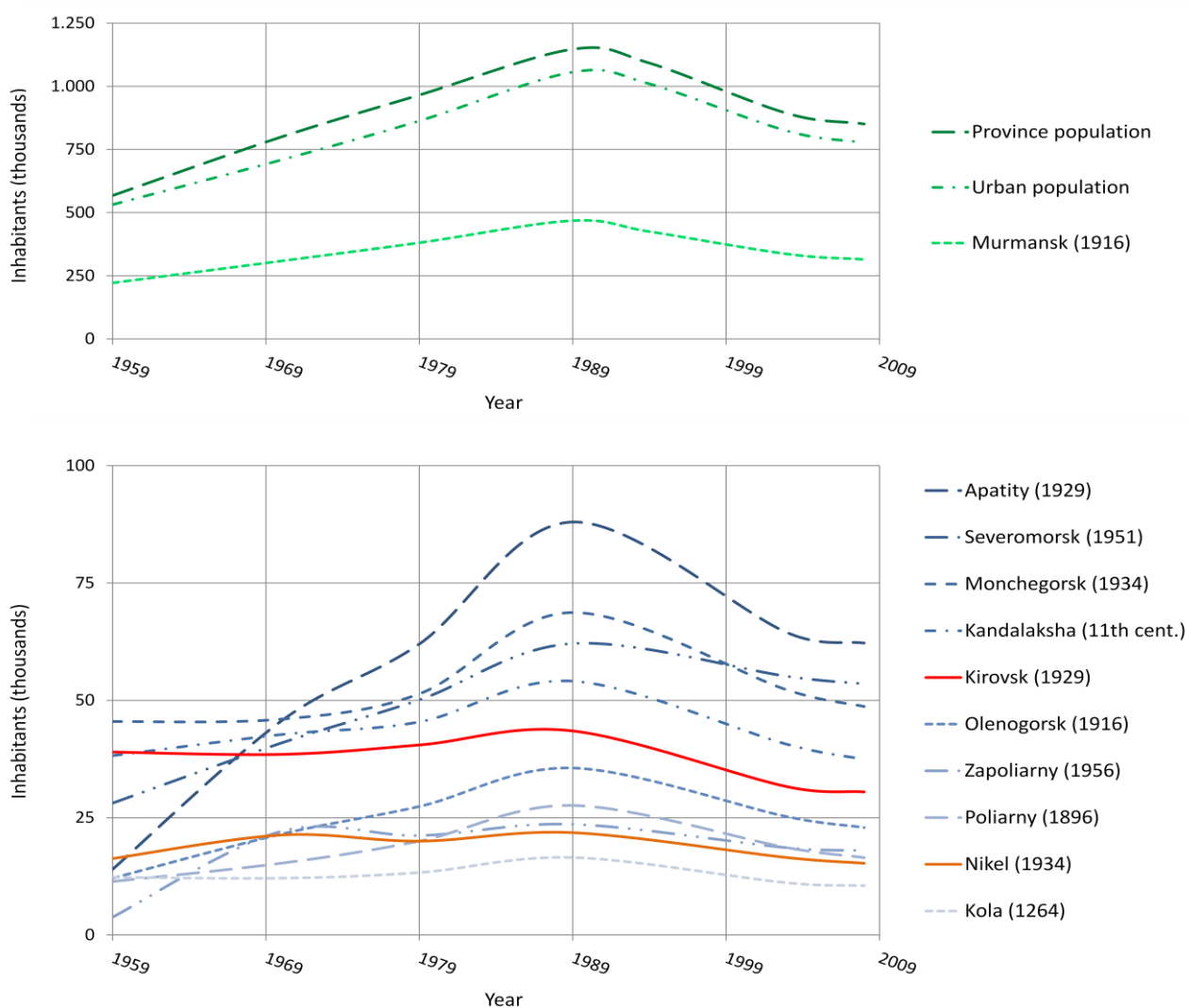
As a result of the campaign of resettlement imposed by the Soviet regime, a variety of people from diverse social and cultural backgrounds came to live together in the new cities and towns that were founded near mines and metallurgic facilities like Kirovsk, Apatity, and Monchegorsk. At the same time, Murmansk grew as the Russian main port on the Arctic Ocean, as well as the economic and administrative centre of the Province. The Russians remained the main ethnic group in most communities of the Province; however, sensible minorities were introduced, mostly Ukrainians, Byelorussians and Tatars. A part of the newly immigrated population consisted of “pioneers” that voluntarily enrolled in the edification of new communities, inspired by the Leninist doctrine. A majority, however, were political prisoners and members of previous aristocracy and bourgeois, many from Sankt Petersburg, who were forced to leave their homelands and resettle in peripheral regions during Stalinist purges. At the same time, the Sami were forced to abandon their traditional life styles and resettle in the town of Lovozero and other villages.

During World War II, the Province of Murmansk was the stage of bitter confrontations between the Red Army on one side, and Nazi and Finnish forces on the other. At the end of the conflict, the district of Pechenga and its rich deposits of nickel were ceded by Finland to the Soviet Union, and thus incorporated into the Province of Murmansk. The presence of huge mineral deposits in the subsoil, as well as the Province’s strategic location during the Cold War, led to the creation of new naval bases and armament factories. In order to host the military and technical personnel along with their families, several cities were founded along the northern coast, like Severomorsk and Zaozersk. In the postwar period, the exploitation of mineral resources increased, attracting new immigration from other regions of the Soviet Union. The availability of new employment opportunities and higher living standards, along with a strict control over internal migrations imposed by Soviet authorities, led to a steady growth of the population, reaching a maximum of 1,155,000 people in 1990, 92% of which were living in cities. Figure 2.2 in the next page shows the demographic trend of the Province of Murmansk and selected communities from 1959 to our days.

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<sup>3</sup> The city of Murmansk was founded on October 4<sup>th</sup>, 1916 with the name of Romanov-na-Murmane, after the Russian reigning dynasty. However, the Tsarist power was dissolved during the February Revolution, only three months after the foundation of the city, and the city’s name was eventually changed to Murmansk.

**Figure 2.2 - Population trends in the Province of Murmansk and selected communities.**



|                                 | 1959             | 1970             | 1979             | 1989                 | 2003             | 2010             | <i>Decline<br/>1989-2010</i> |
|---------------------------------|------------------|------------------|------------------|----------------------|------------------|------------------|------------------------------|
| Province of Murmansk<br>(urban) | 567.7<br>(531.6) | 799.5<br>(708.6) | 965.5<br>(863.3) | 1,146.8<br>(1,056.3) | 892.5<br>(823.2) | 836.7<br>(763.1) | -27.1%<br>(-27.8%)           |
| Murmansk                        | 221.9            | 308.6            | 380.8            | 468.0                | 336.1            | 309.4            | -27.1%                       |
| Apatity                         | 14.0             | 45.6             | 62.0             | 88.0                 | 64.4             | 61.3             | -30.4%                       |
| Severomorsk                     | 28.1             | 40.9             | 50.1             | 62.1                 | 55.1             | 53.3             | -14.2%                       |
| Monchegorsk                     | 45.5             | 46.0             | 51.4             | 68.7                 | 52.2             | 47.6             | -30.7%                       |
| Kandalaksha                     | 38.2             | 42.7             | 45.4             | 54.1                 | 40.6             | 36.1             | -33.3%                       |
| <b>Kirovsk</b>                  | <b>39.0</b>      | <b>38.5</b>      | <b>40.5</b>      | <b>43.5</b>          | <b>31.6</b>      | <b>29.8</b>      | <b>-32.0%</b>                |
| Olenogorsk                      | 12.1             | 21.5             | 27.4             | 35.6                 | 25.2             | 22.0             | -38.0%                       |
| Zapoliarny                      | 3.8              | 22.1             | 21.2             | 23.6                 | 18.6             | 17.4             | -26.7%                       |
| <b>Nikel</b>                    | <b>16.3</b>      | <b>21.3</b>      | <b>20.0</b>      | <b>21.8</b>          | <b>16.5</b>      | <b>12.8</b>      | <b>-41.3%</b>                |
| Kola                            | 12.3             | 12.1             | 13.3             | 16.5                 | 11.1             | 10.3             | -37.6%                       |

**Notes:** the date of foundation is in parentheses. The number of inhabitants is expressed in thousands.  
Source: FSSS (2010)

In the span of seventy years, the Soviets were able to impress tremendous transformations into the physical and human landscape of the Province. At the end of the Soviet era, half of the population of the Province was concentrated in the city of Murmansk, which still remains nowadays the biggest city in the world above the Arctic Circle (468,000 inhabitants in 1989, 309,400 in 2010). The remaining population was hosted in the mono-functional settlements located near the mineral deposits of the Khibiny, and in concomitance of military bases in the Pechenga district and along the shores of the Kola Bay. With the exception of a few villages scattered on the coast, the eastern part of the Province and the innermost regions remained mostly uninhabited. The migration and urbanization policies enacted by Soviet authorities favored the mitigation and amalgamation of the original socio-cultural backgrounds of the immigrated population, as well as the peaceful cohabitation of people with different ethnic and religious backgrounds. At the same time, however, the tight control exercised by authorities on housing allocations and on migration did not allow the free movement of the population. According to Round (2005a), these policies led to an unnatural and unbalanced growth of the communities located in the Russian Arctic, determining a situation of overpopulation.

The demographic and economic expansion of the Province of Murmansk came to a halt and suddenly reversed in the early 1990s, in concomitance with the transition from a communist to a market system. The population of the Province crumbled from 1,146,800 inhabitants in 1989 to 892,500 in 2003, a decline of 22.2% in 14 years. As of 2010, the Province counted 836,700 inhabitants, an additional decline of 14.8% in 7 years. On average, between 1989 and 2010, the Province lost about 15,000 people each year, although the loss of population was stronger in the 1990s than in the 2000s. As we can appreciate from figure 2.2, the loss of population appears to be slightly stronger in urban settlements than in rural settlements, and to assume analogous proportions across communities of different dimensions and located in different areas. Specifically, the loss of population in most communities of the Province of Murmansk between 1989 and 2010 is contained between -27% (Murmansk, Zapoliarny) and -41% (Nikel). The only exception is Severomorsk, where the loss of population is sensibly lower than in other communities (-14%). This exception could be ascribed to the fact that Severomorsk, together with other communities located in the Province, such as Zaozersk and Polyarny, is defined as a closed city (ZATO) and enjoy a special administrative status, in virtue of the military and nuclear facilities located there. In fact, a majority of the local population is composed of military and technical personnel and respective families, who reside in these communities on a temporary basis.

The heavy loss of population affecting the Province of Murmansk and other regions of the Russian Arctic since the early 1990s cannot be understood without referring to the dramatic transformations that took place in the Russian Federation after the fall of the communist regime. In this period, the interruption and downscaling of many production activities throughout the country determined a contraction in the demand of mineral resources and industrial goods, which are the main voices of export of Russian Arctic regions. As a consequence, numerous jobs became redundant, while salaries and pensions were curtailed or suspended for months. Poverty became widespread, and food and other primary goods were missing in the shops. At the same time, local and national governments had to face a profound financial crisis: hospitals lacked of medicines and personnel; transportation networks and infrastructures were neglected; schools were underfunded; public dwellings were left to decay and often abandoned. As in other parts of the former Soviet Union, poor economic and material conditions were accompanied by an array of social issues, such as the increase of criminality and of alcohol and drugs abuse, and the increase of the number of divorces. A compendium of social and economic indicators describing the socio-economic development of the Province of Murmansk between 1990 and 2005 is offered in table 2.2.

**Table 2.2 - Socio-economic development of the Province of Murmansk between 1990 and 2005.**

|  |   | 1990          | 1995          | 2000          | 2005          |
|--|---|---------------|---------------|---------------|---------------|
| SOCIO-DEMOGRAPHIC INDICATORS<br>(excluded migration) | Natural population growth<br>(per 1,000 people)                           | 5.4           | -3.2          | -3.0          | -3.6          |
|  | Births<br>(per 1,000 people)  | 11.2          | 8.2           | 8.6           | 9.8           |
|  | Deaths<br>(per 1,000 people)  | 5.8           | 11.4          | 11.6          | 13.4          |
|  | Life expectancy: males / females<br>(years)                               | 65.65 / 74.14 | 57.05 / 69.76 | 58.54 / 70.96 | 57.72 / 70.32 |
|  | Number of females<br>(per 1,000 males)                                    | 978           | 1,009         | 1,039         | 1,064         |
|  | Population younger than working age <sup>a</sup><br>(%)                   | 26.1          | 22.6          | 18.9          | 16.1          |
|  | Population older than working age <sup>a</sup><br>(%)                     | 9.4           | 12.1          | 13.2          | 14.0          |
|  | Divorces<br>(per 1000 marriages)  | 568           | 833           | 907           | 776           |
|  | Crimes recorded<br>(thousands)  | 12.4          | 15.0          | 16.9          | 18.3          |
| ECONOMIC INDICATORS                                  | Number of employed in the economy<br>(thousands)                          | 567.4         | 472.5         | 432.9         | 445.8         |
|  | Level of unemployment<br>(%)  | -             | 12.6          | 13.4          | 8.8           |
|  | Food consumption<br>(Kg per person per year)                              | 67            | 39            | 32            | 51            |
|  | Average floor space<br>(m <sup>2</sup> per person)                        | 14.6          | 18.8          | 21.8          | 22.6          |
|  | Commission of residential buildings<br>(1,000 m <sup>2</sup> floor space) | 579           | 79            | 28            | 8             |
|  | Main voices of production output:   |               |               |               |               |
|  | Iron ore (million T)  | 11.7          | 7.0           | 7.1           | 9.8           |
|  | Nonferrous building materials (million m <sup>3</sup> )                   | 7.4           | 2.8           | 2.8           | 2.9           |
|  | Apatite concentrate (millions T)  | 8.1           | 3.3           | 4.2           | 4.2           |
|  | Meat (thousand T)   | 18.2          | 4.8           | 5.7           | 2.7           |
|  | Fish: both catch and processed (thousand T)                               | 2,123         | 789           | 1,038         | 1,118         |
| Building bricks (millions)                           | 129   | 19.8          | 4.9           | 2.6           |               |
| Electricity (billion kw/h)                           | 19.6  | 16.5          | 17.4          | 17.2          |               |
| PUBLIC SERVICES                                      | Hospital beds<br>(per 10,000 people)                                      | 128           | 117           | 125           | 143           |
|  | Hospitals and polyclinics<br>(total)                                      | 54            | 52            | 49            | 45            |
|  | Daytime education establishments<br>(total)                               | 184           | 170           | 138           | 91            |
|  | Commissioning of healthcare facilities<br>(beds)                          | 1,145         | 380           | 46            | 290           |
|  | Commissioning of education facilities<br>(pupils places)                  | 9,190         | 0             | 0             | 585           |

**Notes:** <sup>a</sup>: working age is 16-54 for women and 16-59 for men.

**Source:** FSSS (2010); Arcticstat.org (2011).

As we can appreciate from the table, the crisis of the early 1990s had a remarkable impact on the socio-demographic development of the Province of Murmansk in the following years. Namely, the indicators taken into account suggest that the economic crisis reached its apex between 1990 and 1995, and it was only after the year 2000 that the situation has begun to stabilize and to slightly and slowly reverse; as of 2005, however, socio-demographic and economic indicators appear to be still far below the levels achieved during the Soviet Union. Pertaining to this, it is staggering to notice the decline of the natural population growth, due to the sharp decrease of the number of births and simultaneous increase of the number of deaths. Also, the decline of the life expectancy is symptomatic of the dramatic worsening of living conditions experienced by the local population during the first-half of the 1990s. In the arch of five years, the life expectancy decreased of 8 years among males, and of 4 years among females (Arcticstat.org, 2011). According to Chen *et al.* (1996), this decline is only marginally caused by the progressive deterioration of the healthcare system. Rather, as suggested by several authors (Shkolnikov & Mesle, 1996; Tremli, 1997; McKee, 1999; Anderson, 2002), the disparity between the two genders should be attributed to the increase of alcohol consumption and violence, especially amongst males, which were prompted by the dismissal of Gorbachëv anti-alcohol campaign in 1988.

The loss of population experienced by the Province of Murmansk in the last two decades is determined only in part by the negative natural growth of the population. In fact, as documented in tables 2.3 and 2.4, the loss of population can be principally attributed to the consistent outmigration from the Province to other regions of the Russian Federation. Specifically, the data in table 2.3 show that the phenomenon of outmigration had already begun in 1990, suggesting that the social and economic issues affecting the local population were already present at the eve of the political transformations occurred in 1991. As in most of the other regions of the Russian Arctic, the phenomenon of outmigration appears to have reached its peak during the first half of the 1990s, and to have substantially decreased after the year 2000. As of 2009, outmigration was still substantial in most regions, especially among those located in the Far East.

**Table 2.3 - Net migration in the Russian Arctic regions (per 1,000 people, per year).**

|                         | 1990  | 1995   | 2000  | 2005  | 2006  | 2007  | 2008  | 2009  |
|-------------------------|-------|--------|-------|-------|-------|-------|-------|-------|
| Province of Murmansk    | -7.7  | -25.0  | -16.5 | -5.8  | -6.0  | -5.7  | -8.8  | -5.7  |
| Republic of Karelia     | -3.5  | -1.6   | -1.3  | +0.2  | +0.6  | +1.7  | +0.4  | -0.8  |
| Republic of Komi        | -13.4 | -17.6  | -10.8 | -7.4  | -7.9  | -5.8  | -9.4  | -7.4  |
| Province of Arkhangelsk | -7.8  | -8.8   | -7.8  | -3.9  | -3.8  | -3.6  | -5.1  | -4.0  |
| Nenets A.D.             | -16.9 | -27.1  | -6.2  | -1.4  | -1.8  | -1.6  | -3.6  | 1.7   |
| Yamalo-Nenetski A.D.    | -14.3 | +12.0  | -2.2  | +6.1  | +7.3  | -1.1  | -7.4  | -4.4  |
| Khanty-Mansiisk A.D.    | -2.6  | +4.6   | +12.9 | -0.3  | -0.1  | +3.4  | +1.1  | +3.2  |
| Republic of Sahka       | -6.0  | -21.9  | -9.2  | -4.9  | -4.7  | -4.9  | -7.9  | -7.4  |
| Province of Magadan     | -22.9 | -102.4 | -38.4 | -15.4 | -15.4 | -13.9 | -14.4 | -9.4  |
| Chuckchi A.D.           | -35.5 | -126.9 | -70.4 | -7.5  | -4.5  | -8.5  | -17.5 | -20.1 |

Source: Arcticstat.org (2011).

**Table 2.4 - Departures and arrivals in the Province of Murmansk by place of origin and destination.**

|                     | 2000       |          | 2005       |          | 2010       |          |
|---------------------|------------|----------|------------|----------|------------|----------|
|                     | departures | arrivals | departures | arrivals | departures | arrivals |
| Total               | 23,361     | 13,435   | 20,830     | 15,653   | 22,576     | 15,863   |
| Within Russia       | 20,786     | 10,913   | 19,661     | 14,535   | 21,893     | 13,661   |
| Within the region   | 6,131      |          | 5,756      |          | 6,438      |          |
| Outside the region  | 14,655     | 4,782    | 13,905     | 8,779    | 15,455     | 7,223    |
| Outside Russia      | 2,575      | 2,522    | 1,169      | 1,118    | 683        | 2,202    |
| Within the ex-USSR  | 2,248      | 2,522    | 873        | 1,074    | 503        | 2,162    |
| Outside the ex-USSR | 327        | 0        | 296        | 44       | 180        | 40       |

Source: Arcticstat.org (2011); FSSS (2011)

As we can appreciate from the data in table 2.4, the population migrating from the Province of Murmansk between 2000 and 2010 was primarily directed towards other regions in the Russian Federation (between 62% and 69% of total departures, depending on the year). According to Vuorinen (2008), most of the flux was directed towards metropolitan regions, such as Moscow and Sankt Petersburg. At the same time, migration within the Province of Murmansk is rather contained (between 26% and 29% of total departures); specifically, most of the intraregional migration is likely to occur between smaller communities and the provincial capital, Murmansk. The migration towards other countries appears to be in progressive decline (11% in 2000, 3% in 2010), and to be mostly directed towards other countries of the former USSR. As suggested by the data in table 2.5, the migration towards other countries of the former USSR was likely to be more intense during the 1990s. In fact, many foreigners who had previously migrated to the Province of Murmansk returned to the country of origin when social and economic conditions began to worsen. Accordingly, the share of ethnic Russians on the population of the Province, which had been steadily decreasing in the last decades of the Soviet era, increased from 82.9% to 85.3% between 1989 and 2002, while the share of minorities, mostly Ukrainians and Byelorussians, began to decline.

**Table 2.5 – Ethnic composition of the Province of Murmansk between 1970 and 2002 (percentage).**

|                     | 1970  | 1979  | 1989  | 2002              |
|---------------------|-------|-------|-------|-------------------|
| <b>Russian</b>      | 84.59 | 83.81 | 82.92 | 85.25             |
| <b>Ukrainian</b>    | 7.04  | 8.30  | 9.02  | 6.37              |
| <b>Byelorussian</b> | 3.68  | 3.51  | 3.33  | 2.28              |
| <b>Tatar</b>        | 0.94  | 0.97  | 0.98  | 0.89              |
| <b>Azerbaijani</b>  | 0.04  | 0.09  | 0.23  | 0.52              |
| <b>Others</b>       | 3.71  | 3.32  | 3.52  | 4.69 <sup>a</sup> |

Note: as of 2002, other notable minorities included: Chuvash (0.31%); Mordvins (0.28%); Karelians (0.25%); Komi (0.24%); Moldovans (0.22%); Armenians (0.22%); Sami (0.20%); Germans (0.14%); Bashkirs (0.13%); Polish (0.13%); Mari (0.12%) and Udmurts (0.10%).

Source: Mojgorod.ru (2011).



## 2.3 KIROVSK

The City of Kirovsk, 29,800 inhabitants in 2010, is the administrative centre of the homonymous urban district, in the central sector of the Province of Murmansk. It is located about 120 km north of the Arctic Circle, on a terrace in the southern slopes of the Khibiny Mountains, at 368 m of altitude. On its northern edge, the city is lapped by the Lake Bolshoy Vud'yavr, locked in a majestic amphitheater formed by the rocky peaks of the Khibiny, such as the Yudychvumchorr (1,201 m) and the Kukisvumchorr (1,141 m). On the south, a flat taiga stretches towards the horizon occasionally interrupted by lakes and marshes. Due to its location and morphology, the district has a rather rigid climate, with temperatures occasionally reaching -40° C in the winter, and -5° C in the summer. The sun does not rise between the 14<sup>th</sup> of December and the 4<sup>th</sup> of January, and does not set between the 27<sup>th</sup> of May and the 16<sup>th</sup> of July.

The first permanent settlement in the area dates back to 1929, when huge deposits of apatite and nepheline were discovered in the Khibiny Mountains. In that year, the city of Khibinogorsk was founded under the directives of Soviet leader Sergei Mironovich Kirov, in order to host the population working in the mines and related industries located in the vicinity. Part of the newly immigrated population consisted of “pioneers”, i.e. people who voluntarily moved to the most remote outposts in Northern Russia and in Siberia, some inspired by Leninist doctrines, others by the higher salaries and benefits offered in Arctic regions. Beside the pioneers, a considerable part of the population consisted of political prisoners that were deported to Kirovsk and Apatity during the Stalinist regime in order to provide the manpower needed for construction works and mineral activities; however, no statistical data could be found. The deportation of prisoner largely decreased after the death of Stalin in 1953; nonetheless, many of the deported were never allowed to come back to their homeland, and gradually merged with the rest of the population.

During World War II, the city was repeatedly under German bombing, and the male population left the work in the mines for the front. In the following decades, the profitability of mineral exploitation and the control over migration fluxes enabled a constant growth of Kirovsk population, reaching a maximum of 46,000 in 1967. In the meanwhile, the city of Apatity was growing 18 km west of Kirovsk to serve as the city's terminal on the main railway line connecting Sankt Petersburg to Murmansk. In the ark of a few decades, Apatity grew as a regional multifunctional centre, thanks to its metallurgical and chemical facilities and to the establishment of academic and higher education institutions, becoming the second city of the Province (88,000 in 1988). Thanks to the short commuting time between the two cities, the people of Kirovsk relies since then on services and facilities located in Apatity, while many people of Apatity are employed in Kirovsk. At the end of 1960s, in correspondence with the increasing regional role and demographic growth of Apatity, the population of Kirovsk ceased to augment and began fluctuating around 40,000 inhabitants: in 1989, Kirovsk counted 43,500 inhabitants (FSSS, 2011).

The events that accompanied the fall of the Soviet Union in 1991 had profound repercussions on the socio-demographic and economic development of Kirovsk in the following decades. The reorganization of productive activities and the economic crisis affecting the Russian Federation in the early 1990s led to a substantial downscaling of mineral activities and related sectors, which are at the base of Kirovsk economy. For instance, the provincial output of apatite decreased from 8.8 million tons in 1990, to 3.3 in 1995. As in other parts of the Province, many jobs became redundant, unemployment became widespread, and salaries and pensions were cut and suspended for large periods of time, causing misery among the local inhabitants. Simultaneously, the population of Kirovsk began to rapidly shrink, as a consequence of negative natural growth as well as of significant outmigration. Namely, the number of inhabitants decreased from 43,500 in 1989, to 35,400 in 1998 (-18.6%), to 29,800 in 2010 (-15.8%).

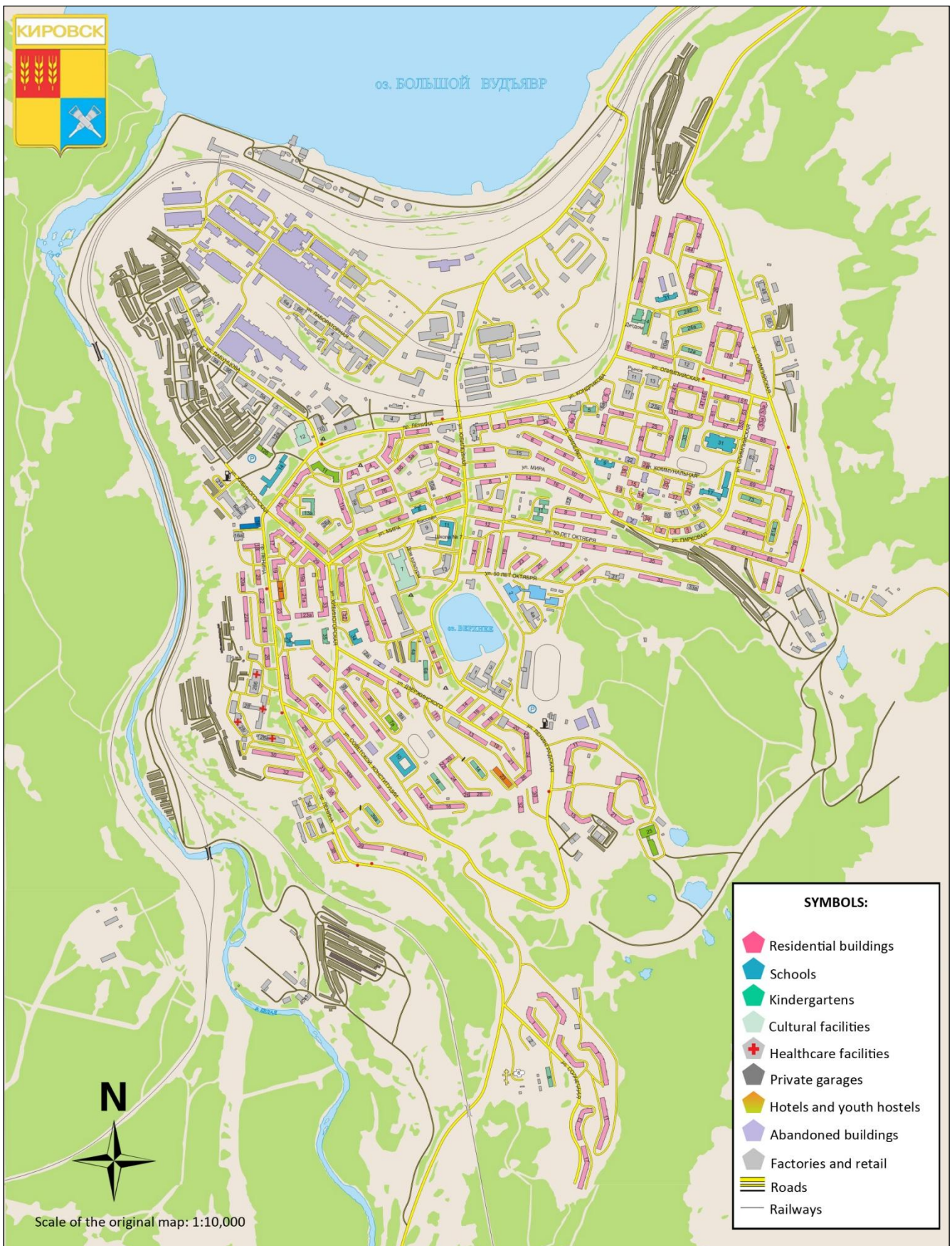
**Figure 2.3** – Panorama of Kirovsk from the western slope of the Ajkuaivenchorr.



Kirovsk city centre is located between Lenina Street and Lake Verkhnee, where main public and administrative buildings are located along with major retails, hotels, and recreational centers. The city centre developed during the 1930s and 1940s according to the monumental and pompous projects of architects and urban planners of the Stalinist era. Streets are usually wide and sided with tree lines, open courtyards and green spaces are frequent, and buildings are decorated with neoclassical elements such as columns and friezes. Amongst them, the most relevant are the City Council (*Gorodskoy Soviet*), the Library, and the buildings facing Lenina Street, many of which are being renovated and plastered with lively colors. New constructions were added in the city centre along the decades, such as the Clock tower (called *Big Ben* by the locals) and the *Bolshoy Vud'yavr* retail and recreational centre; however, their aesthetic value is rather dubious and conflicting with the surrounding architectures. Besides these, the statues of Lenin and of Kirovsk are still standing intact on Lenina Street, twenty years after the fall of the Soviet Union.

The monumental Palace of Culture (*Dom Kultury*) that dominates the city centre from above is reachable by elegant stairs connecting it to Lenina Square. The Palace offers various cultural and recreational activities, and occasionally hosts ceremonies and events in its ample auditorium. South of the city centre, on the opposite shore of the small Lake Verkhnee, there are the headquarters of Joint Stock company (JSC) Apatit local branch, which manages all extracting activities in Kirovsk area and employs many of the city inhabitants. Nearby, a swimming pool and the Apatit sport complex are located, along with hockey and football pitches. On the west, the woods and the slopes at the feet of Mount Ajkuaivenchorr are haunted for cross-country and downhill skiing by locals and tourists. The facilities are obsolete and poorly maintained due to lack of investments, and comprehend several ski lifts, sky jumps, and the only chairlift in the Province of Murmansk.

Figure 2.4 – Map of Kirovsk



Source: Hibiny.ru (2011). Author of the original map (in Russian): A.V. Kuznetsov (2007).

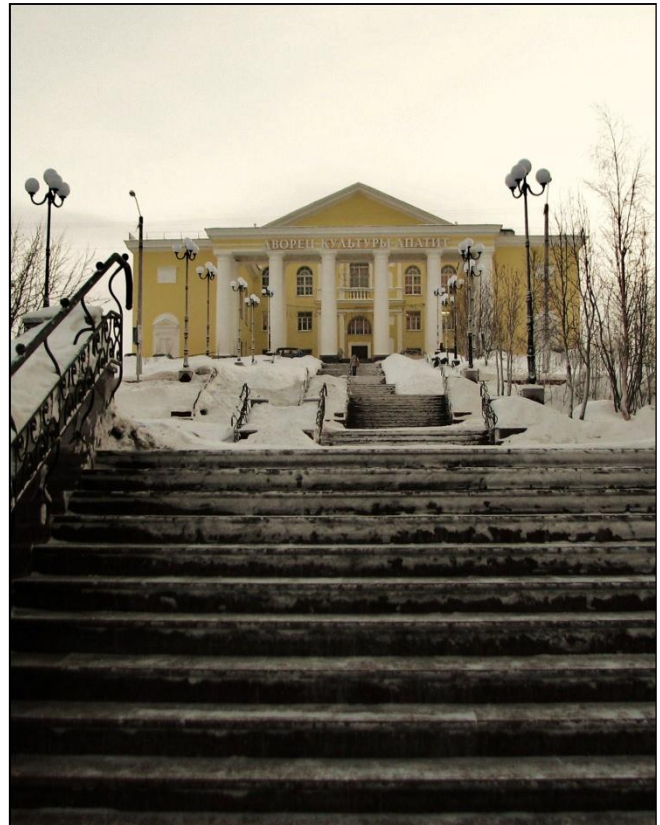
**Figure 2.5** – *View of Kirovsk city centre from the Palace of Culture.*



**Figure 2.6** – *Building facing Lenina Square.*



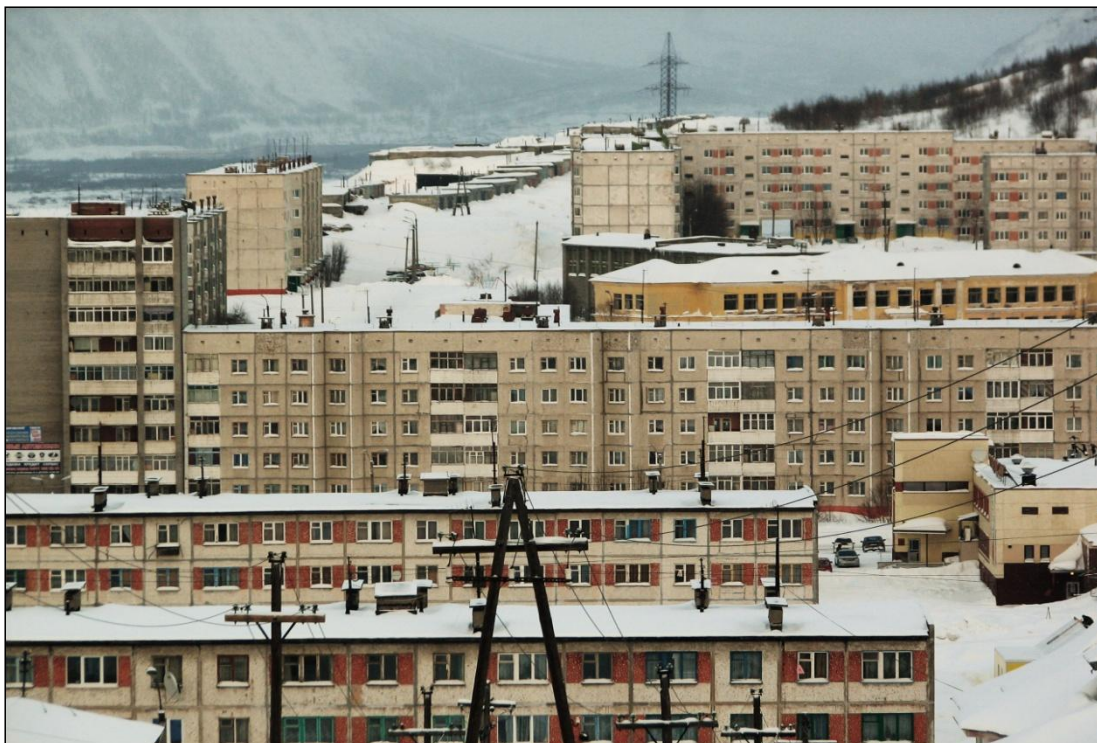
**Figure 2.7** – *The Palace of Culture.*



Notwithstanding the majestic landscape offered by the Khibiny and a few architectural distinctions in the city centre, Kirovsk appears today as a rather grey, monotonous and depressing city. This is mainly due to the aesthetical appearance of the housing stock, which is almost entirely composed by residential blocks built in the Soviet times; private and semi-detached houses are almost absent. Also, as a consequence of recent migration, there are numerous flats and blocks which lay abandoned, giving a certain dreary atmosphere to some spots. The data in table 2.2 suggest that not all the flats were abandoned: in fact, the construction of new dwellings between 1990 and 2005 is close to null, but the average floor space per person has increased from 14.6 to 22.6 m<sup>2</sup> per person. In the city centre, residential blocks date back to the Stalinist era: buildings are usually 4 to 5 stairs high and many have undergone recent restructuration, apartments are wide and comfortable. Around the city centre, the blocks were constructed during the Khrushchëv era between 1950s and 60s, the so-called *Khrushchëvki*: the blocks are made of bricks and are usually 5 stores high; the apartments are small, cold and ill planned; the buildings are decaying and some of them abandoned. In the periphery, residential estate dates back to the 1970s and 1980s: the blocks are made of concrete and are poorly maintained, and they all have the same shape and color; apartments are narrow, but the organization of interiors and utilities are better than in the other housing types.

Public buildings (hospitals, post offices, schools) appear to be in rather decent conditions: interiors are generally clean and well kept, often embellished with ornamental vegetation; however, the outward appearance of public buildings is usually neglected and in need of renovation. Much worse are the conditions of urban furniture and open spaces, like squares, parks and green areas, which are often littered with garbage, and strewn with the excrements of the many stray dogs wandering in the city. Urban streets and extra-urban roads are very bumpy because of climatic agents and poor upkeep, and they can be very dangerous for both drivers and pedestrians, especially during winter months, when roads and sidewalks are covered by ice and snow. Walking on the sidewalks is also made unpleasant by the smog produced by the outdated car fleet, although traffic is quite low and concentrated along the central avenues.

**Figure 2.8** – Residential buildings in Kirovsk (*Olimpiskaya Street*).



**Figure 2.9** – *An abandoned residential block in Kirovsk.*



Located north of the city centre, between Lenina Street and Lake Bolshoy Vud'yavr, there is a wide area which host several industrial facilities and warehouses, and a plant which provides heating to the entire city. The plant is the cause of heavy pollution, for it generates thick clouds of smog that alternatively surge on the Lake Bolshoy Vud'yavr and the city centre, depending on the direction of the wind. Most of the constructions in this area have been dismantled and falling apart for decades: one of them is the spacious passenger station, which was built to serve the traffic to and from Apatity, but never put into service. The railway line passing the city is currently used to transport the minerals from the mines to the metallurgical facilities in Apatity, and the fuel needed for urban and industrial consumption.

**Figure 2.10** – *Kirovsk train station lying in ruins.*



**Figure 2.11** – *Pollution surging from the industrial area located north of Kirovsk city centre.*



Infrastructure maintenance and public transportation have been sharply reduced in the last two decades. The city is served by few local roads and by a railway connecting Kirovsk to other communities in the region, such as Apatity, Lovozero and Uмба. Most of passenger and freight traffics to and from Kirovsk are directed through Apatity and connected daily by the train *Arktika* to Murmansk (190 km, 4 hours) and Sankt Petersburg (880 km, 23 hours). Also, Kirovsk is connected to Murmansk and Sankt Petersburg via Apatity by the “Kola Motorway” (M18). Apatity is also served by the Khibiny Airport, with flights from and to Moscow and Sankt Petersburg, although service is suspended during winter months. Economical transportation within the city and to neighboring communities is implemented by a network of buses and minibuses (*marshrutki*), and by a fleet of taxis.

Nowadays, Kirovsk economy is still largely based on the exploitation of the deposits of apatite in the Khibiny, a phosphate which is utilized to produce agricultural fertilizers. Accordingly, the socio-demographic and economic development of the city relies on the demand and the profitability of apatite extraction in the area. Mineral exploitation is not at risk, at least in the mid-long term, thanks to the presence of huge deposits beneath the soil that will enable a continued exploitation of the mines for several decades to come. Activities are controlled by the JSC Apatit, which being a “city-forming enterprise” is also responsible for maintaining and governing the municipal infrastructures of Kirovsk and Apatity. In the last decade, the company has allocated major investments to modernize equipments and increase efficiency and production, thus reversing the state of negligence and disruption in which the mineral sector was left after the post-soviet economic crisis. As of 2010, the local branch of the company employed about 13,500 people, the most of whom reside in Kirovsk and Apatity (Phosagro.com, 2011).

Most of the males living in Kirovsk perform activities related to the exploitation of local mineral resources, and are employed as miners, technicians, engineers, blacksmiths, haulers, firefighters; women are usually employed as clerks in the company's offices in Kirovsk and Apatity, although some of them have duties in the mines. The work in the mines is particularly dangerous, due to poor safety and health standards, and occasionally results in fatal accidents, the last killing a dozen of workers in December 2008. Notwithstanding this, miners' average salaries are not very high, usually less than 20,000 RUR (510 €) per month (FSSS, 2011). Although miners have the chance to retire at 50 years of age, many cannot afford to live on their retirement pension and continue to work for several years after the official retirement, causing further detriment to their own health.

The rest of the population works in the public sector, and in a number of small businesses and retails located in the city. These types of occupations are usually performed by females, most of whom are employed as teachers, clerks, medics, and retailers; the males who work in the city are usually employed as mechanics, repairmen, drivers, and sales managers. Salaries are rather good if compared to more depressed areas in Central and Southern Russia; however, living expenses, and especially the costs of utilities, are higher than elsewhere. Amongst those employed in organizations in 2008, average monthly salaries varied between 33,000 RUR (850 €) for public officers and 14,600 RUR (370 €) for bars and hotel attendants. In the same year, the provincial average salary was 23,200 RUR (590 €) and the average pension about 6,000 RUR (150 €), against an estimated cost of living of about 7,100 RUR a month (180 €). In 2008, 4.3% of the active population of Kirovsk district was unemployed (FSSS, 2011).

**Figure 2.12** – *Mining facilities in Kukisvumchorr, 5 kilometers from Kirovsk.*





Owing to its mountainous location and natural surroundings, Kirovsk has been a year-round tourist destination for decades. The winter season lasts from December to May, and tourists from Sankt Petersburg and Moscow, and occasionally from Scandinavian countries, visit Kirovsk to ski and snowboard on the slopes located to the east of city centre. The slopes are also employed for training by the ski national teams of Russia, Ukraine, Belarus and Kazakhstan, and the city has become a major base for freestyle skiers in Russia. During the summer, locals and tourists can perform various sport activities in the Khibiny, such as trekking, rafting and paragliding. The tourist offer comprehends the sanatorium *Tirvas*, a “winter village”, and the world’s northernmost botanical garden. Although Kirovsk has enormous potentialities to boost a tourist economy, the sector is still underdeveloped and the infrastructure is in a state of decay because of many interrelated reasons. First of all, the city is distant from the tourists’ place of origin, and the closure of Khibiny airport during the winter does not certainly help. Furthermore, the paucity of private investments and the lack of cooperation between local entrepreneurs and authorities have failed to attract funds from the central government and foreigner investors. In addition to this, the pollution generated by mineral and industrial facilities located nearby further contributes to hinder the tourist exploitation of the region.

**Figure 2.13** – *Trampolines and abandoned ski lifts on the slopes east of Kirovsk.*



The local demand for goods and products is satisfied by the retail and commercial centers located in the city; for costly and exotic products, however, local inhabitants must recur to retail located in Apatity and Murmansk. Prices are slightly higher than the national average due to transportation costs, especially for what concerns perishable products such as fruit and vegetables. As of 2008, 5 shopping centers, 17 kiosks and a large number and variety of shops were active in Kirovsk, including telephony shops, tourist agencies, laundries, car services, etc. In the same year, the city counted several bars, cafes, restaurants and clubs, as well as 5 hotels, which are frequented by visiting tourists and by the personnel of JSC Apatit.

Compared to Russian standards, the quality of public services provided in Kirovsk appears to be relatively high. Seventeen pre-school, nine full-time educational institutions, and one evening school are in service. In addition to this, a school of art, a humanistic school, a technical college and a gymnasium are responsible for imparting higher education. The educational offer is potentiated with extracurricular activities and resources offered by the city's Palace of Culture, three museums, six libraries, and schools of art, music and sport. Pertaining to academic education, local youths usually enroll in the Apatity branch of Petrozavodsk University, and to academic institutions in Murmansk and Sankt Petersburg.

The standards of public health and medical assistance are still below the levels achieved during the Soviet Union, an issue that Kirovsk shares with most other Russian cities; however, the general situation has been ameliorating in recent years thanks to governmental policies and funding. Major health problems are correlated with very high consumption of alcoholics and tobacco, unhealthy and dangerous working locations (mines), and pollution of the air and water. The city is supplied with a polyclinic in the city centre and a hospital in Kukisvumchorr (located 5 km from Kirovsk) which, together with a number of pharmacies and surgeries, provide day-to-day health assistance to the local population. For special medical treatments, the inhabitants of Kirovsk must resort to the medical facilities in Apatity and Murmansk.

Thanks to its small dimensions and relative isolation, there appears to be no major criminal issues in Kirovsk. Public order is guaranteed by police forces and by a small group of voluntaries. Although official figures are not available, murders and other violent offences appear to be very infrequent. An exception occurred in March 2009, when then city mayor Ilya Kelmanzon and his assistant were shot dead in their office by a local businessman who committed suicide afterwards. Also, it is possible that part of the local inhabitants, especially women, may be victims of crimes related to alcohol abuse, such as sexual and domestic violence, which appear to be a chronic issue in the modern Russian society (Trembl, 1997; McKee, 1999). In addition to this, the local population may also be damaged by episodes of bribery involving police officers and other public personnel, such as doctors and bureaucrats. Corruption may also be present at higher levels of the local society, for example among institutional and political figures (Levin & Saratov, 2000; Ledeneva, 2006); however, we do not dispose of any official data concerning the actual diffusion of corruption in the Province of Murmansk.

Social life among the inhabitants of Kirovsk can be said to vary considerably depending on the season of the year. During the summer, local inhabitants have the possibility to practice a variety of recreational activities in the open air and in contact with nature, such as hiking, mountain climbing, fishing and hunting. Also, during warmer months, local inhabitants can enjoy the few open spaces available in the city, such as parks and squares. Namely, there are numerous spaces with equipments for the entertainment of children (swings, slides, etc.); however, most of these equipments are rusty and in precarious conditions. During the winter months, social life is mostly concentrated in enclosed spaces. Young people usually meet in the retail centre in Lenina Square (especially girls), and in the several bars and clubs available in the city. Moreover, young boys are assiduous haunters of billiard rooms, and of internet cafes, where they meet to play online videogames. Social life among adults and older people differs considerably from the one of younger people. Most women frequent the Palace of Culture, where they have the chance of performing different social and cultural activities. Among men, there is the common habit of meeting in bars after work with a few friends or colleagues, and to spend hours drinking great amounts of vodka or other strong drinks. In the evening, it is common to see drunken men staggering alone in the streets or sleeping on the sidewalk, even if the temperature is far below 0° C. The public attending the local church is rather small, and is mostly composed by older women.

## 2.4 NIKEL

Nikel is an urban-type settlement (*poselok*) located in the Pechenga municipal district, in the northwestern corner of the Province of Murmansk, at coordinates 69°24'N 30°13'E. The settlement, 12,800 inhabitants in 2010, is located between the western slopes of the Kamennaya Tundra and the Lake Kuetsyarvi. The territory around Nikel is mostly covered with taiga, shading into the tundra in the most elevated and exposed areas; rivers, lakes and marches are abundant in the surroundings. The Norwegian border is only 7 km west of Nikel, although customs facilities are 40 km northwards, on the road to Kirkenes. In Nikel, the sun remains below the horizon uninterruptedly from the 29<sup>th</sup> of November to the 13<sup>th</sup> of January, and above the horizon between the 20<sup>th</sup> of May and the 24<sup>th</sup> of July. The climate is affected by the mitigating effects of warm currents in the Barents Sea, which shores are 45 km north of Nikel. Winters are not as rigid and long as in the outback, although in January the average temperature is -16° C (with occasional falls below -30° C), and the town is often whipped by strong winds and blizzards during winter months. Summer months are mild and rainy, with temperatures above 0° C for circa 6 months a year.

The area where Nikel is currently located has been almost uninhabited for centuries, with the exception of sporadic visits by Sami herdsman and Norwegian and Russian colonizers. The first permanent settlement dates back to 1920, when the district of Pechenga (Petsamo in Finnish) was ceded by Russia to Finland as agreed in the Treaty of Tartu. During the 1920s, the largest deposits of nickel in Europe were discovered nearby, and the Finnish government began operations for the excavation, smelting and transportation of the mineral. In 1934, the Canadian International Nickel Company secured the lease over mineral operations in the area, which began in the following year. At the same time, the company also built an electric power plant, a smelter, and a railway line connecting the area to the port of Linnahamari. In 1937, the mining town of Kolosjoki was founded on the site of present Nikel in order to host the increasing number of workers employed in local activities. Notwithstanding the frequent food shortages and poor living conditions, the population continued to grow, reaching about 1,300 inhabitants in 1939.

**Figure 2.14** – *Panorama of Nikel from the smelter.*



In 1939, the Winter War broke out between Soviet Union and Finland, and the Pechenga district was the theater of bitter confrontations between the two sides. At the end of the conflict, Finland lost 10% of its territory, but was able to maintain the control over the Pechenga district and its mineral deposits. In the summer of 1941, the Finnish and the Germans tried to regain control over the lost territories in the Continuation War; however, the campaign was destined to fail, and in 1944 the Pechenga district was finally ceded to the Soviet Union, and the town of Kolosjoki renamed Nickel. In the post-war period, the Soviets employed German and Finnish war prisoners to rebuild the infrastructures destroyed during the Nazi retreat, a practice that ended in 1953 with Stalin's death. In the same years, Nickel population began to grow at a high pace, thanks to its mineral and smelting facilities and to its strategic position near the Norwegian border, reaching 16,300 inhabitants in 1959. In the 1960s, the population number began to stabilize, possibly because of the foundation of Zapoliarny in 1956, 23 km east of Nickel. Notwithstanding this, the population of Nickel continued to gradually increase, reaching 21,800 inhabitants in 1989.

In almost five decades of Soviet rule, the original Finnish settlement was enlarged and completely transformed. The former Finnish population left during the war events and was subsequently replaced with Soviet citizens, a large majority of whom were Russians. Most of the preexisting two-stairs houses were replaced with anonymous Soviet-style blocks, while a number of new public facilities and infrastructure were constructed. For the most, the local population was employed in the mines and the smelter; besides, the locals could also find employment in various urban activities such as retail, administration and education, or in the military and customs personnel. Although Nickel was connected to Murmansk by railway in 1966, the border with Norway and Finland remained close to ordinary traffic throughout the Soviet regime. As a result, Nickel remained isolated and cut off from nearby Norwegian communities, while cross-border economic and cultural exchanges were almost inexistent.

The history of Nickel after 1991 follows the trajectory of other communities in the Province of Murmansk. The contraction of all productive activities related the exploitation of mineral resources generated widespread unemployment and poverty among the local population. In the early 1990s, economic and living conditions rapidly declined, and public services and social assistance were left underfunded. Furthermore, the heavy pollution generated by mining and smelting activities determined a precarious ecological situation in the Nickel area, straining diplomatic relations between Oslo and Moscow for decades (Barentsobserver.com, 2011; Bellona.org, 2011). At the same time, the population of Nickel began to steadily decrease, losing 6,800 inhabitants between 1989 and 2010 (-41%). As a result of the conspicuous population loss, many of the buildings and dwellings were abandoned and left to decay, and most of them have never been re-inhabited. In the meanwhile, public facilities and transportation infrastructures were poorly maintained, and some irreversibly damaged.

The cityscape of present-day Nickel is the result of five decades of Soviet urbanization, and of two decades of post-soviet decay. The only remnants of the original Finnish settlement are a dozen of houses, partly inhabited and partly abandoned, located nearby the city centre. The majority of the population lives in residential blocks that were built during the Soviet era: these are usually 5 stores high, although some may reach 9 or 10 stores. The structural and aesthetical characteristics of the residential blocks are quite variegated, and most buildings have a colorful appearance, making the urban landscape look a bit less monotonous and dismal than in other communities of the Province. However, there numerous buildings all over the town which lay abandoned, while most residential and public buildings are aging without proper reparations and maintenance. Analogously to Kirovsk, each neighborhood has a prevalent architectural style depending on the age of construction, and the dimensions and comforts of the habitation units vary accordingly.

Figure 2.15 – Map of Nikel.



Source: Hibiny.ru (2011). Author of the original map (in Russian): A.V. Kuznetsov (2007).

**Figure 2.16** – *Lenina Square: the Palace of Culture and the statue of Lenin.*



**Figure 2.17** – *Pobeda Square and the city hall. In the background, the smelter is hidden by a cloud of smog.*



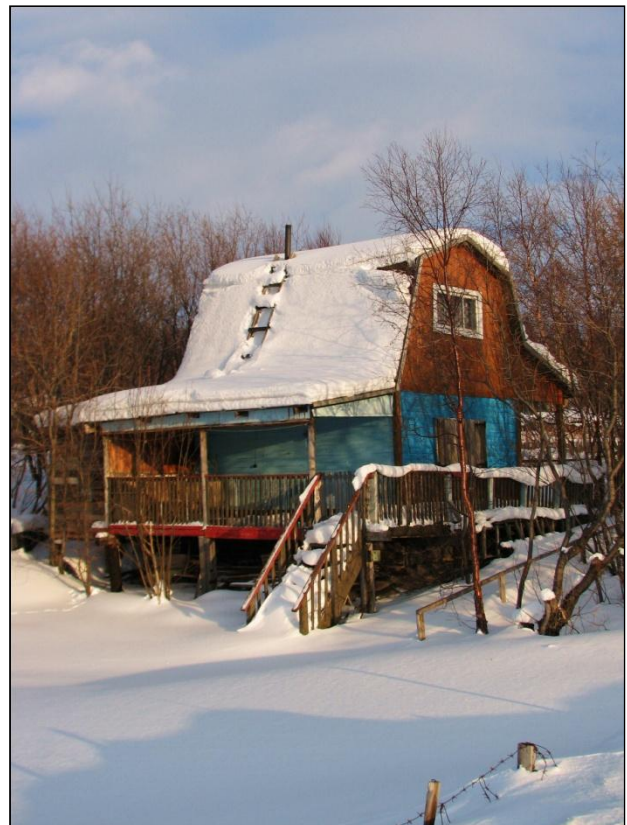
**Figure 2.18** – *Gvardeyskiy Street as seen from Pobeda Square.*



**Figure 2.19** - *Residential blocks in Nikel.*



**Figure 2.20** – *A dacha near Lake Kuetsyarvi.*



**Figure 2.21 – The smelter in Nikel.**



On the eastern side of Nikel, on a dominant position a few hundred meters from the town's borders, is the metallurgical complex, with the monstrous edifice of the smelter and its three chimneys, 150 m tall, the highest in Europe when they were built in 1946. In a large compound around the smelter, a big number of warehouses and industrial facilities lay in complete abandonment, offering a lugubrious post-industrial landscape. The mines where nickel and copper are extracted, and the passenger and freight railway station, are located nearby, on the western side of the complex. The clouds of smoke, rich in sulfur dioxide, that are incessantly released by the smelter and by the heating plant located nearby are poisonous to such an extent, that a vast natural area south of the town has been contaminated and has become treeless and barren. The town is usually spared from polluting emissions for most part of the year, thanks to the winds blowing from the mainland. However, during the summer months, the wind blows from the Arctic Ocean, carrying the fumes on inhabited areas. Because the effects of the smelter propagate across the Norwegian border, Nikel smelter has sparked long lasting tension in the relations between Oslo and Moscow.

The pollution produced by smelting activities is of great concern for the public health, especially for those who work in the complex. The grave pollution also affects the local ecosystems, thus further threatening the humans by poisoning the waters, vegetables, and animals (such as the reindeers) that are used for alimentation. Several studies carried out by Finnish (Anttila *et al.*, 1998) and Norwegians scientists (Norseth, 2003) have gathered partial evidence of a relation between the emissions of sulphur dioxide (SO<sub>2</sub>) and an abnormal insurgence of cardio-vascular diseases and cancer in Nikel area. In July 2007, a sudden increase of polluting emissions, caused by a leak of poisonous materials, brought the concentration of SO<sub>2</sub> in the air to 7,500 mg/m<sup>3</sup>. Although the maximum recommended lever is 350 mg/ m<sup>3</sup>, no measures of emergence were taken at the time. In 2008, estimates place the total emissions of SO<sub>2</sub> produced in Nikel and Zapoliarny to 97,700 tons per year, with Nikel smelter alone producing 5 times the entire production of SO<sub>2</sub> of Norway (Barentsobserver.com, 2011).



As a counterpart to the impact of the smelter on the ecology and the landscape of the town, Nickel is surrounded by vast forests and lakes that are utilized by the local population for recreational purposes. North of Nickel, on the shores of Lake Kuetsyarvi, there is a picturesque village made of wooden dachas where the locals use to spend their holidays and relax, called *Zareche*. On the south, the modest slopes are suitable for skiing and are equipped with ski-lifts. Furthermore, the nature around the town is used by locals for recreational activities such as camping, berries and mushrooms gathering, fishing, hunting in the warm season; snow mobiles rides and cross country skiing in the winter. Most popular spots in the area comprehend the tourist resorts *Gulfstream*, *Perviy Most*, *Kedrovnik*, and *Vodopad*. Like in Kirovsk, natural and winter tourism represents an ecological and profitable alternative for economic development; also in this case, however, the lack of public and private investments, the grave pollution concerns, and the negligence of local authorities have hindered the establishment of a proper touristic sector in the area.

The main employer in Nickel is the Kola Mining and Metallurgical Company (MMC), a division of the colossus Norilsk Nickel MMC. The company manages one open-pit and three underground mines located in the territories of Nickel and Zapoliarny, from which 8,149 thousand tons of ore were extracted in 2008. The mined ore has to be processed in a concentrator and further refined in the roasting shop and smelting shop located in the area. In 2008, the total production of processed metals amounted to 110 thousand tons of nickel and 62 of copper (Nornik.ru, 2011). In the same year, mining and processing activities occupied about 4,400 people, of which 2,600 were miners. The average salary in the sector is 21,200 RUR a month, about 550 € (FSSS, 2011); however, the salary and its purchasing power may often vary in relation to circumstantial economic trends, and to other parameters such as type of occupation and seniority.

**Figure 2.22** – *The mines located north of Nickel*



In addition to Kola MMC, the population is employed in the various activities connected with urban life. In most cases, women find employment in the public sector, for example in the administration, in schools and hospitals, as well as in the private sector, for example as retailers, service providers, accountants, clerks, etc. Men are usually employed in more manual occupations, such as construction, transportation, reparation and mechanical services, but also in more profitable ones, such as businessmen and managers. Men in Nickel are also employed in the police forces and in the military and security personnel, responsible for the customs services and patrolling of the border zone, although most of them are detached in Nickel only on a temporary base. Average monthly salaries in Nickel range from 35,500 RUR (910 €) for the employees of public administration and security personnel, to 15,000 RUR (390 €) for health and social services personnel (FSSS, 2011). The unemployment rate (5.4 % in 2004) is subject to frequent and consistent variations according to the local production, and to the prices and demand of nickel and copper.

**Figure 2.23** – *Nikel train station, located about 2 km north of the inhabited center.*



The connections between Nickel and the other communities in the region are secured by the so-called Polar Highway and by a series of minor roads departing from it, which link Nickel to Murmansk (196 km), Zapoliarny (26 km), and to the Norwegian town of Kirkenes (54 km). During winter months, roads are in rather poor conditions due to lack of maintenance and to environmental conditions, and some may be closed for hours or days during blizzards and heavy snow. Transportation within Nickel and to other communities is implemented by buses, marshrutki, and numerous taxis; car sharing and hitchhiking is also very common. The town is also served by a railway, although the line is mostly utilized to transport raw materials to refineries in Monchegorsk. Passenger services occur four times a week, and the train takes 9h 30' to make the 206 km between Murmansk and Nickel, which is the last station of the line. The nearest airport is located in Murmansk.

As in other communities of the Province, the provision of social services underwent a severe contraction during the early 1990s. Today, Nickel counts 4 kindergartens and 5 full-time schools, which were attended by 626 children in pre-scholar age and 1,332 students respectively in the year 2008. The town's educational institutes enjoy proper funding from the municipality and receive some extra funding from the Norwegian government, in the frame of Barents Euro Region development programs. Other cultural-related facilities comprehend three libraries, one museum, two art and musical schools, and the Palace of Culture that is utilized for very various functions, such as concerts, expositions, political debates, and even markets. The closest universities available are in Murmansk and Apatity. Health care is provided by one hospital and a small number of specialist surgeons and pharmacies. Also in Nickel, alcoholism appears to be one of the major health issues affecting the population, and it is quite frequent to encounter severely drunk men wandering in the streets or sleeping on the sidewalks.

Criminality in Nickel is rather low, and it is usually confined to acts of hooliganism and brawls caused by alcoholism; however, these may very occasionally aggravate into stabbing or even murders. Also in Nike, the widespread abuse of alcohol can be deemed to cause other social issues, such as domestic violence against women and children; however, no official statistics could be retrieved. The control of the public order is enhanced by police forces in cooperation with agents of the Federal Security Office, the *FSB*, who are numerous in town, due to its vicinity with Norwegian border. In the town are also located the barracks of the military and customs personnel, with offices and deposits of weapons and vehicles. Numerous post guards and military facilities are located in the forests and on the hills nearby.

Pertaining retail and service offer, Nickel's inhabitants may satisfy most of everyday necessities in the shops and facilities located in town, and seldom in the ones in Zapoliarny; in any case, for most precious and rare goods, local consumers have to resort to commercial centers in Murmansk. In 2008, one open market and two *torgovye tzentry* (small commercial centers) were active in Nickel, along with several shops and service providers, 2 hotels, and 14 bars and restaurants. As like as in Kirovsk, the price of goods and utilities is slightly higher than in the rest of Russia.

Also in Nickel, social life is profoundly affected by the peculiar climatic and environmental conditions. As already mentioned, during the summer, the town is frequently subject to acid rains and toxic emissions produced by the smelter, which are blown on residential areas by prevailing seasonal winds. Consistently, a substantial part of the population leaves the town to spend the holidays in the community of origin, or in the traditional resorts frequented by Russians during summer months, such as Sochi and the Crimean Peninsula. Those who remain may find shelter in the numerous dachas located in the countryside, or in the small tourist resorts located nearby. During colder months, and especially in occasion of snow blizzards, local inhabitants usually meet in private dwellings or in enclosed spaces. Young people are assiduous haunters of the numerous bars and clubs available in town, such as the *Oasis* and the *Boyar*, where they meet to spend time with friends, drinking and playing pool. Contacts between the local youth and the one of neighboring communities (Zapoliarny, Pechenga) are not very intense, and occur mostly between students of the high schools and technical schools located in these communities. Another location of social aggregation is the sport center *Metallurg*, where locals can practice indoor football, basketball, volleyball, and other sports; the center also hosts a swimming pool. Local bars are also frequented by adults and older people, both men and women. Places of social aggregation which are mostly frequented by women include the Palace of Culture, the church, and the local retail centers, especially the market between Mira and Bredova Street.

### 3. LITERATURE REVIEW

In the present chapter, we are going to review a variety of contributions that we selected from different ambits of research, which we employ to present the theoretical and conceptual background of the present study. Namely, it is our purpose to provide an overview of the theories of propensity to move and residential satisfaction, and to illustrate the manifold factors which are deemed to affect these two dimensions. As already mentioned in the introduction, in order to provide an exhaustive explanation of the subjective factors affecting propensity to move and residential satisfaction, we decided to include considering a variety of notions concerning the social and emotional relationships that people may establish in the ambit of the location of residence. Consistently, in addition to the literature dealing with propensity to move and residential satisfaction, we include considering other contributions about social cohesion, social capital, sense of community, community attachment, place attachment, and place identity.

The first issue that we encounter in our literature review concerns the scarcity of scientific literature dealing with the population and the communities of the Russian Arctic. Specifically, as already lamented in the introduction, there is a remarkable lack of information concerning the extent and distribution of propensity to move and residential satisfaction among the population of Russian Arctic communities. At the same time, little is known about the quality of living conditions of the local inhabitants, and about the social relations and emotional bonds that local inhabitants may establish in the ambit of the location of residence. In addition to this, the degree of residential satisfaction and propensity to move among the local population may be influenced by specific locational factors, including widespread social and economic issues, extreme climatic and environmental conditions, and heavy pollution (see chapter 2). Furthermore, the social and emotional relations that the inhabitants of Russian Arctic communities establish in the location of residence can be deemed to assume peculiar forms in accordance with the cultural habits and values of the local population. Taking this into account, the factors affecting residential satisfaction and propensity to move can be expected to vary considerably between Russian Arctic communities, and communities located in Western Europe, North America and Australia, where most of the research on residential satisfaction and propensity to move is based. Consistently, we are compelled to reinterpret and supplement the existing literature in the light of the effect that specific locational factors may produce on the degree of residential satisfaction and propensity to move in our context of research.

Aside from the difficulty of adapting the existing literature to the peculiar nature of our context of study, there is the problem of making sense of the manifold and often contrasting theories and definitions proposed by the scholars dealing with residential satisfaction, propensity to move and related aspects. On one hand, the variety of theories and definitions proposed in the literature can be deemed to represent an opportunity for pondering and choosing among different perspectives and approaches. On the other hand, however, it generates confusion over the actual argument of discussion, and makes it difficult to discriminate between interrelated or analogous concepts and factors. Given the impossibility to take into account all the approaches and theories proposed in the literature, we decided to concentrate our attention on certain sources while neglecting others, and to support certain discourses over others, each time explaining the ratio behind our choices.

After having clarified the main issues challenging the review of the literature, we now introduce the contents of the present chapter, which is organized in five sections. In section 3.1, we introduce the notion of propensity to move, and we discuss about the relations between this and residential satisfaction. In this section, we also distinguish between objective and subjective factors of propensity to move, and we proceed to analyze how propensity to move may vary depending on locational factors, and on individual and household factors. Following this, we then proceed to analyze more in detail the subjective factors affecting propensity to move. Namely, in section 3.2, we introduce the notion of residential satisfaction, and we review a variety of contributions dealing with this notion in order to identify the most salient factors affecting the subjective evaluation of the dwelling and the community of residence. Specifically, we recognize among three types of subjective factors, which we label as: convenience factors; social factors; and emotional factors. The three types of factors, as well as their potential effect on the degree of residential satisfaction and on the propensity to move, are discussed separately in sections 3.3, 3.4 and 3.5, respectively. At the end of this chapter, we include a conceptual scheme, in which we represent the relations between the different notions discussed in this review.

### **3.1 PROPENSITY TO MOVE**

In the present section, we are going to review a variety of contributions dealing with the concept of propensity to move. As already announced in the introduction, the decision to focus our attention on the concept of propensity to move is suggested by different reasons. In first place, this concept is instrumental in order to investigate the subjective factors responsible for prompting (or hindering) the desire to migrate among the population of Russian Arctic communities. In addition to this, the concept of propensity to move allows us to gather useful information about the composition and distribution of current migration flows affecting the region. Accordingly, the present section is devoted to provide an overview of the main conceptualizations of propensity to move which have been proposed in the literature, and to clarify the relations between this and related notions, such as residential mobility. Also, in the present section, we are going to discuss about the manifold factors, both objective and subjective, which have been found to affect propensity to move in previous studies. Because most of these studies are set in communities in North America or Western Europe, we are compelled to reinterpret and supplement these studies in the light of the peculiar features characterizing Russian Arctic communities, especially in regard to the extreme climatic and environmental conditions.

In order to provide an exhaustive review of the literature dealing with propensity to move, the present section is organized as follows. In first place, we define the concept of propensity to move, and we propose a concise summary of main theoretical developments in this field of research. In this frame of reference, we focus our attention on the famed “Model for the First Stage of Mobility Decision-Making” proposed by Speare (1974), as it allows us to introduce the potential factors which may affect propensity to move. In the second part, we look more in detail to the variety of factors that can be deemed to influence the extent and distribution of propensity to move among the inhabitants of a given community. Namely, we operate a major distinction between objective factors (amongst which we include locational factors as well as individual and household factors), and subjective factors (which pertains to the subjective evaluation of the location of residence). In accordance with this distinction, we then proceed to discuss about the effect of single locational, individual and household factors on the propensity to move while referring to the peculiar

characteristics of the communities and the population investigated in our study. Subjective factors will be discussed more in detail in the following sections of this chapter.

### 3.1.1 Theory of propensity to move

The expression *propensity to move* (Morris *et al.*, 1976), together with others such as prospective residential mobility (Newman, 1975) and intention to move (Ginsberg & Churchman, 1984), has been widely employed in the literature on residential mobility and residential satisfaction to describe any aspiration to leave the place of residence. According to the definition proposed by Morris *et al.* (1976:309), “mobility refers to whether or not a move occurred, while propensity to move refers to desires, plans, inclinations or expectations about future mobility”.

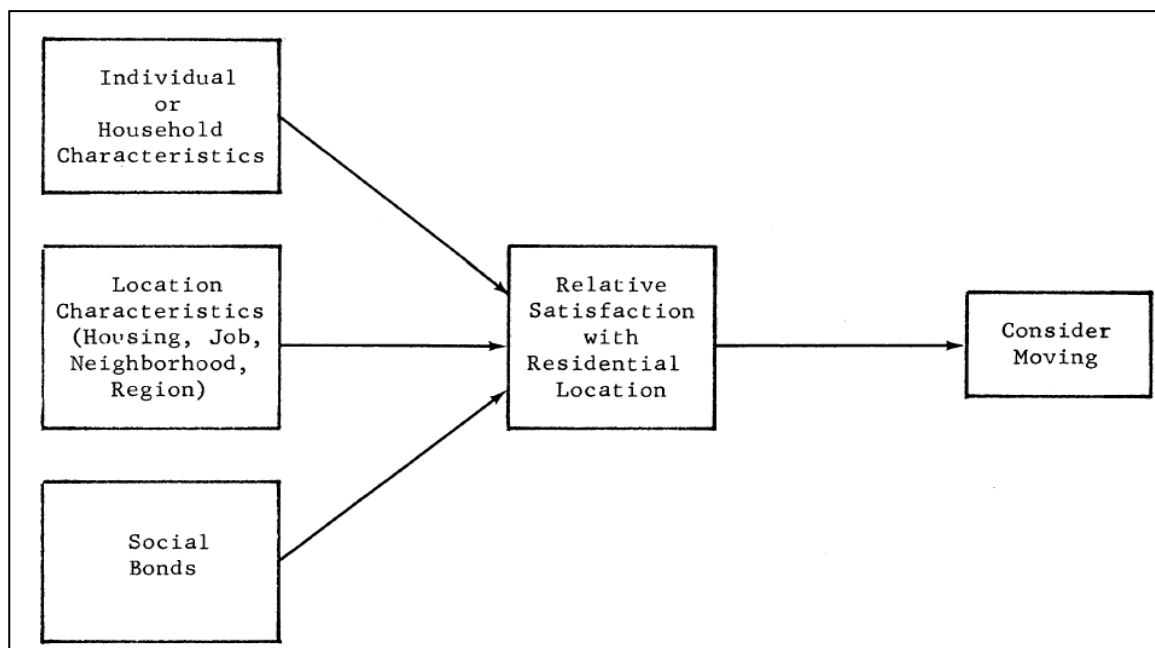
The concept of propensity to move has received notable attention since the pioneering works by Rossi (1955) on residential mobility. According to Rossi, residential mobility should be conceived as the outcome of a decision-making process, which involves a sequence of decisions and actions directed to ameliorate an initial condition of residential stress. Inspired by Rossi’s contribution, other scholars have proposed various models of residential mobility based on a rationalistic approach. Among these, the *cost-benefit model* proposed by Sjaastad (1962) and Lee (1966) regards residential mobility as the result of a rational balancing between the perceived advantages and the expenses that would derive from a hypothetical move. Another model of residential mobility adopting a rationalistic approach is the *stress-threshold model*, developed by Wolpert (1965, 1966) and by Brown & Moore (1970) based on the theories by Simon (1957) on decision-making processes. In this model, propensity to move is thought to arouse when people individuals reach a critical threshold of residential stress; following this, individuals second their propensity by searching for an alternative residence, and by summoning the necessary resources in order to move.

Probably the most fortunate model inspired by the stress-threshold theory is the one proposed by Speare (1974) and Speare *et al.* (1975), the so-called *residential satisfaction model*, which takes inspiration from the studies aforementioned, and which we report in the original form in Figure 3.1. According to Speare, propensity to move should be conceived as the resultant of a preexisting condition of dissatisfaction towards the location of residence, which is determined by the interplay of different factors affecting people’s perceptions, judgments and behaviors. Speare regroups these factors into three typologies, i.e.: individual or household characteristics; location characteristics; and social bonds. When the combination of such factors raises the level of dissatisfaction beyond a critical threshold, people will consider the option of relocating the residence elsewhere; on the contrary, when people are satisfied with the location of residence, they are less likely to consider moving and thus more likely to stay.

In spite of its apparent simplicity, the residential satisfaction model proposed by Speare offers remarkable advantages and applications, as reflected by the notable influence it had on the following research on residential mobility and residential satisfaction (Bach & Smith, 1977; Michelson, 1977; Lee, 1978; Newman & Duncan, 1979; Landale & Guest, 1985). In first place, the utilization of the notion of residential satisfaction as a catalyzing variable affecting propensity to move represents an attempt to solve the long-lasting dichotomy between objective and subjective factors affecting propensity to move. Specifically, according to Speare (1974) and other scholars (e.g. Newman, 1974, 1975), neither the individual and household background nor the characteristics of the location of residence are per se sufficient to explain the reasons why propensity to move is higher among certain groups, and lower among others. Rather, objective factors should be employed in order to measure and evaluate the extent and distribution of

propensity to move among the populations and communities investigated. At the same time, subjective factors are employed to explain the variations in propensity to move between different groups or between different communities. In this frame of reference, the inclusion of residential satisfaction in the model in the role of mediating variable allows us to estimate the overall effect of subjective factors on propensity to move, and to contrast this effect with the one of locational, individual and household factors.

**Figure 3.1** - The “Model for the First Stage of Mobility Decision-Making: the Determinants of Who Considers Moving” (Speare, 1974: 176).



Another important element of innovation which can be found in the model proposed by Speare is the recognition of the role played by social and emotional factors in influencing propensity to move. Although these factors are superficially defined as social bonds in Speare’s model, the inclusion of social and emotional factors of propensity to move represents a step forward if compared to previous decision-making models, which conceived propensity to move merely in the light of material or economic convenience. In this frame of reference, a number of later contributions have confirmed that the propensity to move can be significantly affected by the intensity of social bonds and by the quality of social relationships established in the location of residence (Speare, 1974; Newman, 1975; Kan, 2007; David *et al.*, 2010), as well as by the emotional attachment to and identification with the place of residence (Johnson *et al.*, 2005; Chow & Healey, 2008). Accordingly, in order to appreciate the effect of social and emotional factors on the propensity to move, it is useful to consider a variety of theoretical concepts that have been proposed to describe the social and emotional relationships that people establish in the location of residence, such as: social cohesion; social capital; sense of community; community attachment; sense of place; place attachment; and place identity. These notions, as well as the relations between these and propensity to move, will be discussed more in detail in the fourth and fifth sections of this review.

Notwithstanding the remarkable success and the benefits enabled by the model proposed by Speare, the validity of the model, and the concept of propensity to move itself, have been contested by several scholars, who pointed at the fact that wishes and intentions to move are not necessarily followed by actual mobility. Pertaining to this, Landale & Guest (1985:202) argued that “clearly, feelings about home and local

area influence whether or not an individual wants to move. However, the person is not always in a position to act, or even consider acting, on his or her desires". From a similar perspective, Lu (1998:470) stated that "[although] mobility intentions appear to be important antecedents of mobility decisions, they are usually not sufficient for mobility to take place". The incongruence between propensity to move and actual mobility is documented in several studies employing a longitudinal approach, such as those by Landale & Guest (1985), Lu (1998), Kearns & Parkes (2003), and De Groot *et al.* (2007). In the studies by Lu and by De Groot *et al.*, which are based on a two-year period, one-third of the people who intended to move have actually moved within the following two years, while one-eighth of those who intended to stay have moved. However, in the study by Kearns & Parkes, based on a 5-year period, the ratios were one-half and again one-eighth, which suggests that people have more chances to fulfill their propensity to move with the time passing.

In order to explain the fact that not all the people wishing to move are able to satisfy their mobility aspirations, and the fact that some people have moved in spite of their wish to stay, scholars have focused on the manifold constraints which may hinder or force the actual move. In this frame of reference, Rossi (1955) and Simon (1957) argued that decision-making processes are bounded by the subjective capacity to solve problems and acquire information. From a similar perspective, other scholars (e.g. Clark *et al.*, 1979; Clark, 1982) investigated residential mobility in relation to the subjective capacity of retrieving information and resources for the purpose of moving out, and to the possibility of gaining access to housing alternatives. Moreover, other scholars focused on other factors and events relatable to the life course and the household background, which may either force residential mobility, such as childbirths, household formations and dissolutions (Moore, 1986; Myers, 2000), or impede it, such as having children in scholar age (Tucker *et al.*, 1998). Finally, residential mobility may be forced by the occurrence of certain events, such as job relocations, evictions, calamities, etc.

In consideration of the studies discussed above, we should be careful not to overestimate the causal relation between propensity to move and residential mobility, as this would require taking into account also the potential constraints which may either force or impede mobility. At the same time, however, the concept of propensity to move appears to be a reliable instrument in order to investigate the factors affecting voluntary and non-constrained mobility. Quoting Speare (1974:175), "if we exclude cases where a person or household is forced to move, then the rest of mobility can be viewed as resulting from the increase in dissatisfaction beyond a person's threshold or tolerance level". As already announced in the introduction, we decided to focus our research on the relation between residential satisfaction and propensity to move, and on the objective and subjective factors which may affect these among the inhabitants of Russian Arctic communities. Consistently, in our research, we neglect to consider the relation between propensity to move and residential satisfaction, as well as the constraints which may affect residential mobility - also in virtue of the limited time and resources at our disposal, which do not allow us to adopt a longitudinal approach on the subject.

### **3.1.2 Objective and subjective factors of propensity to move**

In order to provide a systematic and exhaustive explanation of the factors affecting propensity to move, scholars have proposed a multitude of different models, each utilizing a specific set of indicators depending on the purposes and context of the research. In this frame of reference it is possible to operate a major distinction between two main typologies of factors: objective factors, and subject factors (Campbell & Converse, 1972; Newman, 1974, 1975). Objective factors are directed to represent salient characteristics of the location and of the population investigated. Specifically, locational factors may include the dimension



and relative location of the community, the type of housing, the availability of public services, the level of employment, etc. In addition to this, the population is generally described in terms of individual background (age, gender, education, income, etc.) and household background (marital status, presence of children). Subjective factors are directed to represent the subjective attitudes, perceptions and evaluations of the population in regard to the location of residence, or to single aspects ascribable to such location.

Objective and subjective indicators can be conceived as serving two different and complementary purposes. On one hand, objective indicators are instrumental in order to measure the extent of propensity to move among a given population, and to appreciate how this varies across different contexts of analysis. In addition to this, individual and household factors allow us to assess how the propensity to move is distributed across the population investigated. Accordingly, objective indicators can be deemed to be an indispensable tool for any research directed to analyze the extent and distribution of propensity to move and residential mobility. On the other hand, the adoption of subjective indicators is instrumental in order to explain *why* the propensity to move is higher in certain locations or among certain groups, and lower in others. Namely, subjective factors enable us to detect the specific causes determining dissatisfaction or distress among local inhabitants, and thus to clarify the role played by single locational factors in influencing the propensity to move. Moreover, subjective factors allow us to shed light on the reasons why some people are willing to stay while others are willing to move, notwithstanding the fact that they are subject to the same locational factors, or that they share analogous individual and household backgrounds.

According to most scholars (Campbell & Converse, 1972; Robinson et al., 1973; Marans & Rodgers, 1975; Newman, 1974, 1975), an exhaustive explanation of the factors affecting propensity to move should take into account any indicator, both objective and subjective, which may ultimately influence the mobility inclinations of the individual. Pertaining to this, Newman (1975:61) argues that “subjective indicators add considerably to the explanation of mobility inclinations *over and above* that contributed by objective indicators”. While Newman’s argumentations are confirmed by numerous studies investigating the effect of subjective indicators on propensity to move (Speare, 1974; Back & Smith, 1977; Michelson, 1977), there are others scholars who argued that objective factors may play a relevant and distinct role in affecting propensity to move as well as residential mobility, regardless of the subjective factors taken into account (Newman & Duncan, 1979; Landale & Guest, 1985). The heterogeneity of approaches and methodologies employed in these studies does not allow us to express a definitive judgment over the type of indicators which is most reliable to explain the extent and distribution propensity to move. Accordingly, in order to investigate the antecedents of propensity to move among the population of Russian Arctic communities, we decided to include considering both objective and subjective factors, in virtue of the different purposes and benefits enabled by the two typologies of factors.

### **3.1.3 Locational factors and ranges of analysis**

While discussing the effects of locational factors on propensity to move, scholars have often discerned among different ranges of analysis. Namely, some authors focused on the propensity to leave the dwelling (Speare, 1974; Landale & Guest, 1979; Cuba & Hummon, 1994); others focused on the propensity to leave the neighborhood or community of residence (Heaton *et al.*, 1979; Lee *et al.*, 1994; Johnson *et al.*, 2005); and others included considering more ranges of analysis (Newman, 1975; White & Mueser, 1988; Randall *et al.*, 2007; Parkes *et al.*, 2002; Clark & Ledwith, 2005). Consistently with this, scholars proposed different typologies of locational factors, depending on whether the focus of investigation is set at the home or at the community level of analysis. Nevertheless, it is common that scholars investigating propensity to move at the home range would also include considering certain aspects relatable to the neighborhood and

community of residence, and vice versa. In our research, we decided to consider both ranges of analysis, and to distinguish between *propensity to leave home*, and *propensity to leave the community* (or to migrate). At the same time, we decided not to consider the neighborhood as a distinct range of analysis, for this would create conflicts of attribution with the community range of analysis, given the relatively small size of the communities taken as study cases.

Pertaining to the factors of propensity to move ascribable to the dwelling of residence, scholars have included considering a variety of indicators related to the quality of housing conditions, and the type of housing tenure. In general, the quality of housing conditions is represented by a series of factors associated with the objective features of the dwelling, which may include: the housing typology; the quality of housing infrastructure; the level of maintenance and upkeep; the availability of space; the economic value of the dwelling; and the availability of utilities and other comforts (Newman, 1975; Amerigo & Aragonés, 1997). However, as we are going to clarify in the following paragraphs, the objective characteristics of the dwelling appear to provide only a limited explanation of the antecedents of propensity to move, as their effect may vary depending on the individual and household needs and aspirations, as well as in relation to subjective perceptions and evaluations. Pertaining to the type of tenure, a several studies have confirmed that the propensity to move is generally higher among renters than among homeowners, both when referring to the propensity to leave home and the propensity to leave the community (Morris *et al.*, 1976; McHugh *et al.*, 1990). However, also the effect of housing tenure is likely depend on other contingent factors relatable to the individual and the household background, and to subjective needs, aspirations and judgments.

Also at the community level of analysis, the effect of locational factors on the propensity to move can be deemed to be mediated by other concurring factors, including the individual and household background, and subjective evaluations. Notwithstanding this, there are numerous studies which investigate propensity to move in relation to specific attributes of the community of residence, such as: the community size and degree of urbanity; the availability of occupational opportunities; the availability and quality of public services; the presence of retail, cultural and recreational facilities; the presence of green and natural areas; the quality of the neighborhood; etc. (Marans & Rodgers, 1975; Newman, 1975; Rodgers, 1980; Wasserman, 1982; Allen *et al.*, 1991; Parkes *et al.*, 2002). In addition to this, attention has been devoted to investigate the relation between propensity to move and the socio-cultural characteristics of the community of residence, such as the ethnic composition of the community population (Clark, 1991; South & Deane, 1993), and the social capital shared by community members (Kan, 2007; David *et al.*, 2010). Also in this case, however, the effect of neighborhood and community factors on the propensity to move can be better appreciated by including to consider the individual and household background of the population investigated, and by looking at the subjective evaluation and degree of satisfaction with the single aspects that are retained to be meaningful in affecting the propensity to move (e.g. the quality of public services, the quality of social relations, etc.).

The role played by locational factors in influencing the propensity to move is likely to vary considerably depending on the context of research. Consistently, also the selection of an appropriate set of locational factors is due to change according to the specific characteristics of the locations investigated, and depending on the presence of peculiar factors which may either foster or hinder the desire to move. In the context of Russian Arctic communities, therefore, we are compelled to include considering a variety of factors which are generally overlooked or even neglected in the literature dealing with propensity to move, for this is mostly concerned with study cases in Western Europe and North America. Specifically, the peculiar climatic and environmental conditions affecting Russian Arctic communities (such as low temperatures and prolonged periods of darkness and daylight) can be expected to play a salient role in

influencing the quality of living conditions among the local population, hence to affect the propensity to move. However, there is still a lack of information pertaining to the effect of climatic conditions on the propensity to move. In addition to this, the social and economic issues affecting the Province of Murmansk and other regions of the Russian Arctic can be deemed to play a substantial role in fostering the propensity to move among the local population, as testified by the considerable outmigration from these regions in the last two decades. In this frame of reference, specific attention shall be devoted to the availability of employment opportunities, to the cost of life, and to the quality of public services and infrastructures. Also, particular attention shall be devoted to the presence of major sources of pollution (both in Kirovsk and in Nikel): in fact, these could be deemed to have a negative impact on the quality of living conditions, and may thus concur to foster the propensity to move among the local inhabitants.

### **3.1.4 Individual and household factors**

As already announced, the extent and distribution of propensity to move may vary considerably depending on the individual and household background of the population investigated. In this respect, most authors dealing with propensity to move have included taking into account basic socio-demographic indicators (such as age, gender, education and income), in order to assess how propensity to move varies across the various groups and categories composing the population (e.g. Speare, 1970, 1974; Newman, 1975; Lee *et al.*, 1994; Lu, 1998; Kearns & Parkes, 2003). While the effect of single individual and household factors is likely to vary according to the location of research, several studies have confirmed that the propensity to move can be substantially affected by age. Specifically, propensity to move appears is generally higher among the young population, and weaker among the elderly (Drozdowski, 2007; Loveridge *et al.*, 2009); however, the relation between age and propensity to move appears to be influenced by particular events occurring during the life course, such as childbirths, marriages and divorces (Speare & Goldscheider, 1987; Michielin & Mulder, 2008). Moreover, scholars have shown that propensity to move may vary depending on the length of residence in the community, as newcomers are generally more desirous to move than those who have been residing in the same community for a long time (Speare, 1974; Newman, 1975; Lu, 1998; Kearns & Parkes, 2003). The relation between propensity to move and other socio-demographic variables, such as gender, income and level of education, appears to be less relevant, and to depend more intrinsically on the specific characteristics of the location of residence.

Pertaining to the effect of household factors on the propensity to move, scholars have included considering a variety of indicators, such as: the marital status; the composition of the household; the number and age of household members; the age of children; and the number of children attending local schools (Long, 1972; Speare & Goldscheider, 1987; Gober *et al.*, 1991; Madigan & Hogan, 1991; Astone & McLanahan, 1994; Diepen & Mulder, 2009). Also in regard to the household background, the effect of single factors may depend on the socio-cultural context in which the research takes place, as well as on the attitudes and inclinations of the individual and of other household members towards the location of residence. Notwithstanding these limitations, the studies mentioned above show that propensity to move tends to be higher among young couples and among couples with children in pre-scholar age, while it tends to be lower among couples with children in scholar age, and among single mothers. Also in this case, the effect of household factors on the propensity to move is likely to vary on the specific attribute of the location of residence, especially in terms of social policies and availability of public services. As we are going to discuss in section 3.4, the effect of household factors can be also deemed to vary according to the type and intensity of social bonds that people establish in the neighborhood and community of residence, especially in the case of more vulnerable subjects, such as single mothers and widows.

## 3.2. RESIDENTIAL SATISFACTION

In the previous section, we proposed a compendium of the theory of propensity to move, underlining the relations between this concept and other interrelated ones, such as residential mobility and residential satisfaction (Speare, 1974). Later in the same section, we introduced the important distinction between objective and subjective factors (Newman, 1975), and we proceeded to discuss the role played by locational, individual and household factors in influencing the propensity to move. Accordingly, in the present section and in the following ones, we are going to debate about the manifold subjective factors which can be deemed to affect the propensity to move in the context of Russian Arctic communities. Specifically, in the present section, we are going to focus on the concept of residential satisfaction by providing a brief account of the theoretical background standing behind this concept, and by introducing the potential factors which may affect the subjective evaluation of the location of residence among the inhabitants of Russian Arctic communities. Namely, in addition to locational, individual and household factors, we distinguish among three main typologies of subjective factors that can be reputed to affect residential satisfaction as well as propensity to move, and which we label as convenience, social, and emotional aspects. The three typologies are discussed more in detail in sections 3.3, 3.4 and 3.5, respectively.

### 3.2.1 Theory of residential satisfaction

According to a distinction proposed by Weidemann & Anderson (1985), the concept of residential satisfaction can be employed in the framework of two distinct approaches. As already debated in the previous section, the concept of residential satisfaction has been employed as a predictor of mobility behaviors, as exemplified in the studies by Speare (1974), Bach & Smith (1977), Newman & Duncan (1979), Priemus (1986), and Galster (1987). In addition to this, residential satisfaction has been widely adopted as a “global attitude of a resident (or a household) towards the living environment” (Adriaanse, 2007:290), or in the words of Amerigo & Aragonés (1997:47), as a “criterion of evaluation of residential quality. This approach can be recognized in the studies by Marans and Rodgers (1975), Galster & Hesser (1981), Gifford (1987), Bonaiuto *et al.* (1999, 2003) and Parkes *et al.* (2002). Accordingly, the studies adopting the first approach treat the notion of residential satisfaction as a predicting variable, whereas in the studies adopting the second approach, residential satisfaction is treated as dependent variable. In addition to these, it is possible to recognize a third approach, exemplified by those studies which attempt to collimate the two approaches aforementioned, namely by considering residential satisfaction both as a criterion of residential quality, and as a predictor of mobility behaviors (Heaton *et al.*, 1979; Weidemann & Anderson, 1985; Francescato *et al.*, 1989; Amerigo & Aragonés, 1990). The present research could be included among this last typology of studies.

The definition of the concept of residential satisfaction is also dependent on the range of analysis considered in the study. Namely, some studies focus on the degree of satisfaction with the dwelling (Amerigo & Aragonés, 1990, 1997), while others investigate the degree of neighborhood satisfaction (Carp & Carp, 1992; Bonaiuto *et al.*, 1999, 2003; Sirgy & Cornwell, 2002), and others the degree of community satisfaction (Fried, 1982, 1984; Brown, 1993). Depending on the range of analysis considered in the study,

therefore, the factors taken into account to assess the degree of residential satisfaction may vary considerably. However, it is common that studies dealing with home satisfaction include considering a number of indicators concerning the subjective evaluation of the neighborhood or the community of residence (especially with regard to the quality of social relationships with neighbors and fellow community members). Vice versa, it is common that the studies dealing with neighborhood and community satisfaction include considering other indicators concerning the subjective evaluation of certain aspects of the dwelling, for instance in relation to the quality of housing conditions, or to the relative location of the dwelling. As already announced in the previous section, we decided not to include the neighborhood range of analysis in our research. In fact, we consider this to be redundant in the context of communities with a relatively small population, such as Kirovsk and Nickel. Accordingly, in our research, we redefine the concept of residential satisfaction in terms of *home satisfaction* and *community satisfaction*, also in order to maintain a correspondence with our previous definitions of propensity to leave home, and propensity to leave the community.

As a general rule, the studies dealing with residential satisfaction are based on extensive surveys, most of which are administered to a random sample of residents. In some studies (e.g. Hadden & Leger, 1990), the degree of residential satisfaction is measured by a single-item measure, for instance by asking to local inhabitants whether they are satisfied with the dwelling, the neighborhood, or the community where they currently live; however, this type of measures has been criticized for being too coarse and superficial (Pinquart & Burmedi, 2004). Consistently, it is common that the global measure of residential satisfaction is accompanied by a set of subjective indicators, which are directed to assess the attitudes and evaluations of local residents in regard to single aspects attributable to the location of residence. These indicators are generally presented in the questionnaires under the form of Likert scales. Namely, respondents are confronted with general statements concerning the quality of the residential environment, e.g. "I have a lot of contacts with my neighbors", or "The dwelling is properly maintained" (Adriaanse, 2007:293), and are asked to state whether they agree with such statements on a rating scale. Eventually, by contrasting these scales with the global measure of residential satisfaction, it is possible to appreciate the effect of single factors on the overall evaluation of the location of residence.

In virtue of the heterogeneity of theoretical and methodological approaches adopted in the literature on residential satisfaction, there have been numerous efforts, in recent years, to define a comprehensive conceptual framework directed to synthesize and schematize the manifold factors affecting the degree of residential satisfaction, and the relations amongst them (e.g. Amerigo & Aragones, 1997; Bonaiuto *et al.*, 1999; Parkes *et al.*, 2002). Also in this frame of reference, a major distinction is made between the objective indicators describing the location and the population investigated, and the indicators employed to assess the subjective attitudes and evaluations of the location of residence (Adriaanse, 2007). Namely, objective indicators are employed to assess *how* the degree of residential satisfaction varies across different locations, and in relation to individual and household characteristics. As already mentioned, subjective indicators are instead directed to explain *why* the degree of residential satisfaction varies according to the locational, individual and household background, namely by assessing and confronting the role played by single factors in influencing residential satisfaction.

Because of the significant (negative) correlations between residential satisfaction and propensity to move recorded in the studies dealing with these topics, it is somewhat complicated to distinguish between factors of residential satisfaction, and factors of propensity to move. In fact, if we accept the model proposed by Speare (1974), we would expect that an increase in the degree of residential satisfaction will determine an analogous decline of the desire to leave the location of residence, whereas a decrease in the

degree of residential satisfaction will foster the desire to move. Accordingly, every factor affecting the subjective evaluation of the location of residence could be expected to produce an equal and opposite effect on the propensity to move. However, because the studies dealing with residential satisfaction and propensity to move tend to focus on the relation between the two notions, they often fail to consider whether the factors affecting the first are also responsible for affecting the second. As a consequence, we do not dispose of sufficient empirical evidence in order to corroborate our expectations. Consistently, while investigating the relation between residential satisfaction and propensity to move among the inhabitants of Kirovsk and Nikel, it will be interesting to analyze whether there is indeed a parallelism between the effect of single factors on the degree of residential satisfaction, and on the propensity to move.

In the present section, we omit to discuss the effect of objective factors on the global evaluation of the location of residence, for this would inevitably create redundancies with what has been said in section 3.1 concerning the effect of locational, individual and household factors on the propensity to move. Instead, we are now going to debate about the diverse subjective factors which can be deemed to affect residential satisfaction, and which could be expected to have a more or less direct effect on the propensity to move. As already announced, the relations between objective factors and single subjective aspects of residential satisfaction will be discussed more in detail in the following sections.

### **3.2.2 Convenience, social and emotional aspects of residential satisfaction**

As we have seen in previous paragraphs, the concept of residential satisfaction can assume different connotations depending on the context and purposes of research. Accordingly, the number and type of subjective factors that are employed in order to analyze the degree of residential satisfaction can vary considerably from study to study. Nevertheless, while reviewing the literature dealing with residential satisfaction and analogous notions, such as neighborhood and community satisfaction, it is possible to recognize a number of indicators which recur frequently across the different studies on the subject.

The first type of subjective factors that we encounter in the literature dealing with residential satisfaction pertains to the subjective evaluation of those aspects which can be deemed to enhance (or to worsen) the practicality, habitability and functionality of the location of residence in respect to subjective needs and expectations. Specifically, we define this type of factors as *convenience factors*, inspired by an analogous definition proposed by Fried (1984:90). According to Fried, these factors are represented by “indices that point to satisfaction with the immediate, local availability of resources (shopping, parks, recreation), with ease of access to more widely dispersed facilities (cultural, sports, age-graded services), and with the convenience of school and work locations and a general index of satisfaction with the convenience of the local area including access to transportation”. In this category, it is also possible to include what Fried defines as “local residential satisfaction”, which refers to the subjective evaluation of the quality of the dwelling, and of the environment in its immediate vicinity. In line with this definition, we introduce the notion of *convenience satisfaction* in order to represent any aspect of residential satisfaction which refers to the evaluation of convenience aspects attributable to the dwelling and to the community of residence.

As suggested by the definition proposed by Fried, the inclusion of convenience factors in the analysis is likely to differ considerably depending on the range of analysis considered in the study. Pertaining to home satisfaction, for example, convenience factors can be referred to the subjective evaluation of specific housing characteristics, such as the size of the dwelling, the degree of maintenance, the quality of infrastructure, its relative location, etc. (Amerigo & Aragones, 1997; Adriaanse, 2007). As we widen the range of analysis to include the neighborhood and community level, convenience factors may refer to the

evaluation of a variety of aspects, including: the presence of occupational opportunities (Marans & Rodgers, 1975; Rodgers, 1980); the availability and quality of public services (Parkes *et al.*, 2002); the presence of other amenities, such as retail, cultural, and recreational facilities (Fried, 1984); and the quality of the environment - especially in regard to the presence of natural areas and to sources of pollution (Wasserman, 1982; Allen *et al.*, 1991; Howley, 2009). As already mentioned, the peculiar characteristics of Russian Arctic communities induce us to supplement these factors with others that are more inherent to our context of research, especially in the light of: the socio-economic development characterizing the regions of the Russian Arctic after the fall of the Soviet regime; and the severe climatic and environmental conditions experienced by the local population.

In addition to convenience factors, the scholars dealing with residential satisfaction generally include considering a variety of factors concerning the quality of social relationships established in the neighborhood and in the community of residence, which we define as *social factors*. Quoting Fried (1984:90), this type of factors “takes account both of locally available sources of interpersonal satisfaction and of the geographic distance of people with whom close social interaction is sustained. Thus it takes account of localism in interpersonal relationships generally, in addition to neighborhood interaction. The components are small-scale indices representing satisfactions with neighboring, closeness of interaction with closest friends, closeness of interaction with more peripheral friends, and the sense of neighborhood and community in the local area“. Under the label social factors, it is also possible to include other factors which pertains to the possibility for the resident to take part in the civil and political life of the neighborhood and the community of residence, for instance by getting involved in local clubs and associations, or by participating in local administrative elections (McAuley & Nutty, 1985; Allen *et al.*, 1991; Christakopolou *et al.*, 2001). Accordingly, we define *social satisfaction* any aspect of residential satisfaction related to the quantity and quality of social relationships established in the location of residence.

As already announced in the introduction, in order to address the complexity and multifacetedness of the social relationships linking people to their neighborhood and community of residence, we decided to recur to the extensive literature dealing with the notions of social cohesion (Lott & Lott, 1965; Cartwright, 1968; Hogg, 1992; Friedkin, 2004), social capital (Bourdieu, 1985; Portes, 1998; Putnam, 2000), sense of community (Sarason, 1974; McMillan & Chavis, 1986) and community attachment (Kasarda & Janowitz, 1974). In first place, by referring to the notions of social cohesion and social capital, we intend to obtain an exhaustive outlook on the type of social relationships that people may establish in the location of residence, both in regard to informal relations with relatives and friends, and to more formal type of relations, such as those which an individual establish with fellow neighbors and community members, or with local authorities. In addition to this, by referring to the literature of sense of community and community attachment, it is our intention to underline the symbolical and emotional contents which characterize the social relations that people establish in the ambit of the neighborhood and community of residence. Accordingly, by reviewing the literature dealing with the notions of social cohesion, social capital, sense of community and community attachment, it is our intention to compile a comprehensive list of social indicators, which we are going to employ as predicting variables of residential satisfaction and propensity to move later in our research.

In addition to convenience and social factors, it is possible to recognize a third typology of factors of residential satisfaction, which concerns the subjective appraisal of the physical environment of the location of residence. In this frame of reference, most studies dealing with neighborhood and community satisfaction include taking into account a variety of indicators, directed to assess how residents evaluate certain aesthetical features of the neighborhood and community of residence, for instance: the appearance

of buildings and open spaces, such as streets and squares; the presence of green and natural areas; and the planning of urban spaces (Bonaiuto *et al.*, 2003; Kearney, 2006; Hur & Morrow-Jones, 2008; Matsuoka & Kaplan, 2008). At the home level, these indicators may also refer to the subjective evaluation of the interiors and exteriors of the dwelling (Amerigo & Aragones, 1997). As the attention is set on the aesthetical appraisal of the dwelling, neighborhood and community appearance, however, most studies dealing with residential satisfaction fail to consider the emotional bonds that residents establish with the physical environment of the location of residence - although there are exceptions (e.g. Fried, 1982; Theodori, 2001; Bonaiuto *et al.*, 2003). Namely, in the studies dealing with residential satisfaction, the emotional bonds that people establish in the ambit of the location of residence are described merely in terms of social bonds and integration in the local community, while at the same, the notions of place attachment (Tuan, 1977; Shumaker & Taylor, 1983; Low & Altman, 1992) and place identity (Proshansky *et al.*, 1983; Breakwell, 1986; Twigger-Ross & Uzzell, 1996) are usually omitted from the investigation.

In order to overcome this lacuna, in section 3.5, we are going to review a number of contributions dealing with sense of place, place attachment and place identity. In our intentions, this review will enable us to highlight the emotional bonds linking people to the physical environment in which they live, and to discuss about the effects that such bonds may produce on the subjective evaluation of the location of residence, and on the desire to move. Also in this case, therefore, our review will be ultimately directed to the compilation of a list of subjective factors, to be employed as predictor variables of residential satisfaction and propensity to move later in our research. Namely, we decided to label this last typology of factors as *emotional factors*, and to define emotional satisfaction all those aspects of residential satisfaction that concerns the emotional bonds

### 3.3 CONVENIENCE ASPECTS OF RESIDENTIAL SATISFACTION

In the previous section, we proposed a brief review of the literature dealing with residential satisfaction, and we distinguished among three major typologies of subjective factors, which we labeled as convenience, social and emotional factors. Namely, by means of the term *convenience factors*, we indicate every aspect of residential satisfaction that refers “to satisfaction with the immediate, local availability of resources (shopping, parks, recreation), with ease of access to more widely dispersed facilities (cultural, sports, age-graded services), and with the convenience of school and work locations and a general index of satisfaction with the convenience of the local area including access to transportation” (Fried, 1984:90). In this typology, we decided to include also every pertaining to the subjective evaluation of housing conditions, namely in regard to those aspects which can be deemed to improve the habitability and practicality of the dwelling in respect to individual needs and expectations. Consistently with this definition, in the introduction, we proposed the notion of *convenience satisfaction* in order to represent any aspect of residential satisfaction which can be deemed to be affected by the subjective evaluation of convenience aspects ascribable to the dwelling, the neighborhood or the community of residence.



Although a great amount of literature has been written about the effect of convenience factors on the subjective evaluation of the dwelling (Morris *et al.*, 1976; Amerigo & Aragonés, 1990, 1997) and the community of residence (Marans & Rodgers, 1975; Wasserman, 1982; Fried, 1984; Bonaiuto *et al.*, 2003), we are compelled to reinterpret and complement the existing literature in relation to the specific characteristics of the community investigated in our research. In fact, as already suggested in the previous sections, the degree of residential satisfaction and propensity to move among the inhabitants of Russian Arctic communities could be influenced by certain peculiar factors, such as severe climatic and environmental conditions, which are generally neglected to be considered in the literature based in locations with temperate or warm climates. Moreover, the degree of residential satisfaction and propensity to move among the inhabitants of Kirovsk and Nickel could also be deemed to be affected by the specific historical and geographical background of these communities, as well as by the socio-economic development of the last two decades. Consistently, we should be aware that the convenience factors affecting residential satisfaction and propensity to move among the inhabitants of Kirovsk and Nickel may differ considerably from the ones taken into account in the general literature dealing with residential satisfaction and propensity to move, which is almost entirely based in North America, Western Europe, and Australia.

In order to discuss the convenience factors which may potentially affect residential satisfaction and the propensity to move among the inhabitants of Russian Arctic communities, we decided to discern once again between the home and the community range of analysis. Accordingly, in the first part of this section, we are going to discuss about the convenience aspects which can be deemed to affect the subjective evaluation of the dwelling. Following this, we look at the convenience aspects ascribable to the dwelling and the community of residence, and we discuss how residential satisfaction and propensity to move could be affected by the subjective evaluation of: the economic and occupational conditions; the availability of public services; the availability of other amenities, such as retail, cultural and recreational facilities; the environmental conditions.

### **3.3.1 Convenience aspects ascribable to the dwelling**

In the literature investigating residential satisfaction, considerable attention has been devoted to investigate how people evaluate certain aspects which can be deemed to improve the habitability, functionality and comfort of the dwelling of residence. Among these aspects, scholars have included considering: the type of housing; the overall quality of the housing infrastructure; the availability of space and rooms; the presence of comforts and commodities; the age of construction; the housing appearance; the degree of maintenance; and the degree of accessibility (Morris *et al.*, 1976; Gruber & Shelton, 1986; Amerigo & Aragonés, 1990, 1997; Myers *et al.*, 1997). Additionally, some authors (Rex & Moore, 1967; Clark & Burt, 1980; Kim *et al.*, 2005) have included considering the relation between residential satisfaction and the location of the dwelling in respect to the workplace, to public services and to other amenities; however, given the small dimensions and relative isolation of the communities taken as study cases in our research, we deem this indicator to be superfluous in our context of study.

The contributions mentioned above provide us with information concerning the effect that certain locational factors ascribable to the dwelling may produce on the degree of home satisfaction, hence on the propensity to leave home. Furthermore, these contributions offer useful insights concerning the relation between individual and household background, and the subjective evaluation of single aspects of the dwelling. Namely, the subjective evaluation of dwelling characteristics can be expected to be more positive

among homeowners than among renters, possibly in regard to objective differences between the quality of private and rented dwellings (Morris *et al.*, 1976; Walker *et al.*, 2002). In addition to this, scholars have demonstrated that the evaluation of housing conditions may vary in relation to other factors, such as gender, age, income, and marital status (Newman, 1975; Morris *et al.*, 1976; Myers *et al.*, 1997). Moreover, changes in the household compositions, such as marriages and childbirths, can be expected to transform the individual and housing needs, hence to substantially affect the propensity to leave home (Speare, 1970; Gober *et al.*, 1991; Myers, 2000; Duncombe *et al.*, 2003; Michielin & Mulder, 2008). Although these studies provide substantial proves of the relation between the individual and household background on one hand, and the evaluation of living conditions and the propensity to leave home on the other, the degree of significance of single indicators varies considerably from study to study.

### **3.3.2 Convenience aspects ascribable to the community of residence**

As already mentioned, the degree of community satisfaction can be deemed to vary considerably depending on the objective characteristics of the community of residence. Namely, we argued that people may evaluate the community of residence in regard to a variety of desirable features, including: the availability of occupational opportunities and the quality of economic conditions (Marans & Rodgers, 1975; Rodgers, 1980); the availability and quality of public services (Fried, 1984; Gruber & Shelton, 1986; Allen *et al.*, 1991); the presence of amenities, such as retail, cultural and recreational facilities (Fried, 1984; Bonaiuto *et al.*, 1999, 2003) and the quality of environmental conditions (Wasserman, 1982; Bonaiuto *et al.*, 2003). Accordingly, in the following paragraphs, we are going to discuss more in detail about the effect that single convenience factors may produce on the subjective evaluation of the community of residence among the inhabitants of Kirovsk and Nikel.

The first type of convenience factors that we encounter in the literature dealing with community satisfaction concerns the evaluation of economic conditions, and of occupational opportunities available in the community of residence (Marans & Rodgers, 1975; Rodgers, 1980; Allen *et al.*, 1991; Christakopoulou *et al.*, 2001; Theodori, 2001). In this frame of reference, the degree of satisfaction with economic and occupational conditions can be measured by means of different indicators concerning the evaluation of: the availability of and accessibility to job opportunities and good salaries; the possibility to achieve better jobs and to make career; the cost and availability of housing, utilities, services and goods. As already suggested, the subjective evaluation of economic and occupational aspects may play a decisive role in affecting the global evaluation of the community of residence among the inhabitants of Kirovsk and Nikel, in consideration of the substantial contraction of the local economy in the last two decades. Moreover, the poor evaluation of economic and occupational conditions that we expect to find among the inhabitants of Kirovsk and Nikel may provide useful information concerning the extent and distribution of propensity to move among the local population.

Another type of convenience factors that can be recognized in the literature dealing with neighborhood and community satisfaction concerns the subjective evaluation of the availability, accessibility, and quality of public services offered in the location of residence (Wasserman, 1982; Fried, 1984; Gruber & Shelton, 1986; Allen *et al.*, 1991; Christakopoulou *et al.*, 2001; Parkes *et al.*, 2002; Hur & Morrow-Jones, 2008; Lee *et al.*, 2008; Kim *et al.*, 2005). Among the public services taken into account in the literature, the most common are: schooling; healthcare and social services; police and fire departments; public transport and infrastructures. In addition to these, several studies have included considering how residential satisfaction can be affected by the sense of safety and security, and by the subjective perception of criminality in the

neighborhood and the community of residence (Hartnagel, 1979; Andersen, 2008; Wood *et al.*, 2008). Finally, there are numerous studies which take into account the relations between the degree of residential satisfaction on one side, and the subjective evaluation of other amenities available in the neighborhood and community of residence, including: retail; cultural facilities, such as museums, libraries, theaters, etc.; and leisure and recreational facilities, such as sport centers, bars, clubs, etc. (Fried, 1984; Bonaiuto *et al.*, 1999, 2003; Matsuoka & Kaplan, 2008). Specifically, the subjective evaluation and the frequentation of such amenities are also deemed to play an important role in influencing the degree of community attachment (Brehm, 2007).

As already mentioned, the degree of satisfaction with public services available in the community of residence can be expected to vary considerably depending on the individual and household background of the population investigated. For instance, people's needs and expectations in regard to public services may vary considerably depending on the age and on the presence of children in the household, as older people may request good healthcare facilities, while parents may also request appropriate schools and kindergartens (Long *et al.*, 1972; Speare & Goldscheider, 1975; Roberts *et al.*, 1983; Trent *et al.*, 1984). At the same time, the satisfaction with public services can also be deemed to vary depending on the household income, as people with higher incomes may recur to the services offered by private providers, while people with lower incomes may not afford to recur to private services. Moreover, we can expect that also the degree of satisfaction with cultural and recreational facilities may vary considerably depending on the individual and household background: for instance, young people may be interested in places of social aggregation for the youth, such as bars and clubs; parents may request parks for their children; educated people may request museums and libraries, etc.

Among the inhabitants of Russian Arctic communities, the evaluation of public services offered in the community may produce a considerable effect not only on the degree of residential satisfaction, but also on the propensity to move. In fact, as we have seen in chapter 2, the gradual restructuring and privatization of the social welfare that was carried out in the Russian Federation after the fall of the Soviet regime determined a dramatic reduction of the quantity and quality of services offered. According to some scholars (Akopov & Gadzhiev, 2008; Cerami, 2009), the restructuring of the social welfare has particularly penalized the population of more peripheral and remote regions, while major cities and core regions saw the mushrooming of private schools and healthcare institutes. Accordingly, the differential between the services offered in Kirovsk and in Nickel can be deemed to produce different outcomes on the subjective evaluation of the community of residence among the local inhabitants.

The last type of convenience factors ascribable to the community of residence concerns the subjective evaluation of the quality of environmental conditions. Namely, there are several studies which include considering how the degree of community satisfaction is affected by the evaluation of: the presence of green and natural areas; the presence of sources of pollution; the contamination of the air and waters; the presence of urban traffic and acoustic pollution (Allen *et al.*, 1991; Bonaiuto *et al.*, 1999, 2003; Matsuoka & Kaplan, 2008). At the same time however, there is still a lack of information concerning the relation between residential satisfaction and the subjective evaluation of the climate, although there is evidence showing that climatic and meteorological conditions may produce a considerable effect on the subjective physical and psychological wellbeing (Song *et al.*, 2007; Kerr *et al.*, 2010). As already mentioned, environmental and climatic conditions may play an important role in influencing residential satisfaction and propensity to move among the inhabitants of Russian Arctic communities. Namely, the rigid temperatures and hazardous weather conditions may put people's health and safety at risk, cause damage and wear to possessions and infrastructures, and hamper outdoor activities for several months a year. Moreover, the

prolonged periods of darkness and daylight may represent an additional cause of distress among the populations living beyond the Arctic Circle; however, no documentation on the issue could be retrieved. Finally, the heavy pollution due to industrial and mineral activities can be deemed to further exacerbate the quality of living conditions among the local population.

### **3.4 SOCIAL ASPECTS OF RESIDENTIAL SATISFACTION AND PROPENSITY TO MOVE**

As already documented in numerous studies, the social bonds that people share with kin and friends living in the same community, as well as the subjective attitudes towards neighbors and fellow community members, can be deemed to play a fundamental role in influencing both the degree of residential satisfaction (Bonaiuto *et al.*, 1999, 2003; Adriaanse, 2007; Hur & Morrow-Jones, 2008) and the propensity to move (Speare, 1966, 1970, 1974; Johnson *et al.*, 2005). In addition to this, studies have shown that the degree of residential satisfaction could also be influenced by the degree of social interaction among neighbors and community members, and depending on the degree of participation and involvement in the social and political life of the community (Goudy, 1977; Fried, 1984; Herting & Guest, 1985; Filkins *et al.*, 2000). Accordingly, in the introduction, we introduced the notion of *social satisfaction*, in order to describe every aspect of residential satisfaction ascribable to the social relations that an individual may establish in the ambit of the location of residence.

In the present section, we are going to debate more in detail about the social factors affecting residential satisfaction and the propensity to move among the population of Russian Arctic communities. As already lamented in the introduction, this task is complicated by the shortage of information pertaining to the social attitudes and behaviors among the population of the Russian Arctic. Namely, we could not find any scientific literature dealing with the notions of social cohesion, social capital, sense of community or community attachment in the context of Russian Arctic communities; at the same time, the contributions dealing with such notions in the context of the Russian Federation are still rather limited (Marsch, 2000; Hudson, 2003; Domrin, 2003; Twigg & Schechter, 2003; Walker, 2010). In order to overcome this lack of information, in the present section, we are going to review a number of studies dealing with the social aspects of residential satisfaction and propensity to move, as well as a variety of contributions dealing with the notions of social cohesion, social capital, sense of community, and community attachment. Namely, the goal of this review is to define a comprehensive list of indicators describing the social relations that people establish in the ambit of the location of residence. In our intentions, these indicators will enable us to later investigate the relation between single social factors on one side, and the degree of residential satisfaction and propensity to move on the other. Furthermore, these indicators could provide us with useful and much needed information concerning the quality of social relations among the inhabitants of Russian Arctic communities.

In line with the objectives stated above, the present section is organized as follows. Firstly, we analyze the social relations that people may establish in the ambit of the community of residence, and we discuss about the effects of different types of social relations on the overall evaluation of the location of residence, and on the propensity to move. Following this, we look more in detail at the social relations between fellow neighbors and community members, both in terms of social interaction, and in terms of subjective perceptions, attitudes and behaviors; also in this case, we include considering how neighborhood and community relations may affect both residential satisfaction and propensity to move. Finally, we focus on the individual involvement in local associationism and political affairs and on the factors influencing the subjective participation in the social and political life of the community, underlining the potential relations between these factors and residential satisfaction.

### **3.4.1 Social relations in the ambit of the location of residence**

When investigating social relations in the ambit of residential satisfaction and propensity to move, authors generally discern among two main typologies of social relations which individuals share with other members of the community of residence. The first typology refers to the bonds that people may share with relatives and friends living in the same dwelling, neighborhood and community. Specifically, the vicinity to relatives and friends is deemed to play a remarkable role in enhancing the subjective evaluation of the location of residence (Amerigo & Aragones, 1990, 1997; Adriaanse, 2007; Hur & Morrow-Jones, 2008; Fried, 1984; Bolan, 1997; Gustafson, 2001). In addition to this, there are numerous studies which show that the vicinity to relatives and friends may have profound effects on the propensity to move (Speare, 1966, 1970, 1974; Johnson *et al.*, 2005; Chow & Healey, 2008), for different reasons. In first place, the presence of relatives and friends living in the same community can be deemed to increase the chances of social interaction with fellow neighbors and community members, and thus to increase the degree of individual integration in the local community (Dawkins, 2006). Furthermore, the vicinity to kin and friends may represent a fundamental source of support and solidarity, especially in regard to more vulnerable categories, such as elderly, widows, and single mothers (Madigan & Hogan, 1991; Schwirian & Schwirian, 1993; Astone & McLanahan, 1994). Moreover, the quantity and intensity of social bonds established in the location of residence can be deemed to produce a substantial effect also on the degree of community attachment, as well as on the degree of identification with the community (Goudy, 1981; Sampson, 1988; Paxton & Moody, 2003; Crowe, 2010).

The second type of social relations considered in the literature dealing with residential satisfaction and propensity to move pertains to those relations that an individual establish with other people residing in the same block, neighborhood, or community of residence. In this frame of reference, the subjective perceptions and attitudes towards other people residing in the same location, as well as the frequency and quality of social interaction among fellow neighbors and community members, are often regarded to be important factors influencing the degree of satisfaction with the dwelling and the community of residence (Amerigo & Aragones, 1990, 1997; Adriaanse, 2007; Hur & Morrow-Joens, 2008; Shields *et al.*, 2009). The effect of social relations with neighbors and community members on the degree of residential satisfaction is supported by the role that such relations play in increasing the degree of integration of the individual in the neighborhood or community of residence (Ross & Jang, 2000; Forrest & Kearns, 2001; Crowe, 2010). Namely, positive attitudes among neighbors and fellow community members can be deemed to increase the chances of social interaction, and to constitute a source of mutual support and solidarity - although in a different and less intense form than among relatives and friends (McAuley & Nutti, 1985; Schwirian & Schwirian, 1993; Shield, 2007). In addition to this, positive relations can also be deemed to foster

cooperation and associationism among neighbors and community members, which may be directed to the improvement of the neighborhood/community of residence, or to the preservation of certain landmarks, etc. (Chavis & Wandersman, 1990; Ohmer, 2007; Anderson, 2009; Shields *et al.*, 2009). Moreover, the subjective attitudes and the quality of social interaction among fellow neighbors and community members can also be deemed to improve the degree of attachment to and identification with the neighborhood and community of residence (Riger & Lavrakas, 1981; Prezza *et al.*, 2001; Crowe, 2010; Lee & Kim, 2010; Toney, 1976; McAuley & Nutty, 1985).

In virtue of the remarkable effects produced on the degree of residential satisfaction, the social relations that an individual establish in the location of residence are deemed to play a determinant role in influencing the propensity to move. Specifically, several authors underlined the fact that the propensity to move is significantly higher among short-term residents than among long-term residents (Speare, 1974; Toney, 1976; Cuba & Hummon, 1993; Randall *et al.*, 2007). To some extent, this could be explained with the fact that people who have resided in the same location for a longer period of time usually display more and deeper social relations in that location than people who have just moved in. Consistently, also the propensity to move can be deemed to be substantially influenced by the quantity and quality of social relations established in the neighborhood and community of residence, and especially, by the vicinity to relatives and friends (Myers *et al.*, 2000; Johnson *et al.*, 2005; Chow & Healey, 2008). Furthermore, long-term residents can be expected to be comparatively more integrated in the social environment of the block, neighborhood, and community of residence than short-term residents, and thus to be more likely to entertain relationships of mutual support and cooperation with the neighbors. Accordingly, the propensity to move could be deemed to depend on the degree of mutual support and on the dependence on such support, especially among the more vulnerable categories of the population (Wellman & Wortley, 1990; Schwirian & Schwirian, 1993; Duran-Aydintug, 1998; Thuen & Eikeland, 1998; Miller *et al.*, 1998; Amato, 2000; Terhell *et al.*, 2004).

As the presence of numerous and intense social relations in the location of residence is found to increase the degree of residential satisfaction and to weaken the propensity to move, the lack of social relations, or the presence of negative relations, can be expected to produce an opposite outcome. For instance, the sense of loneliness and the lack of social interaction, as well as the distance from kin and friends living elsewhere, may produce a negative effect on the subjective evaluation of the location of residence (Prezza *et al.*, 2001; Fingerman *et al.*, 2004), and prompt the desire to move (Palo Stoller & Longino, 2001). As already discussed, the lack of social relations and the distance from relatives and friends is likely to be more frequent among short-term residents, especially among people who have just moved in the community, and among and temporary residents. Among the inhabitants of Russian Arctic communities, however, the number and intensity of social relations could be negatively affected by the conspicuous emigration flows occurred during the post-Soviet period, as many local residents have seen their relatives, friends and neighbors leaving the community. Accordingly, long-term residents may feel more and more lonely and detached from their kin and friends, and this may foster the desire to migrate elsewhere.

### **3.4.2 Social interaction among neighbors and community members**

As argued by Laumann (1973:111; quoted in Friedkin, 2004:416), “intimate face-to-face interaction, whether in dyadic or larger group relationships, has long been recognized to be of crucial importance in the formation of an individual’s basic personality or self-conception [...], the development and maintenance of myriad attitudes towards the world, the determination and social control of “appropriate behavior” [...],

and the maintenance of a 'motivational commitment to participate' [...]. Indeed, the intimate face-to-face group is often held to form the critical 'primary environment' by which an individual is related to the larger society". Because of its remarkable impact on the individual wellbeing and on social attitudes and behaviors, the frequency and quality of social interaction has been treated as fundamental predictors of social cohesion (Forrest & Kearns, 2001; Friedkin, 2004), social capital (Middleton et al., 2005; Putnam, 1995, 2000; Forrest & Kearns, 2001), sense of community (McMillan & Chavis, 1986; Chavis & Wandersman, 1990; Borroughs & Eby, 1998; Prezza *et al.*, 2001), and community attachment (Riger & Lavrakas, 1981; Hummon, 1992). Among the literature analyzing the social aspects of residential satisfaction and propensity to move, however, the frequency and quality of social interaction is usually excluded from the list of factors, possibly in the light of redundancies with other indicators related to the quantity and quality of social ties - although there are exceptions (e.g. Christakopolou et al., 2001; Bonaiuto *et al.*, 1999, 2003; Hur & Morrow-Jones, 2008). Accordingly, we decided to include considering how social interaction may affect the subjective evaluation of the location of residence, and the propensity to move.

Social interaction among neighbors and fellow community members may assume very different forms. In first place, we already discussed about the occasional interaction that may occur among neighbors, for instance in the occasion of exchanges of mutual favors. In addition to this, social interaction may also refer to the participation to the frequentation of public spaces where social interaction is likely to occur. Accordingly, indicators of social interaction may include the frequentation of church services and local associations and clubs, as well as the participation in leisure, recreational or cultural activities involving a discreet number of people. Namely, this type of interaction can be deemed to foster the individual integration in the social environment of the community of residence (Ellison & George, 1994; Theodori, 2001), as well as to increase the degree of attachment to and identification with the community (Chavis & Wandersman, 1990; Bolan, 1997; Brehm, 2007; Rogers & Sukolratanamete, 2009; Wood *et al.*, 2010). As documented in the studies by Low (1992) and Prezza *et al.* (2001), the degree of sense of community and community attachment may be particularly enhanced by the participation to particular events and manifestations, such as local celebrations and traditional festivities. Finally, we should remind that social interaction, as well as the values and meanings attributed to it, may vary substantially depending on the specific cultural background of the population investigated.

The forms and frequency of social interaction among people living in the same location may depend on a multitude of different factors. In first place, it is clear that social interaction may vary substantially depending on the individual and household background (age, gender, length of residence, marital status, household composition, etc.). For instance, young people can be expected to display more recurrent social interaction, and to aggregate in different places and with different modalities than older people. Moreover, a catalytic factor affecting social interaction is the number and intensity of social relations that an individual share with other people living in the same community, especially in regard to kin and friends, but also in regard to neighbors and co-workers (Borroughs & Ebi, 1998). In fact, the participation in social activities can be deemed to increase the chances of establishing new social relations, while reinforcing already existing ones (Friedkin, 2004; Brehm, 2007). Consistently, people who display more numerous and intense social ties in the location of residence are more likely to interact with fellow neighbors and community members, and this allows them to further increase in the number of social ties established in the location of residence.

Among the inhabitants of Russian Arctic communities, the degree of social interaction may be affected from the same factors which are likely to affect the quantity and quality of social relations among neighbors and fellow community members. Namely, the widespread social issues and the progressive depopulation of

Russian Arctic communities may decrease the chances of social interactions among local inhabitants. However, the precarious social and economic conditions experienced by the local population may also increase the opportunity of social interaction based on the exchange of mutual support and cooperation. Moreover, the degree of social interaction among the inhabitants of Kirovsk and Nickel may depend on the presence of locations and facilities where cultural and recreational activities can be performed, and where people can come together and interact (bars, retail and sport centers, libraries, palaces of culture, etc.). In fact, social interaction is likely to occur prevalently in enclosed spaces during winter months, when the extreme climatic and environmental conditions hinder most activities in the open air.

### **3.4.3 Attitudes towards neighbors and community members**

In the literature dealing with residential satisfaction and propensity to move, there are several studies which include considering how subjective perceptions and attitudes towards neighbors and fellow community members affect the evaluation of the location of residence (Newman, 1975; Gruber & Shelton, 1986; Bonaiuto *et al.*, 2003; Adriaanse, 2007; Hur & Morrow-Jones, 2008; Shields *et al.*, 2009). As documented in these studies, people who perceive their neighbors and community members as friendly, generous, civil and well-mannered are also more likely to evaluate their location of residence in positive terms, and to display a lower propensity to move. As a general rule, however, the studies dealing with residential satisfaction fail to consider certain aspects ascribable to neighborhood and community relations, such as mutual tolerance, trust and solidarity, notwithstanding the important role that these aspects play in fostering social cohesion (Friedkin, 2004), social capital (Forrest & Kearns, 2001), and sense of community (Nasar & Julian, 1995; Prezza *et al.*, 2001; Long & Perkins, 2007). Accordingly, in the following paragraphs, we are going to devote our attention to the subjective perceptions and attitudes that people may display towards fellow neighbors and community members, in virtue of their potential effects on the evaluation of the community of residence, and on the propensity to move.

As documented in the literature dealing with social cohesion, the subjective attitudes towards fellow community members can be influenced by the social and ethnic composition of the community population, as well as by the degree of mutual tolerance and respect among the various groups represented in the community (Friedkin, 2004; Shields *et al.*, 2009). According to these authors, social cohesion is stronger in communities where members display a uniform cultural, religious and ethnic background, as uniformity facilitates interpersonal communication and interaction among community members. On the contrary, in communities where different ethnic or religious groups are present, and in those affected by episodes of intolerance and conflict, the degree of social integration is likely to be lower (Shields *et al.*, 2009). Consistently, social attitudes and perceptions towards fellow community members can be deemed to be more positive among people who share the cultural, ethnic or religious background that is prevalent among community members, and who identify themselves with the community of residence (Twigger-Ross & Uzzell, 1996). On the contrary, the degree of sense of community and community attachment can be expected to be lower among people who suffer discrimination, and among those who perceive cultural and ethnic differences as a problem rather than as a resource (Gruber & Shelton, 1986; Prezza *et al.*, 2001; Pooley *et al.*, 2005).

Another important aspect characterizing social relations in the ambit of the location of residence is the degree of mutual trust and solidarity among neighbors and community members, a topic which is largely debated in the literature on social cohesion and social capital. Specifically, scholars have shown that a sense of mutual trust and solidarity is a precondition for the establishment of relationships of mutual support and cooperation among neighbors and community members (Doolittle & MacDonald, 1978; Chavis



& Wandersman, 1990). Moreover, the establishment of relationships of mutual trust and solidarity may contribute to foster a sense of security and safety among neighbors and community members (McMillan, 1996; Hartnagel, 1979; Bonaiuto *et al.*, 2003; Gold & Reville, 2003; Wood *et al.*, 2008). Furthermore, mutual trust and solidarity can foster cooperation among neighbors and community members, and prompt the individual involvement in local associations and politics, while improving the sense of self-efficacy, and of counting in local decision-making processes (Nasar & Julian, 1995; Anderson, 2009). Also in this case, the establishment of relationships of mutual trust and solidarity is likely to produce a positive effect on sense of community and community attachment, as well as on the overall evaluation of the neighborhood and the community of residence.

In the context of Russian Arctic communities, the social attitudes towards neighbors and community members may be negatively influenced by the precarious economic and social conditions experienced by the local population in the last two decades. For instance, the increasing gap between richer and poorer, as well as the spreading of ultra-nationalistic and xenophobic attitudes among the Russian population (Price, 2007; Tsylev & Mulina, 2010), may foster intolerance and social conflicts between classes, and between ethnic and religious groups. However, this may not be the case of the Province of Murmansk, which presents a large majority of Russian ethnics, and only sensible minorities of Byelorussians and Ukrainians (see table 2.5). Also, it is possible that the social and economic problems of the last two decades may have strengthened the relationships of mutual support and solidarity among local inhabitants, producing a positive effect on the subjective perceptions and attitudes neighbors and fellow community members.

#### **3.4.4 Associationism and political involvement**

In the literature dealing with residential satisfaction, several authors have included considering whether, and how, the evaluation of the locations of residence varies in relation to the degree of associationism of local residents, and to the degree involvement in local associations and politics. The way in which such relation is assessed, however, varies consistently from study to study. For example, scholars such as Hur & Morrow-Jones (2008) looked at the relation between residential satisfaction and the degree of involvement and cooperation among neighbors. Moreover, scholars have related residential satisfaction to the degree of involvement and participation in local politics, to the degree of satisfaction with the local government, and to the possibility of affecting local decision-making processes (Fried, 1984; McAuley & Nutty, 1985; Christakopoulou *et al.*, 2001; Theodori, 2001; Adriaanse, 2007). In addition to this, it is possible that the degree of residential satisfaction may also be affected by the participation in local associations and clubs; however, there is still a lack of information concerning this issue. In order to obtain an exhaustive outlook over the relation between the subjective involvement in local associations and politics on one side, and residential satisfaction on the other, we refer once again to the wider literature dealing with social cohesion, social capital, and sense of community.

According to several scholars, the involvement in local associations and politics can be retained to be a fundamental indicator of both social cohesion (Friedkin, 1994; Forrest & Kearns, 2001; Chen *et al.*, 2006) and social capital (Middleton *et al.*, 2005; Putnam, 1995, 2000; Forrest & Kearns, 2001). Namely, these studies confirm that associationism and political involvement are likely to emerge in communities where social ties are numerous and intense, where social interaction is frequent, and where community members display positive social attitudes towards each other. Additionally, associationism and political involvement may represent an opportunity to increase social interaction and to improve social relations among neighbors and community members, and are considered to be important indicators of sense of community (Sarason, 1974; McMillan, 1996; Glynn, 1981; Chavis & Pretty, 1999; Long & Perkins, 2007). In fact, people

who identify themselves with the community and who care about the quality of the environment in which they live are more likely to display some form of social involvement than those who feel emarginated from the community. At the same time, social involvement may improve the sense of self-efficacy among community members, and thus reinforce the sense of community amongst them.

As already mentioned, one of the most simple forms of social involvement is represented by the participation in different kinds of associations, such as recreational and cultural clubs, religious and voluntary associations, and civic, labour and political movements (Ellison & George, 1994; Heuser, 2005). As already discussed, the participation in associations depends to a great extent on the quantity and quality of social relations that an individual establish in the location of residence. Namely, people who display numerous social relations, frequent social interaction, and positive attitudes towards neighbors and fellow community members, are also more likely to get involved in associations than those who do not (Bolan, 1997; Long & Perkins, 2007; Peterson *et al.*, 2008). At the same time, the participation in local associations may represent an opportunity of social bonding and social interaction, and thus contribute to reinforce the sense of community and the cohesion among community members (Ohmer, 2007; Peterson *et al.*, 2008; Anderson, 2009). Consistently, it is fair to expect that the degree of associationism may be positively correlated with the degree of community satisfaction.

Another form of social involvement is the participation in the political life of the community of residence. Typical indicators of this type of involvement may include the attendance to local elections, the participation to civic consultancies and political debates, and the degree of awareness concerning local politics and institutions (McAuley & Nutty, 1985; Davidson & Cotter, 1989; Chavis & Pretty, 1999). As documented in these studies, the degree of involvement in community affairs is likely to be higher among people who feel integrated in the community of residence, and who display a strong sense of community. Namely, political involvement can be expected to be higher among those who nurture interest in the sorts of the community of residence, and among those who retain that the public opinion is taken into account by local governors (Christakopolou *et al.*, 2001; Ohmer, 2007; Long & Perkins, 2007; Anderson, 2009). Accordingly, political involvement can be expected to be higher in those communities where citizens are prompted to take part in local politics, and where decision making processes are transparent and open to the contributions of the public. The evaluation of these aspects and of local politicians may eventually affect the overall evaluation of the community of residence (Fried, 1984); however, it is unlikely that such factors alone may actually play any relevant role in influencing the propensity to move.

While there is an increasing literature dealing with social capital and political participation in the context of post-Soviet countries (Marsch, 2000; Twigg & Schecter, 2003), there is still a lack of research pertaining to the extent of associationism and political involvement in the context of Russian Arctic communities. Consistently, it is impossible for us to foresee what effect these factors may produce on the degree of residential satisfaction among the inhabitants of these communities. However, it is possible that the worsening of social conditions and the spreading of criminality and other social issues may have determined a decline in degree of associationism and political involvement among local inhabitants. Moreover, political involvement may be discouraged by certain aspects of Russian society, such as: the lack of a strong civic society; the high rates of corruption among institutional and political figures; and the low level of democratization and transparency in decision-making processes (Levin & Saratov, 2000; Domrin, 2003; Hudson, 2003; Ledeneva, 2006; Lemaître, 2006; Taylor, 2006).

### 3.5 EMOTIONAL ASPECTS OF RESIDENTIAL SATISFACTION AND PROPENSITY TO MOVE

In the previous section, we highlighted the important effect that social relations and social interaction may produce on the degree of attachment to and identification with the community of residence, as well as on the overall evaluation of the location of residence. In addition to this, several authors have pointed out the subjective evaluation of the location of residence may be considerably affected by the aesthetical and emotional appraisal of the physical environment of the dwelling, the neighborhood and the community of residence (Amerigo & Aragonés, 1997; Theodori, 2001; Bonaiuto *et al.*, 2003; Kearney, 2006; Hur & Morrow-Jones, 2008; Matsuoka & Kaplan, 2008). Consistently, beside convenience satisfaction and social satisfaction, we introduced the notion of *emotional satisfaction*, in order to define every aspect of residential satisfaction relatable to the emotional appraisal of the physical environment of the location of residence. In order to provide an exhaustive outlook of the emotional factors which may affect residential satisfaction and propensity to move among the inhabitants of Russian Arctic communities, we then announced our intention to delve more in deep in the literature investigating the emotional bonds linking people to the environment in which they live.

The emotional bonds that people establish in the location of residence have been represented by means of different and interrelated concepts and terminologies, which are often hard to distinguish in virtue of the frequent overlapping amongst them. In this frame of reference, a major distinction can be made between the studies adopting a place perspective, and those adopting a community perspective. As argued by Koons Trentelman (2009:203), “for place scholars, a community is just another place to consider the relationships between humans and their localities, another setting to examine attachment to place or sense of place - it is mainly an issue of scale. For community sociologists, on the other hand, the community is the setting for particular types of social relationships that vary from those in other kinds of locales. [...] In other words, for place scholars, community attachment can be seen as attachment to a type of place, while for community sociologists, community attachment is one of many social dynamics within a community”. In addition to this, the emotional appraisal of the location of residence can be also defined in terms of attachment to physical environments and places, and attachment to people. In this frame of reference, Riger & Lavrakas (1981) discriminated between physical *rootedness* and social *bonding*; Taylor *et al.* (1985) distinguished between physical *rootedness and involvement* and social *local bonds*; while Hidalgo & Hernandez (2001) defined these simply as *physical* and *social attachment*.

As we already devoted much attention to the effect of social factors on the degree of residential satisfaction, and to the factors affecting sense of community and community attachment, we omit to treat these topics again in the present section. Accordingly, we are now going to focus on the symbolical and emotional bonds that people establish with the physical environment of their location of residence, in order to obtain an exhaustive overview over the emotional factors which may affect residential satisfaction and propensity to move. Consistently, in the first part of this section, we are going to discuss about the notions of sense of place, place attachment and place identity, which allow us to focus on the relation between physical environment and emotional appraisals. Following this, we introduce on the notion of sense of belonging, which refers to the degree of emotional attachment to the home. Finally, we discuss about the manifold factors which may affect the aesthetical and emotional appraisal of the neighborhood and of the community of residence.

### 3.5.1 Sense of place, place attachment, and place identity

Research on sense of place and place attachment commenced in the late 1950s, thanks to the works by phenomenological scholars such as Eliade (1959), Fried (1963), and Bachelard (1964), and was further developed in the next decades by a second generation of phenomenologists dealing with environment-behavior issues, such as Tuan (1975, 1977), Relph (1976), and Proshansky *et al.* (1983). Earlier works on people-environment relationships usually focused on the mechanisms of cognitive functioning and on the role of environmental determinants, so that the whole research on the topic was confined within the domains of cognitive and environmental psychology. The phenomenologists had the merit to open up the whole debate on people-environment relationships, bringing the focus on subjective and social experience rather than on psychological processes and environmental determinants. Other major elements of innovation were the introduction of the concepts of place and people-place bonding, as well as a new emphasis on change within social groups (Low & Altman, 1992). From the 1970s onwards, the phenomenological argumentations attracted the attention of many psychologists, sociologists, and human geographers, favoring an evolvement of the debate towards multidisciplinary and holistic approaches (Giuliani, 2003).

The concept of *sense of place* usually refers to the symbolical and cognitional aspects of place, while the concept of *place attachment* to the emotional ones. The concept of sense of place encompasses all those meanings that allow an individual to identify a place from the surrounding space, and to give it a character of uniqueness and originality. According to Steel (1981:9), sense of place is the outcome of an experiential process “created by the [spatial] setting combined with what a person brings to it. In other words, to some degree we create our own places, they do not exist independent of us”. However, according to Hummon (1992:262), the nature of sense of place is not merely symbolical but also emotional, as he states: “sense of place involves a personal orientation toward place, in which one’s understandings of place and one’s feelings about place become fused in the context of environmental meanings”. According to Kyle *et al.* (2004), instead, the concept of place attachment should be considered as a specific dimension of the overarching concept of sense of place, as the term attachment implies a positive relationship with place, while sense of place has a neutral connotation, and is therefore more appropriate to define both positive and negative feelings towards the place considered.

The empirical and theoretical work on place attachment represents a consistent portion of the whole literature on place studies. As like as other place-related concepts, many scholars trace the concept of place attachment back to the early works by Tuan (1977:159): “Attachment of a deep though subconscious sort may come simply with familiarity and ease, with the assurance of nurture and security, with the memory of sounds and smells, of communal activities and homely pleasures accumulated over time”. In this definition, place attachment is more than a transient emotion resulting from an immediate sensory delight; rather, it is a deeply rooted and long-lasting bond linking an individual to a specific place. Consistently with this perspective, in the early works by phenomenologists, major predictors of place attachment were associated with the intensity of the subjective experience of the place considered, and the length of the individual’s exposure to the place itself (Tuan, 1977). However, in the studies that followed, a multitude of concurrent factors were found to be associated with place attachment. In consideration of this, Low & Altman (1992:4) defined place attachment as “an integrating concept comprising interrelated and inseparable aspects”, whose “origins [...] are varied and complex”, and which “contributes to individual, group, and cultural self-definition and integrity”.

Another important notion proposed in the ambit of place studies is the concept of *place identity*. The concept of place identity was first elaborated in the works by Proshansky (1978:155), who defined it as

“those dimensions of the self that define the individual’s personal identity in relation to the physical environment”. The concept of place identity was further developed by Twigger-Ross & Uzzell (1996), who based their conceptualization on Breakwell’s identity process theory (1986, 1992). According to Twigger-Ross & Uzzell (1996:207-208), place identity should be intended as a response to basic individual needs, which are: “the desire to maintain personal distinctiveness or uniqueness”; “the desire to preserve continuity of the self-concept”; self-esteem, or the “positive evaluation of oneself or of the group with which one identifies”; and self-efficacy, or “the individual’s belief in his capabilities to meet situational demands”.

Because of the ambiguous connotations attributed to both the concepts of place attachment and place identity, there is an ongoing debate concerning the relation existing between the two concepts. Pertaining to this, Hernandez *et al.* (2007) argued that there is a problem of empirically distinguishing place attachment from place identity, due to the high levels of correlation that are registered between the two. On one hand, authors such as Brown & Werner (1985) have made little distinction between the two concepts, thus employing them as if they were synonyms. Other authors, such as Hay (1988) and Jorgensen & Stedman (2001), have considered place attachment and place identity as two separate aspects of the overarching concept of sense of place. Finally, other scholars (e.g. Kyle *et al.*, 2005) have explicitly referred to place identity as one of the factors determining place attachment. From a similar perspective, Williams *et al.* (1992: 32) argued that “a place may be viewed as an essential part of one’s self, resulting in strong emotional attachment to places”. These argumentations appear to be confirmed in the studies by Korpela (1989) and Haviland *et al.* (1994), according to whom the identification with the physical and social environment may prompt the establishment of emotional attachment and foster psychological well-being.

As confirmed by the literature mentioned above, the emotional attachment to and self-identification with the place of residence can be retained to play a remarkable role in influencing the subjective evaluation of the location of residence. Consistently, also in our context of research, we intend to devote sufficient attention to the relation between residential satisfaction and propensity to move on one side, and place attachment and place identity on the other. In order to operationalize the notions of place attachment and place identity in line with the purposes of our research, however, it is first necessary to define more clearly the single aspects and factors which can be deemed to characterize or influence place attachment and place identity among the inhabitants of Russian Arctic communities.

### **3.5.2 Physical attachment to the dwelling (sense of belonging)**

For many people, the home is the location which evokes the most intense memories and emotions (Rapaport, 1995; Rowles, 2006; Oswald *et al.*, 2006). In the literature, the physical attachment to the dwelling is often defined as *sense of belonging*, i.e. “a mélange of experiential dimensions - feelings of familiarity, comfort, security, mastery, ownership and identity - that, together, convey and express a transcendent wholeness and rightness in a person’s life” (Rowles, 2006:27). According to Rowles, the experience of home is place-situated, but not place-dependent: what make a house become a home are not the specific attributes and characteristics of the dwelling, but rather the subjective emotional and symbolical values attributed to it. From the same perspective, Oswald *et al.* (2006:8-9) argues that the sense of belonging “is not only related to attitudinal components of the home, but [also] to aspects of physical, social and personal bonding [...] Cognitive and emotional aspects of the meaning of home are often strongly linked to biography, but independent from housing satisfaction or objective housing conditions”.

While the sense of belonging appears to be only marginally affected by the objective characteristics of the dwelling, there are numerous studies which show that the sense of belonging may vary considerably in relation to individual factors, such as age, gender, housing tenure, and length of residence. Specifically, women, children and the elderly tend to display a stronger attachment to the home, while men and young people are generally less attached (Chawla, 1992; Cuba & Hummon, 1993; Hidalgo & Hernandez, 2001). In addition to this, scholars have noticed that home attachment is more intense among people who resided in the same dwelling for a long period, especially if they were born or raised there (Rowles, 1978; Hart, 1979; Chawla, 1992; Heinonen *et al.*, 2004). As in the case of residential satisfaction, therefore, the degree of sense of belonging is likely to be higher among long-term residents and among homeowners, and to be lower among newcomers and among renters.

### **3.5.3 Physical attachment to the neighborhood and the community of residence**

Shifting from the home to the neighborhood and community level of analysis, scholars investigated place attachment in relation to various typologies of locations that are frequented during everyday routines, or which assume a particular spiritual and emotional value, for instance in virtue of their historical, natural or cultural relevance. Pertaining to the first type of locations, people may feel emotions (both positive and negative) towards the place where they work (Rafaeli & Kluger, 2000), study (Libbey, 2004; Cooper, 2008), prey (Mazumdar & Mazumdar, 2004) or shop (Machleit & Powell Mantel, 2001). Moreover, the locations where leisure and social activities are carried out are usually deemed to foster positive emotions and experiences, and to play a prominent role in improving the subjective evaluation of the location of residence (Williams *et al.*, 1992; Brehm, 2007). Accordingly, people may feel attached to places where social aggregation occurs, such as bars and clubs; places where sports can be practiced or watched; and places that offer an opportunity of cultural enrichment, like theaters and libraries.

Another element which may influence the emotional attachment to the community is the presence of specific places which assume a particular spiritual or emotional value. For instance, such places may refer to locations associated with one's personal life, such as the birthplace or other places frequented during the youth (Low & Altman, 1992). Other places considered in the literature include: family estates; sacred places, such as temples and cemeteries; sites of historical and natural conservation; monuments; and buildings of particular aesthetic value (Lowenthal, 1975; Osborne, 1998; Mazumdar & Mazumdar, 2004; Paulsen, 2007; Charleston, 2009). Of course, the attachment to such locations is likely vary consistently according to the individual and socio-cultural background, and according to the subjective identification with the values expressed by such locations (Low, 1992).

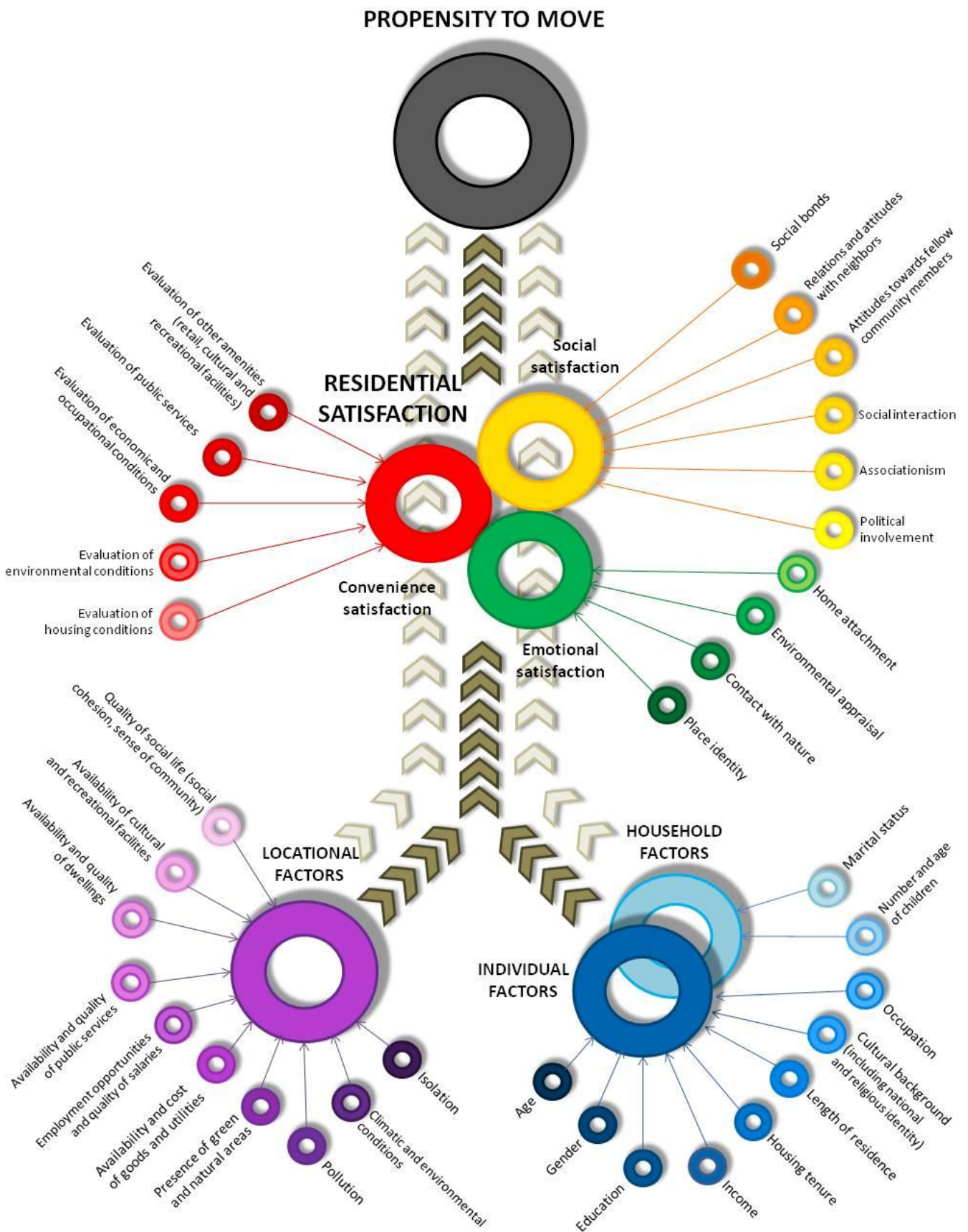
While the studies mentioned above investigate physical attachment in relation to specific locations, there are numerous studies which investigate the relation between physical attachment and the aesthetical and emotional appraisal of the physical environment of the neighborhood and the community of residence. In this frame of reference, a distinction is usually made between artificial or urban environments, and natural ones. Pertaining to artificial environments, numerous studies have shown that environments that are perceived as a good and suitable place to live, safe, unpolluted, and well kept are deemed to evoke positive emotions; on the contrary, places that appear to be dangerous, polluted, or abandoned, are associated with negative emotions (Mesch & Manor, 1998; Brown *et al.*, 2003; Gold & Revill, 2003; Knez, 2005; Wood *et al.*, 2008). In addition to this, the quality of urban and architectural design, and the presence of green and natural areas, may enhance or worsen the aesthetical appearance of the neighborhood or the community, and thus affect the overall evaluation of the place of residence (Bonaiuto *et al.*, 2003).

Pertaining to natural environments, numerous contributions have shown that the contact with nature, and especially the frequentation of natural settings in occasion of leisure or social activities, is an important factor fostering psychological as well as physical well-being (Matsuoka & Kaplan, 2008). In first place, natural landscapes and natural settings are generally regarded to be more pleasant and aesthetically attractive than artificial and urban ones, and thus to elicit a more intense feelings and emotions (Wesley Schultz & Tabanico, 2007). In this frame of reference, Ulrich (1983) argues that the aesthetical judgment of the natural landscape may vary depending on certain features and characteristics of the environment, such as its heterogeneity and complexity, its visual depth, and presence of peculiar morphologies like reliefs and water features. According to Brown & Raymond (2007), this judgment may also influenced by subjective estimations of the natural and economic value of the setting, its suitability for recreational activities, and the sense of wilderness and spirituality transpiring from it.

While physical attachment to natural environments may depend on specific attributes and characteristics of the setting, there are several scholars who underlined the subjective and physiological and psychological factors influencing this type of attachment. Concerning this, authors such as Kaplan & Talbot (1983) and Wilson (1984) described the human contact with nature as driven by a sort of instinctive bond, labeled as *wilderness attachment*, or *biophilia*, which links humans to all other living systems and to natural settings. According to Williams *et al.* (1992), the relation between physical attachment and wilderness is mediated by the previous experiences and by the subjective inclinations and attitudes towards natural environments. In line with these argumentations, Brown & Raymond (2007:108) argued that “[while] an abundance of aesthetic and wilderness/natural landscape features [may] create the conditions that lead to place attachment [...], it is the individual’s willingness to associate spiritual value with a landscape that best predicts the psychological state of place attachment”.

In the light of what has been said so far, the emotional attachment to the location of residence among the inhabitants of Russian Arctic communities can be expected to be influenced by a series of negative factors. In first place, the infamous quality and aesthetical appearance of Soviet-style residential blocks, the presence of abandoned buildings, and the general decay and lack of maintenance of urban infrastructure can be deemed to have a profound impact on people’s aesthetic and emotional appraisal of the location of residence. Moreover, the appraisal of the community of residence could be negatively affected by the presence of industrial and mineral activities located in the proximity of residential areas, and by the pollution produced by such activities. Notwithstanding this, the aesthetical and emotional appraisal of the community of residence may be fostered by the presence of wild and natural areas and by the presence of numerous resorts and bases for both tourists and local residents. Especially in Kirovsk, the subjective evaluation of the physical environment can be expected to be positively affected by the beautiful landscape offered by the massif of the Khibiny, and by the presence of facilities deputed to winter sports.

Figure 3.6 – Conceptual scheme.





## 4. METHODOLOGY

As announced in the introduction, our research is based on an extensive survey that we carried out among the population of Kirovsk and Nikel. Namely, the survey relied on the administration of self-completion questionnaires across two samples, one in each community, which we obtained by means of a “snowball” sampling procedure (Bryman, 2008). The questionnaires were directed to collect first-hand information among local inhabitants concerning: their individual and household background; their propensity to leave home and the community; and their evaluation of the dwelling and of the community of residence in relation to different aspects (convenience, social, and emotional). While the outcome of the survey will be analyzed and discussed in the following chapter, we are now going to present the methodological approach and the procedures that we adopted in the course of our survey, as well as the practical and conceptual reasons standing behind our methodological choices. For this purpose, in the first part of this chapter, we are going to clarify the reasons which led us to opt for the administration of a survey in the form of self-completion questionnaires. Following this, we present the principles guiding the sampling method adopted in our survey, as well as the practical constraints which induced us to eventually opt for a snowball sampling procedure.

### 4.1 SURVEY METHOD

The decision to carry out a survey in order to elicit information from the local population represents a response to stringent conceptual and methodological considerations, as well as a solution to the manifold constraints and limitations hampering research in the Russian Arctic. In first place, by administering a survey, we are able to obtain first-hand information from a relatively large sample of respondents, with a relatively low expenditure of time and financial resources. In our case, the decision to carry out a survey is somewhat obligated, as we intend to investigate how propensity to move and residential satisfaction are distributed across the various groups composing the population in relation to individual and household factors. In fact, in order to enable this investigation, we need to dispose of a sufficient number of respondents ( $n \geq 30$ ) representing each individual and household group. Furthermore, the decision to carry out a survey is supported by the fact that the majority of studies investigating propensity to move and residential satisfaction also relies on the administration of extensive surveys.

The decision to conduct the survey by means of self-completion questionnaires can also be explained in the light of both practical and methodological reasons. In first place, self-completion questionnaires are comparatively more economic and quicker to administer than face-to-face, mail, or telephone interviews, especially in the case of large samples. Secondly, self-completion questionnaires allow us to pose the same set of questions, in the same order and fashion, to all the survey participants, so that we are able to exclude any bias due to interviewer effects during the completion of the questionnaires. In this frame of reference, the utilization of self-completion questionnaires is more advantageous when compared to face-to-face or telephone interviews, as oral communication could be easily corrupted by mistranslations and misunderstandings (also in the light of the cultural gap between interviewer and interviewees).

Notwithstanding the manifold advantages we have described above, the utilization of self-completion questionnaires can be affected by certain weaknesses and limitations, as discussed by (Bryman, 2008). Specifically, the employment of self-completion questionnaires does not allow us to prompt further explanations about the answers provided by our respondents, or to elicit information concerning aspects and factors which we did not previously accounted for. Consistently, while investigating propensity to move and residential satisfaction among the population of Russian Arctic communities, there is the risk of failing to consider certain factors which may play a considerable role in this context of investigation, but which are neglected in the literature dealing with residential satisfaction and propensity to move. At the same time, the difficulty of prompting further explanations in regard to the answers given in the questionnaires may hamper and mislead the understanding of the information collected in the survey. In order to overcome these issues, before carrying out the survey among the inhabitants of Kirovsk and Nikel, we retained opportune to gain a direct experience of these communities, and to conduct informal interviews among the local population. Specifically, in the course of these interviews, we were able to obtain more precise information about the communities investigated, and about the lifestyle, habits and traditions of the local populations.

## 4.2 SAMPLING METHOD

Earlier in this chapter, we argued the necessity of considering a relatively large sample in our survey, in order to represent more accurately the composition of the population investigated, and to enable comparisons and generalizations between the different groups of the population, namely in regard to individual and household characteristics. For obvious reasons of reliability, our initial intention was to adopt a random sampling method, in order to avoid any potential bias induced by the researcher. Accordingly, we decided to distribute the questionnaires door-to-door, as telephone and mail surveys would have been more costly, both in terms of time and financial resources; however, the distribution door-to-door of the questionnaires had to be interrupted after the intervention of local authorities<sup>4</sup>. Because of this, we decided to adopt a non-probability sampling method, which we could define as a sort of “snowball” sampling (Bryman, 2008). Namely, we delivered our questionnaires through a small number of intermediaries, selected on a convenience basis among people working in contact with the population of the community, such as teachers, bar tenders and shop keepers. Then, we asked our intermediaries to spread the questionnaires among their friends, to their customers, and to the parents of their students, in order to be compiled and delivered back.

The adoption of a snowball sampling presents remarkable strong points, but also a series of limitations that we cannot neglect to consider. Pertaining to the strong points, several scholars (Coleman, 1958; Becker, 1963; Bryman, 2008) agree that non-probability sampling represents a very accessible and versatile opportunity of collecting information about a given population. In our case, the selection of a restricted number of intermediaries enables us to deliver our questionnaires in stocks rather than one at a time, thus saving a lot of time in the delivery and collection of the questionnaires. Furthermore, this method enables us to reach out to the potential respondents without contacting them on an individual basis, as we were previously dissuaded from doing so by. Finally, as the questionnaires are delivered and collected by

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<sup>4</sup> On the first day of the survey, while delivering questionnaires in a residential block in Kirovsk, the researcher was personally approached by a police officer. After a brief interrogation, the police offer explicitly dissuaded the researcher from continuing to deliver the questionnaires door-to-door, without adding any reason.

intermediaries, the potential respondents may feel more at ease in compiling the questionnaire than if it they were asked to by a perfect stranger; this may ultimately improve the response rate of the survey, as well as the reliability of the information provided.

One of the main issues and limitation of snowball sampling is the difficulty of generalizing the information that we obtain from our sample to the entire population of the communities investigated. Namely, the possibility to generalize our results to the rest of the population is hindered by the fact that respondents were not selected by means of a purely random procedure. In fact, given the modality of the delivery of our questionnaire, the samples obtained in Kirovsk and Nickel cannot be deemed to reflect the original composition of the population of these communities. Namely, given the occupation of our intermediaries, we expect people with children in scholar age and people who frequent commercial and restoration facilities to be overrepresented in our sample. At the same time, other groups may be underrepresented, for instance couples with no children, people who do not frequent local commercial and restoration facilities, and people who tend to be marginalized, such as the elderly. Notwithstanding the inevitable bias and errors which can be deemed to affect non-probability sampling, the adoption of a snowball sampling should not preclude us from appreciating the variations of propensity to move and residential satisfaction among the inhabitants of the communities investigated in regard to their individual and household background.

Another factor hindering the possibility of generalizing our results is the lack of statistical information concerning the actual composition of the population of Kirovsk and Nickel. In fact, the statistical resources made available online by the Russian Federal State Statistics Service (FSSS, 2011) concerning the population of single communities are only partial, as well as quite unreliable. Namely, the data do not include important indicators, such as the ratio of males per females, the age structure of the population, the ratio of divorces per marriages, etc. In addition to this, the unaccommodating and uncooperative attitudes of public authorities prevented us from obtaining more detailed information about the composition and characteristics of the local population. Thus, we are not able to assess to what extent the composition of our samples differs from the actual composition of these communities.

# 5. RESULTS

In the present chapter, we present the results of the survey that we conducted among the population of Kirovsk and Nikel. Initially, we report about the planning and administration of the survey and the modalities in which the questionnaires were distributed and collected, and we describe the composition and characteristics of our sample. Also, we look for bias and errors which may affect our sample. After these necessary clarifications, we then proceed to analyze the questionnaires collected in Kirovsk and in Nikel by means of statistical analysis. Namely, in section 5.1, we analyze the extent and distribution of propensity to move among the participants in our survey. In section 5.2, we analyze to what extent the participants in our survey are satisfied with their dwelling and their community of residence, and we investigate how the degree of satisfaction varies depending on locational, individual and household factors. Then, in sections 5.3, 5.4, and 5.5, we look at how the inhabitants of Kirovsk and Nikel evaluate their dwelling and their community in regard to convenience, social and emotional factors, respectively. Following this, section 5.6 is devoted to assess the actual relation between the set of subjective indicators analyzed in the previous sections, and the degree of residential satisfaction. Finally, section 5.7 is devoted to investigate how the propensity to move varies depending on the degree of residential satisfaction and on the single subjective factors related to it.

## 5.a Administration of the survey

The administration of the survey among the population of Kirovsk and Nikel took place in the months of February and March 2010. The decision to conduct the survey in these months was suggested by the absence of major holidays in this time of the year; in fact, some people may leave the community of residence during non-working periods, hence invalidating our sample. By conducting our survey in these months, we also managed to avoid the prolonged darkness of the Polar night, but not the severe climatic conditions affecting the Province of Murmansk during the winter months. Especially during the conduction of our survey in Kirovsk, which took place in February, the average daily temperatures were between  $-12^{\circ}\text{C}$  and  $-20^{\circ}\text{C}$ ; in the night, the temperature could fall to  $-25^{\circ}\text{C}$  or  $-30^{\circ}\text{C}$ , once reaching  $-37^{\circ}\text{C}$ . In Nikel, where the survey was administered in early March, temperatures were slightly milder although constantly below  $0^{\circ}\text{C}$ . Apart from the freezing temperatures, the administration of our survey as well as the conduction of our daily routines was occasionally precluded by snow blizzards and strong winds, both in Kirovsk and Nikel.

Notwithstanding the inhospitable environmental conditions, the time at our disposal was sufficient to carry out the survey, as well as to gain more detailed information about the population and the communities investigated. For this purpose, the first days of our survey in Kirovsk and in Nikel were devoted to gather a direct experience of the communities investigated and of their surroundings, and to collect pictures and other documentation to include in the present research. At the same time, we had the opportunity to establish numerous contacts among the local residents, especially among journalists and teachers who, thanks to their occupation, were able to provide us with valuable information concerning their community and fellow citizens. Namely, this information was obtained by means of a series of informal interviews with our contacts both in Kirovsk and in Nikel. These interviews were directed to gather a clearer picture of the

population living in these communities, namely pertaining to the lifestyles and attitudes of local residents, and about the general problems affecting the community. As intended, these interviews enabled us to contextualize, specify, and supplement the various indicators which, according to the literature we have reviewed, may influence propensity to move, living conditions, social capital and emotional attachment. Thanks to the important testimonies given by our contacts in Kirovsk and in Nikel, we eventually compiled a list of questions and related answers expressing the various indicators taken into account, and which we organized in the form of a questionnaire. The questionnaire (both the original form in Russian and the translated version in English) can be found in attachment at the end of this thesis

After having translated our questionnaires in the Russian language<sup>5</sup>, we began the administration of the survey by distributing our questionnaires among the population. As already mentioned in the previous section, our intention was to sample the population by means of a stratified random sampling; however, because of the resistance of the population to participate in the survey, we were compelled to switch to a non-probability sample, which we earlier portrayed as a hybrid between a convenience and a snowball sample. Given the time and resources at our disposal for the administration of the survey, we decided to limit the size of our sample to 100 responses for each of the communities investigated.

In Kirovsk, the distribution and collection of our questionnaires occurred between the 8<sup>th</sup> and the 25<sup>th</sup> of February 2010. In order to spread our questionnaires among the population, we counted on the collaboration of a number of intermediaries who helped us in delivering and collecting the questionnaires. Our intermediaries in Kirovsk included: two shopkeepers, two bartenders, two school teachers, one miner, one pharmacist, one kindergarten educator and one journalist. As they accepted to help us conducting our survey, the intermediaries were briefed about the distribution and the collection of the questionnaires, and were asked to select the potential respondents *only* among people residing in Kirovsk, and older than 18. Our intermediaries kindly offered their collaboration without asking for any recompense; however, we felt somehow compelled to pay off our “debt” by purchasing products in their shops or bars, and in the case of teachers, by giving English lessons at the local school.

During the administration of the survey in Nikel, which took place between the 1<sup>st</sup> and the 14<sup>th</sup> of March 2010, the expedients adopted for the distribution and collection of the questionnaires were very similar to the ones adopted in Kirovsk. Namely, we were able to obtain the collaboration of the same number of intermediaries that we had in Kirovsk, and even the same proportion of occupations amongst them. The decision to select our intermediaries in Kirovsk and in Nikel with analogous criteria and approaches was dictated by the necessity to spread our questionnaires among two comparable samples of the population, one for each community. Specifically, by selecting our intermediaries according to their occupation, we expected to reach out to specific groups of the population, whose sum would ultimately represent the entire population. At the same time, by leaving our intermediaries free to choose the potential respondents of the questionnaires, we were able to maintain a certain degree of randomness in our sampling, notwithstanding the impossibility to adopt a random stratified sampling.

After having ensured the collaboration of our intermediaries, we proceeded to brief them about the modalities of distribution and collection of the questionnaires. In order to obtain a total of a hundred valid responses from each community, the distribution and collection of the questionnaires was conducted in the following manner in both communities. In first place, we distributed one hundred questionnaires among our intermediaries, and asked them to distribute these among their friends, family members,

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<sup>5</sup> In order to translate our questionnaire in Russian, we have counted on the precious collaboration of three teachers of English language at the school number 7 in Kirovsk. The work of translation was overviewed by the researcher, in order to clarify the meaning and scope of our questions, and to avoid misunderstandings and incorrect translations.

customers or pupils' parents. One week after the first distributing round, we visited our intermediaries in order to retrieve the questionnaires which had already been responded and collected. The questionnaires were then scrutinized and coded in a database, in order to recognize and eliminate any questionnaire compiled in an improper or invalid manner, or which presented an insufficient number of responded questions. According to the number of valid responses retrieved and to the composition of our partial sample, we then proceeded to distribute another stock of questionnaires, which would have allowed us to reach the desired threshold of 100 questionnaires in each community <sup>6</sup>. These last questionnaires were eventually collected after one week.

As we expected, the collaboration of our intermediaries revealed itself to be a precious instrument that allowed us to obtain a relatively high response rate among the population of both the communities investigated, even in comparison with other studies in standard contexts of research. In Kirovsk, of 155 questionnaires that were initially distributed, 103 were eventually completed and returned to us, with a response rate of 66.5%. Of the 103 questionnaires returned, three were discarded: in two of them, the calligraphy and the responses perfectly coincided, leading us to suspect they might have been compiled by the same person; another questionnaire was discarded as almost half of the responses were left blank. In Nikel, the response rate was sensibly lower than in Kirovsk (54.6%): 185 questionnaires were distributed, and only 101 were answered and collected. Of these, we considered one to be invalid because most questions had been left unanswered. Thanks to the controlled administration of our survey, we were eventually able to achieve a total of 200 valid responses, equally distributed between Kirovsk and Nikel.

**Table 5.1 - Survey administration and response rates in Kirovsk and in Nikel.**

|  | Kirovsk  | Nikel  | Aggregate |
|--|--|--|-----------|
| <i>Dates of the survey administration:</i> | 8 <sup>th</sup> to 25 <sup>th</sup> Feb., 2010 | 1 <sup>st</sup> to 14 <sup>th</sup> Mar., 2010 |           |
| <i>Intermediaries involved:</i>            | 10   | 10   | 20        |
| <i>Questionnaires distributed:</i>         | 155  | 185  | 340       |
| <i>Questionnaires collected:</i>           | 103  | 101  | 204       |
| <i>Invalid questionnaires:</i>             | 3  | 1  | 4         |
| <i>Valid questionnaires:</i>               | 100  | 100  | 200       |
| <i>Response rate:</i>                      | 66.5 %   | 54.6 %   | 60.6 %    |

## 5.b Sample composition

As already mentioned in the methodology, the adoption of a non-probability sampling does not allow us to perfectly generalize our sample to the whole population residing in the community at the time of our survey. Specifically, the difficulty of generalizing the information deducted from our sample is due to the lack of statistical information describing the composition of the population of Kirovsk and Nikel.

<sup>6</sup> The decision to control the number of questionnaires distributed and collected was also suggested by practical reasons. In first place, the printing and copying of the questionnaires was rather inconvenient and expensive, both in Kirovsk and in Nikel. Furthermore, by administering the distribution of the questionnaires, we were able to control the progress of our survey, and to check whether our intermediaries had encountered any particular issue or annoyance while delivering and retrieving the questionnaires.

Notwithstanding this, by representing the respondents according to their objective characteristics, we intend to obtain valuable information about whether, how, and why propensity to move and residential satisfaction varies across the various groups composing the population of our study-case communities.

As we can notice in table 5.2, our sample presents a consistent portion of female respondents, with an aggregate ratio of 76 male and 124 female. In both communities, this unbalanced ratio may be due to the difficulty of reaching out to the male population, especially when the questionnaires were distributed among shop costumers and among the parents of kindergarten and school's pupils. For example, of 25 questionnaires distributed among parents in a school, only 2 were compiled by men. Notwithstanding men's tendency to withhold participation in our survey, we managed to collect enough questionnaires from male respondents in both communities ( $n > 30$ ), in order to allow for a comparison with the other gender. To a large extent, this was achieved thanks to the collaboration of our intermediaries employed in local mines and factories, who collected a remarkable number of questionnaires among their colleagues.

**Table 5.2 - Samples composition according to socio-demographic indicators**

|   | Kirovsk | Nikel | Aggregate |
|---|---------|-------|-----------|
| <i>Gender:</i>                          | (100)   | (100) | (200)     |
| Male                                    | 41      | 35    | 76        |
| Female                                  | 59      | 65    | 124       |
| <i>Average age (years):</i>             | 36.4    | 40.2  | 38.3      |
| <i>Age group:</i>                       | (100)   | (100) | (200)     |
| Between 18 and 30                       | 37      | 23    | 60        |
| Between 31 and 45                       | 40      | 43    | 83        |
| Between 46 and 70                       | 23      | 34    | 57        |
| <i>Place of birth:</i>                  | (100)   | (99)  | (199)     |
| Community of residence                  | 57      | 60    | 117       |
| Other communities of Murmansk Province  | 9       | 6     | 15        |
| Other regions of the Russian Federation | 25      | 26    | 51        |
| Other Republics of the former USSR      | 9       | 7     | 16        |
| <i>Nationality:</i>                     | (100)   | (100) | (200)     |
| Russians                                | 92      | 92    | 184       |
| Ukrainians and Belarusians              | 4       | 7     | 11        |
| Others                                  | 4       | 1     | 5         |
| <i>Religion:</i>                        | (100)   | (98)  | (198)     |
| Atheists and agnostics                  | 21      | 17    | 38        |
| Orthodox Christians                     | 78      | 81    | 159       |
| Others                                  | 1       | 0     | 1         |

**Note:** the number of valid responses is reported in parentheses.

Notable differences between the sample obtained in Kirovsk and the one obtained in Nikel regard the average age of the respondents, being of 36.4 in Kirovsk and of 40.2 in Nikel. As we break up our samples in three age groups, we notice that the difference between the averages recorded in the two communities is due to the underrepresentation of older groups in the Kirovsk sample, and of younger groups in the Nikel

sample. Although we do not know the reason determining such differences, we expect these to have arisen because of the utilization of a non-probability sampling which, as already explained, was the only way to gather information on discretely large samples in Kirovsk and in Nickel. While the scarcity of respondents among older groups in Kirovsk and younger groups in Nickel may affect the comparison between the two communities taken as study cases, it should not preclude us from providing explanations on how propensity to move and residential satisfaction varies depending on the age.

Notwithstanding the notable differences among our samples in Kirovsk and in Nickel, there are also remarkable similarities. In both samples, about 60% of the respondents were born in the community in which they were residing at the moment; less than 10% were born in other communities of the Province of Murmansk; about 25% were born in other regions of the Russian Federation; and less than 10% were born in other Republics of the former USSR. Also pertaining to the nationality and religion of our respondents, the samples obtained in Kirovsk and in Nickel are not very dissimilar. In both samples, 92% of the respondents identified themselves as Russian, with the remaining part of respondents stating Ukrainian, Belarusians, Azeri, Georgian, Tatar, or Sami nationality. Also, both communities presented a majority of Christians, with about 80% of the respondents defining themselves as Orthodox and the remaining portion composed of atheists and agnostics. Religious minorities were practically absent from our samples.

Pertaining to the familiar background of our respondents, the samples gathered in Kirovsk and in Nickel present similar characteristics, as displayed in table 5.3. As we can observe, both samples present an elevated number of married or cohabiting respondents (about 65%), and a relatively high rate of divorced or widowed respondents (15% in Kirovsk, 20% in Nickel) - especially if we consider the average age of our samples. Some differences can be also noticed by confronting the average number of children and of household members in the two samples. Namely, respondents in Kirovsk reported an average of 0.84 children and 2.76 members per household, while in Nickel the averages were 0.72 and 2.59, respectively.

**Table 5.3** - *Samples composition according to household indicators*

|  | Kirovsk | Nikel | Aggregate |
|--|---------|-------|-----------|
| <i>Marital status:</i>                             | (100)   | (100) | (200)     |
| Single   | 20      | 17    | 37        |
| Married or cohabiting                              | 65      | 63    | 128       |
| Divorced or widowed                                | 15      | 20    | 35        |
| <i>Average number of members in the household:</i> | 2.76    | 2.59  | 2.67      |
| <i>Average number of children per respondent:</i>  | 0.84    | 0.72  | 0.78      |

**Note:** the number of valid responses is reported in parentheses.

As we continue to compare the samples obtained in Kirovsk and in Nickel, we observe other notable differences concerning the average level of education and the income of our respondents, as portrayed in table 5.4. Namely, the sample obtained in Kirovsk is averagely more educated and dispose of a higher income than the one in Nickel, as we may expect to observe when confronting two communities of different dimensions located in the same region. However, the different size of our study-case communities appears unfit to explain the differences concerning the occupation of our respondents in the two samples, which appear instead to be caused by the type of sampling adopted. As shown in table 5.4, the rate of



employment is higher in the sample obtained in Kirovsk than the one obtained in Nikel, which presents more students and retired people. Furthermore, the Kirovsk sample displays a higher number of factory and manual workers, and of professionals and managers; the sample in Nikel, instead, presents almost twice as many public workers than the sample in Kirovsk. Finally the proportions of miners and employees of retail and restoration activities are homogenously represented in both samples.

**Table 5.4 - Samples composition according to educational and economic indicators**

|  | Kirovsk | Nikel | Aggregate |
|--|---------|-------|-----------|
| <i>Education:</i>                            | (100)   | (100) | (200)     |
| Mandatory or technical                       | 55      | 68    | 123       |
| Higher                                       | 45      | 32    | 77        |
| <i>Household income:</i>                     | (96)    | (91)  | (187)     |
| 30,000 RUB / month or less                   | 52      | 55    | 107       |
| More than 30,00 RUB / month                  | 44      | 36    | 80        |
| <i>Income per household member:</i>          | (96)    | (91)  | (187)     |
| 10,000 RUB / month or less                   | 41      | 40    | 81        |
| More than 10,000 RUB / month                 | 55      | 51    | 106       |
| <i>Occupation:</i>                           | (92)    | (95)  | (187)     |
| Employed:                                    | 87      | 82    | 169       |
| Students                                     | 4       | 9     | 13        |
| Retired                                      | 1       | 4     | 5         |
| <i>Location of employment:</i>               | (87)    | (82)  | (169)     |
| In the community of residence                | 83      | 80    | 163       |
| Outside the community of residence           | 4       | 2     | 6         |
| <i>Type of employment:</i>                   | (87)    | (82)  | (169)     |
| Public workers                               | 14      | 27    | 41        |
| Employees of retail and restoration services | 17      | 13    | 30        |
| Miners                                       | 11      | 12    | 23        |
| Factory and manual workers                   | 22      | 12    | 34        |
| Professionals and managers                   | 23      | 18    | 41        |

**Note:** the number of valid responses is reported in parentheses.

Differences between the samples gathered in Kirovsk and in Nikel can also be found in relation to the length of residence and to the type of housing tenure of our respondents. As we can observe in table 5.5, at the time of our survey, the respondents in Nikel had lived 1.4 years longer in the dwelling and 4.2 years longer in the community than the respondents in Kirovsk. To some extent, this difference can be ascribed to the average age of our respondents, which is higher in Nikel than in Kirovsk. Pertaining to the type of tenure, the responses were rather similar in both communities, with about 85% of our respondents living in private flats, and the remaining living in rented flats or social housing. However, only one person reported to live in social housing in Kirovsk, while eight did in Nikel. To some extent, this information collimate with the ones referring to economic indicators, showing that respondents in Kirovsk are on average wealthier than in Nikel.

**Table 5.5 - Sample composition according to length of residence and housing tenure.**

|   | Kirovsk | Nikel | Aggregate |
|---|---------|-------|-----------|
| Average length of residence in the dwelling (years):  | 13.0    | 14.4  | 13.7      |
| Average length of residence in the community (years): | 27.3    | 31.5  | 29.4      |
| House tenure:   | (100)   | (100) | (200)     |
| Private house   | 0       | 0     | 0         |
| Private flat  | 86      | 83    | 169       |
| Rented flat   | 13      | 9     | 22        |
| Municipal flat  | 1       | 8     | 9         |

**Note:** the number of valid responses is reported in parentheses.

### 5.c Objective indicators and measurements

In order to assess how the propensity to move, the degree of residential satisfaction and its related aspects vary between the two communities taken as study cases, and among the various categories composing the population, we defined a set of objective factors and respective measurements. Because of our intention to employ these factors in the context of linear and logistic regressions, and because of the necessity of employing a small number of factors in these regressions, we decided to utilize only ten variables, and to discard others which we considered redundant or irrelevant for our purposes. Namely, we discarded the variables nationality and religion following the interviews conducted with our contacts in Kirovsk and Nikel, who confirmed the absence of specific episodes of racial or religious discrimination in these communities. Furthermore, we decided not to consider the type of occupation of our respondents. In fact, this would have meant to include a number of dummy variables that would have created problems of reliability for the conduction of the regressions. The variables that we decided to take into account in our research, together with their respective sets of values, are reported in table 5.6.

**Table 5.6 - Variables and measurements of objective indicators**

| Variable                             | Measurement  |
|--------------------------------------|--|
| Community of residence               | 0 = Kirovsk; 1 = Nikel   |
| Gender                               | 0 = male; 1 = female   |
| Age                                  | Scale values (in years)  |
| Education                            | 0 = Mandatory or technical; 1 = Higher                           |
| Household income                     | 0 = less than 30,000 RUB/month; 1 = more than 30,000 RUB/month   |
| Marital status                       | 0 = Single; 1 = Married and cohabiting; 2 = Divorced and widowed |
| Presence of children                 | 0 = no children; 1 = one or more children                        |
| Length of residence in the community | Scale values (in years)  |
| Housing tenure                       | 0 = Private flat; 1 = Rented or municipal flat                   |

## 5.1 PROPENSITY TO MOVE IN RELATION TO OBJECTIVE FACTORS

The present section is devoted to analyze the extent of propensity to move among the inhabitants we have surveyed in Kirovsk and in Nikel, in order to assess whether and how propensity to move varies between the two communities taken as study cases, and across the groups and categories composing their population. Namely, the present section aims to answer the first of the research questions (**RQ 1**) set out in the introduction: *“To what extent are the inhabitants of Kirovsk and Nikel willing to leave their location of residence?”* To this end, we operate a distinction between the propensity to leave home, and the propensity to migrate, i.e. to leave the community of residence. In order to evaluate how the propensity to leave home and the propensity to migrate vary in relation to objective factors, we utilize a set of indicators, which include: the community of residence; the gender; the age; the level of education; the household income; the marital status; the presence of children in the household; the length of residence in the community; and the household tenure. In first place, we look at the extent of propensity to leave home and propensity to migrate among the respondents in Kirovsk and in Nikel, and we confront the results obtained in the two communities. Following this, we look at how propensity to move varies across the groups and categories composing the population of Kirovsk and Nikel. To this end, we carry out two logistic regressions, by means of which we assess the effect of objective indicators (independent variables) on the propensity to leave home and the propensity to leave the community (dependent variables).

### 5.1.1 Propensity to move in relation to locational factors

As already mentioned, the decision to adopt Kirovsk and Nikel as our study cases is suggested by the numerous aspects that these communities have in common, as well as by the remarkable differences between them. In fact, the communities of Kirovsk and Nikel present a similar geographic, historical, and cultural background. Moreover, the social and economic crisis which affected Russia at the turn of the millennium appears to have produced remarkable and analogous consequences both in Kirovsk and in Nikel, as testified by the dramatic loss of population experienced by the two communities between 1990 and 2010. The remarkable differences between the two communities we have taken as study cases enable us to specify how propensity to move varies depending on the peculiar characteristics of the community investigated. In fact, Kirovsk has the double of the population of Nikel, is more centrally located, and thanks to its vicinity to Apatity, presents a wider offer of jobs and services in comparison to Nikel. On the other hand, Nikel appears to be penalized by its peripheral location and by the paucity of trans-border trades, as well as by the heavy pollution generated by the smelter located in the vicinity of inhabited areas. Taking this into account, the variation in propensity to move between Kirovsk and Nikel could be ascribed to the differences concerning the size and the location of the two communities, to the different degree of urbanity, and to the presence of peculiar elements affecting the quality of life among local inhabitants. In the light of the aspects aforementioned, we reputed both Kirovsk and Nikel as suitable study locations for the purpose of obtaining information to be generalized to the rest of Russian Arctic communities.

In our questionnaires, the propensity to leave home is assessed by means of the following question: *If you have the chance, would you move from your home?* Analogously, in order to assess propensity to migrate,

we asked: *If you have the chance, would you move from (Kirovsk/Nikel)?* Because the propensity to leave home and the propensity to migrate are assessed by means of yes/no questions, we define the two variables as binomial, with value 1 attributed to positive response. The degree of propensity to move reported in Kirovsk and in Nikel is presented in table 5.7. As we can appreciate from the table, a majority of our respondents reported the desire to leave the home and to migrate, although not always the intention to leave home is accompanied by the intention to leave the community, and vice versa. Namely, 69.5% of our respondents wished to leave the community of residence, while 63.5% wished to leave home. However, these percentages vary sensibly between the samples obtained in the single communities. In Kirovsk, the respondents who were willing to leave the community were 57% of the sample, while those willing to leave home were 58%; in Nikel, 82% of our respondents wanted to leave the community, while 70% wanted to leave home. These results appear therefore to be much higher than the ones recorded by Vuorinen (2008) in Apatity and Kirovsk: in that occasion, 46.1% of the respondents were willing to remain, 34.5% did not state any preference, and only 19.4% were willing to leave the community. To some extent, this gap may be due to the different methods employed in the two studies, and possibly, to the fact that respondents in Apatity may be less desirous to move than respondents in Kirovsk; however, these reasons appear to be insufficient to explain such a wide gap, which we are not yet able to explain.

**Table 5.7 - Propensity to leave home and propensity to leave the community according to community of residence.**

|   |                 | Kirovsk            | Nikel              | Aggregate          |
|---|-----------------|--------------------|--------------------|--------------------|
| Propensity to leave home  |                 | 58 %               | 70 %               | 64.0%              |
| Propensity to leave the community   |                 | 57 %               | 82 %               | 69.5 %             |
| Propensity to leave both home and the community                                 |                 | 42 %               | 65 %               | 53.5 %             |
| Propensity to leave home, not the community                                     |                 | 16 %               | 5 %                | 10.5 %             |
| Propensity to leave the community, not home                                     |                 | 15 %               | 17 %               | 16.0 %             |
| Propensity to stay in the same home and community                               |                 | 27 %               | 13 %               | 20.0 %             |
| Relation between propensity to leave home and propensity to leave the community | $\chi^2$<br>phi | 13.386 ***<br>.366 | 18.635 ***<br>.432 | 33.318 ***<br>.408 |
| Relation between propensity to leave home and community of residence            | $\chi^2$<br>phi |                    | 15.519 ***<br>.282 |                    |
| Relation between propensity to leave the community and community of residence   | $\chi^2$<br>phi |                    | 21.394 ***<br>.397 |                    |

**Notes:** \*\*\*: Significant at the 0.01 level

Another element which may help us understanding why the propensity to move varies between Kirovsk and Nikel is the comparison between the propensity to leave home and the propensity to migrate in the two communities. In fact, as we can see from table 5.7, there is a strong correlation between the desire to leave home and the desire to migrate, both in Kirovsk and in Nikel. Namely, 53.5% of our respondents reported the wish to leave both home and the community; 10.5% desired to leave home, but not the

community; and 20% reported the wish to stay in the same home and community of residence. Interestingly, 16% of our respondents reported the desire to leave the community, but not the dwelling of residence, a result which may possibly depend on a stronger attachment to the dwelling rather than to the community. Taking these results into account, it appears that people desires and plans pertaining to mobility are mostly directed to migrate elsewhere, rather than to find alternative housing solutions in the community of residence (White & Mueser, 1988). However, such relation appears to vary between the two communities, as respondents in Kirovsk were twice more likely to show no propensity to move at all than respondents in Nikel, while the latter were 1.5 times more likely to display both the propensity to leave home and the community than the first.

The number of respondents willing to leave their community that we record in Kirovsk and in Nikel appears to confirm our previous expectations concerning the degree of propensity to move among the inhabitants of the two communities. While the actual effect of single locational factors on propensity to move will be discussed more in detail when analyzing the role of subjective factors, these preliminary results seem to suggest that propensity to move could be higher among people living in less populated and more isolated communities than among people living in more central districts. In fact, people living in isolated communities may lament a smaller offer of goods and services than in other communities which more centrally located, as well as from a narrower array of occupational and career opportunities. However, the variation in the degree of propensity to move between Kirovsk and Nikel could be also related to peculiar aspects and features available in the two communities, namely in reference to the heavy pollution and environmental issues affecting the community of Nikel. Once again, in order to clarify our doubts, it will be necessary to consider how single individuals perceive and evaluate the single aspects ascribable to the dwelling and the community of residence, which is the subject of the following sections.

### **5.1.2 Propensity to move in relation to individual and household factors**

As already discussed in the literature review, the propensity to move can be influenced by a variety of factors relatable to the individual and household background. In this frame of reference, several studies documented that the propensity to move tends to be lower among the elderly and among long-term residents and homeowners, while it tends to be higher among young people, short-term residents, and home renters (Speare, 1970, 1974; Cuba & Hummon, 1993; Drozdowski, 2007; Loveridge *et al.*, 2009). In this frame of reference, also the aforementioned study by Vuorinen (2008) in Apatity and Kirovsk has shown that the propensity to migrate is much higher among the youth than among the elderly. In addition to individual factors, scholars argued that the propensity to move may be also affected by the household background, for instance in relation to the marital status and the presence of children in the household (Speare & Goldscheider, 1987; Michielin & Mulder, 2008). In accordance with these studies, the adoption of individual and household factors beside locational ones may allow us to discern whether and how the propensity to move varies across the various groups composing the population of Kirovsk and Nikel. Consistently with this, the adoption of individual and household factors should provide useful insights concerning which categories of individuals are more likely to remain, and which instead are more likely to leave home and/or the community of residence.

In order to assess how the propensity to leave home and the propensity to migrate vary depending on the individual and household background, we carry out a series of logistic regressions. In these regressions, propensity to leave home and propensity to leave the community are treated as dependent variables, while individual and household factors are treated as independent variables. The outcomes of the regressions,

which is presented in table 5.8, confirm the correlation between community of residence and propensity to move, both in regard to home satisfaction and to community satisfaction. Namely, the community of residence appears to be the most reliable predictor of propensity to move among the objective indicators included in the regression. In addition to this, the propensity to leave home appears to be influenced by the presence of children in the household, the length of residence in the community, and the type of housing tenure. At the same time, the propensity to migrate is affected by the community of residence, as well as by the age, the household income, the level of education, the marital status, the length of residence in the community, and the type of housing tenure. While these results partially confirm some of the previous literature dealing with the effect of individual and household factors on propensity to move, they also present certain anomalies and unexpected outcomes, which may depend on the peculiar nature of our study context.

**Table 5.8 - Propensity to leave home and propensity to leave the community according to individual and household factors.**

|  | Propensity to leave home | Propensity to leave the community |
|--|--------------------------|-----------------------------------|
| Community of residence                                   | .872 ***<br>(.337)       | 1.950 ***<br>(.413)               |
| Gender   | -.272<br>(.358)          | -.618<br>(.404)                   |
| Age  | .024<br>(.019)           | .044 **<br>(.022)                 |
| Education  | .461<br>(.359)           | .673 *<br>(.402)                  |
| Income   | -.280<br>(.392)          | .1123 **<br>(.442)                |
| Marital status I <sup>a</sup><br>(Married or cohabiting) | -.435<br>(.554)          | -1.235 **<br>(.624)               |
| Marital status II <sup>a</sup><br>(Divorced or widowed)  | -.669<br>(.664)          | -1.210 *<br>(.703)                |
| With children  | .742 *<br>(.391)         | .366<br>(.425)                    |
| Length of residence                                      | -.028 *<br>(.016)        | -.029 *<br>(.017)                 |
| Housing tenure   | 1.075 ***<br>(.503)      | .938 *<br>(.530)                  |
| <i>Constant</i>  | .028<br>(.594)           | -.453<br>(.659)                   |
| n  | 198                      | 196                               |
| Cox & Snell R <sup>2</sup>                               | .122                     | .193                              |
| Nagelkerke R <sup>2</sup>                                | .168                     | .276                              |
| Model $\chi^2$   | 25.994                   | 42.079                            |

**Notes:** standard errors in parentheses; \*\*\* p < 0.01; \*\* p < 0.05; \* p < 0.1

<sup>a</sup>: the category of reference is singles.

In line with previous contributions on the topic, the propensity to leave home appears to be higher among home renters and short-term residents, and to be lower among home owners and long-term residents (Speare, 1974; Cuba & Hummon, 1993; Loveridge *et al.*, 2009). To some extent, this outcome could be

explained with the fact that home owners and long-term residents tend to display a stronger sense of belonging towards the dwelling of residence, and to display more numerous and intense ties with other people living in the neighborhood and the community. These, in turn, could be expected to produce a positive effect on the overall evaluation of the dwelling of residence, and thus to decrease the propensity to leave home. In addition to the length of residence and the housing tenure, our results also indicate that people with children are more desirous to move than people without although, in this case, the relation is significant only for the propensity to leave home, and not for the propensity to migrate. This correlation may be due to the presence of certain features which make the dwellings in Kirovsk and Nikel appear to be unsuitable for properly raising children. In the case of Russian Arctic communities this may be due, for example, to occasional problems with heating and thermal insulation, which may threaten the health of children. In addition to this, the relatively small dimensions of housing units available in Kirovsk and Nikel may represent an issue for larger households, and this may foster the desire to leave home among people with numerous children.

As we shift from the results pertaining to the propensity to leave home to the ones concerning the propensity to migrate, we notice numerous elements which appear to be in contrast with our expectations as well as with previous literature dealing with propensity to move. The first element of ambiguity that we encounter refers to the fact that the propensity to leave the community is higher among respondents with a higher level of education and with a higher household income than among poorer and less educated respondents. In this frame of reference, the few authors dealing with current migration trends in the Russian Arctic argued that current outmigration should be interpreted in the light of poor economic performances of Arctic regions after the fall of the Soviet Union and of the consequent social issues affecting the local population, such as unemployment and poor living conditions (Vuorinen, 2008; Akopov & Gadzhiev, 2008). In line with the previous contributions, therefore, we would expect to find a higher degree of propensity to move among people in a precarious financial and economic situation, rather than among wealthier and more educated people, as it appears from our results.

The fact that the propensity to leave the community is higher among the wealthier than among the poorer, and among those with a higher education than among those with a lower education, could be explained in the light of the subjective factors at play. For instance, while wealthier and more educated people can be expected to enjoy better living conditions than people with lower incomes, it is also possible that wealthier people may evaluate their community more negatively than poorer people. In fact, wealthier and more educated people may regard with discontent the fact of living in a relatively small and isolated community, in virtue of the few occupational and career opportunities available there, and of the modest quantity and quality of services offered locally. Accordingly, people with higher incomes and higher education may feel more attracted by the occupational opportunities, social prestige and commodities available in major regional and national centers, such as Murmansk, Sankt Petersburg and Moscow. On the contrary, people with a lower income and education could possibly rely more intensively on the occupational positions gained in the community of residence, and on the relations of mutual support and cooperation established with other community members, such as relatives, friends, and neighbors. Consistently with this, the dependence on the economic and social resources available in the community of residence may weaken the desire to migrate, especially among people with lower incomes and less educated. In order to test such hypotheses, however, it is necessary to await the analyses of the subjective factors influencing residential satisfaction and propensity to move, which are discussed in the following sections.

The second element of ambiguity that we encounter in our results concerns the relation between age and propensity to leave the community. In fact, our results show that older people are significantly more

desirous to migrate than younger people. However, many contributions (amongst which the one by Vuorinen, 2008) show that the propensity to move tends to be higher among the youth than among the elderly. In fact, younger people may have educational and occupational aspirations which can only be fulfilled by leaving the community, as well as a major willingness to accept the risks and uncertainties connected with leaving the hometown (Johnson *et al.*, 2005; Chow & Healey, 2008). Furthermore, young couples may be willing to move to a new community which offers better conditions for growing children, for example in relation to better educational services and to a better quality of the environment (Tucker *et al.*, 1998). The fact that older people display a higher propensity to migrate than younger people may thus be associated with the fact that many of the elderly living in Kirovsk and Nickel were born in other territories of the Soviet Union. Thus, it is possible that older people may be willing to move closer to family members and to return to the place of origin, as already suggested by Litwak & Longino (1987) and by Palo Stoller & Longino (2001). In this frame of reference, therefore, the propensity to leave the community among the older population may be influenced by social and emotional factors, such as a feeling of solitude in the community of residence, or a stronger sense of attachment to the community of origin than to the community of residence (Schwirian & Schwirian, 1993; McHugh & Mings, 1996).

Notwithstanding the ambiguous relations between objective factors and propensity to migrate that we have discussed above, our results confirm our expectations concerning the relation between marital status and length of residence on one hand, and the propensity to leave the community on the other. Pertaining to the marital status, our results show that single people are more desirous to leave the community of residence than people who are married/cohabiting or divorced/widowed. To some extent, this may be due to the fact that single people can choose whether to migrate or to remain without considering the opinion of a partner, and thus present less constraints than, for example, people who married or cohabiting. In addition to this, people who live alone or with the parents may feel the need of looking for a partner and start raising a family, and in order to achieve these objectives, they might desire migrating elsewhere. Contrarily to single people, divorced or widowed people can be deemed to rely more strongly on the support of relatives and friends living in the same community, who may help supplying for the absence of the partner. Accordingly, people experiencing a precarious familiar situation may be more intentioned to remain in the community of residence, rather than moving to another community where they could not count on the same amount of support.

Pertaining to the relation between length of residence and propensity to migrate, our results suggest that short-term residents are more desirous to leave the community than long-term residents. Such an outcome appears to be in line with other contributions dealing with the topic, which underlined the relation between length of residence on one side, and the degree of propensity to move and residential satisfaction on the other (Speare, 1974; Speare & Goldscheider, 1987; Cuba & Hummon, 1993; Loveridge *et al.*, 2009). In fact, long-term residents can be expected to be more integrated in the community of residence, and to have developed a deeper emotional bond and a stronger sense of identification with the place of residence than short-term residents. Moreover, long-term residents may also enjoy more numerous and intense social relations with the other neighbors and community members than short-term residents, which may also entail relations of mutual support and cooperation among. The social and emotional bonds established in the location of residence may thus concur to increase the degree of community satisfaction among long-term residents, and ultimately hinder the desire to leave the community of residence. On the contrary, the difficulty of getting integrated and the lack of an emotional bond to the community may elicit dissatisfaction among short-term residents, fostering the desire to leave the community.



## 5.2 RESIDENTIAL SATISFACTION IN RELATION TO OBJECTIVE FACTORS

In the previous section, we assessed the extent of propensity to move in the samples obtained in Kirovsk and in Nikel, and we investigated how propensity to move varies depending on the community of residence, and according to individual and household background. Our results show that a majority of our respondents wish to leave their home and their community of residence. However, our results also show that the propensity to move is sensibly higher among people living in Nikel than among those living in Kirovsk, suggesting that locational factors may play an effective role in influencing both the propensity to leave home and the propensity to leave the community. In addition to this, our results suggest that propensity to move might be influenced by certain factors related to the individual and household background. Specifically, the propensity to leave home appears to be higher among home renters, short-term residents, and people with children, and to be lower among homeowners, long-term residents, and people without children. At the same time, the propensity to leave the community appears to be higher among people with a higher income and education, among older people, among singles, among short-term residents, and among renters.

While the utilization of objective indicators gives us the opportunity to measure the variations of propensity to move among the population investigated, it provides nonetheless only a partial explanation of the reasons standing behind such variations. Pertaining to this, in our literature review, we have stressed the necessity of considering subjective indicators beside objective ones, as they allow us to focus on the subjective perceptions, evaluations, attitudes and behaviors, rather than on the contextual determinants at play (Newman, 1974, 1975). In this frame of reference, we devoted particular attention to the residential satisfaction model proposed by Speare (1974), which had a remarkable success in modern studies dealing with residential mobility (Bach & Smith, 1977; Michelson, 1977; Lee, 1978; Newman & Duncan, 1979). According to this model, mobility should be conceived as the outcome of a condition of dissatisfaction with the location of residence, which depends in turn on the subjective evaluation of different aspects relatable to the dwelling and the community of residence. On one hand, the residential satisfaction model has been criticized by several scholars (Landale & Guest, 1985; Lu, 1998; Kearns & Parkes, 2003; De Groot *et al.* (2007), who have pointed at the manifold constraints which may intervene between the intention to move and effective mobility. On the other hand, however, the model represents an optimal instrument to shed light on the subjective factors influencing propensity to move among the inhabitants of Kirovsk and Nikel, which is the ultimate purpose of our research. Namely, by focusing on the notion of residential satisfaction, we intend to discern which are the factors fostering satisfaction among the inhabitants of Kirovsk and Nikel and which are instead causing dissatisfaction, and to assess how these factors affect the propensity to remain or to move.

While the analysis of the single subjective factors affecting residential satisfaction will be carried out in the following sections of this chapter, the present section is devoted to analyze the extent and distribution of residential satisfaction among the inhabitants of Kirovsk and Nikel. Specifically, the aim of the present section is to answer the second research question we have set in the introduction (**RQ 2**): *“To what extent are the inhabitants of Kirovsk and Nikel satisfied with their location of residence?”*. In order to answer this question, the present section is structured as follows. In first place, we are going to investigate how the degree of residential satisfaction varies between the sample obtained in Kirovsk and the one obtained in Nikel, in order to assess whether there is a relation between locational factors and residential satisfaction.

Following this, we are going to analyze how the degree of residential satisfaction varies depending on the individual and household background, namely by employing the same set of objective factors utilized in the previous section.

### 5.2.1 Residential satisfaction in relation to locational factors

In the literature review, we repeatedly stressed the necessity of distinguishing among different range of analysis while discussing about propensity to move and residential satisfaction. Accordingly, we decided to define the notion of residential satisfaction by means of two distinct variables, i.e. home satisfaction and community satisfaction. In order to assess the degree of home satisfaction, our respondents were asked to state whether they agreed on a scale from 1 (strong disagreement) to 5 (strong agreement) to the statement: *I am satisfied with living in my home*. Similarly, we assessed the degree of community satisfaction by means of the following statement: *I am satisfied with living in (Kirovsk/Nikel)*. The degree of home satisfaction and community satisfaction recorded among the inhabitants of Kirovsk and in Nikel are presented in table 5.9. In the table, we also report the correlation between residential satisfaction and community of residence, and between home and community satisfaction.

**Table 5.9 - Home satisfaction and community satisfaction according to community of residence**

|   |                   | Kirovsk    | Nikel | Aggregate |
|---|-------------------|------------|-------|-----------|
| Home satisfaction   | Very satisfied    | 37         | 18    | 55        |
|   | Satisfied         | 43         | 40    | 83        |
|   | Indifferent       | 13         | 26    | 39        |
|   | Dissatisfied      | 5          | 10    | 15        |
|   | Very dissatisfied | 1          | 2     | 3         |
|   | Total             | 99         | 96    | 195       |
| Correlation between home satisfaction and community of residence      | $\chi^2$          | 12.962 **  |       |           |
|   | Kendall's Tau-C   | -.278      |       |           |
| Community satisfaction  | Very satisfied    | 31         | 12    | 43        |
|   | Satisfied         | 38         | 32    | 70        |
|   | Indifferent       | 26         | 35    | 61        |
|   | Dissatisfied      | 4          | 12    | 16        |
|   | Very dissatisfied | 1          | 9     | 10        |
|   | Total             | 100        | 100   | 200       |
| Correlation between community satisfaction and community of residence | $\chi^2$          | 20.638 *** |       |           |
|   | Kendall's Tau-C   | -.343      |       |           |
| Correlation between home satisfaction and community satisfaction      | $\chi^2$          | 40.861 *** |       |           |
|   | Kendall's Tau-C   | .223       |       |           |

Notes: \*\*\* p < 0.01; \*\* p < 0.05

As we can appreciate from table 5.9, a majority of our respondents are either satisfied or very satisfied both with the dwelling and with the community of residence, while only a minority reported to be either dissatisfied or very dissatisfied. In addition to this, as in the case of propensity to move, the degree of residential satisfaction appears to be strongly correlated with the community of residence. Namely, people

living in Kirovsk appear to be significantly more satisfied than people living in Nickel, both in regard to the dwelling and to the community of residence, while at the same time, people in Nickel are more likely to display dissatisfaction or just indifference than people living in Kirovsk. Moreover, the results in the table show that the degree of home satisfaction is significantly correlated with the degree of community correlation, meaning that people who are satisfied with their dwelling are also satisfied with the community of residence, and vice versa.

As we compare the results presented in table 5.9 with the ones reported in section 5.1 concerning the relation between propensity to move and the community of residence, there appear to be some elements suggesting that the propensity to move may actually depend on the degree of residential satisfaction, while others suggest the opposite. Namely, our results show that residential satisfaction is lower in Nickel, where people are more desirous to move, and higher in Kirovsk, where people are more desirous to leave, thus suggesting that there might be indeed a meaningful relation between the degree of residential satisfaction and the propensity to move. From this perspective, the differential in residential satisfaction between the two communities may thus depend on the same locational factors influencing propensity to move, such as the quality of housing conditions, the availability of occupational opportunities and of public services and facilities, the presence of sources of pollution, etc. From the same perspective, the differential in residential satisfaction may then be explained also in relation to the different composition of the samples obtained in Kirovsk and in Nickel although. However, as we have already seen in the previous section, the differences reported between the two communities are more likely to be due to locational factors, rather than on mere sampling bias and errors.

While the different degree of residential satisfaction reported in Kirovsk and in Nickel may possibly determine the variations in propensity to move that we previously recorded between respondents in the two communities, there appears to be a notable mismatch between the number of respondents who reported some degree of dissatisfaction, and those who reported the desire to move. Namely, these results appear to be in contrast with the argumentations by Speare (1974), according to whom the degree of dissatisfaction is symptomatic of both propensity to move and effective residential mobility. In fact, only 9% of our respondents reported to be either dissatisfied or very dissatisfied with their home, although 64% declared to wish to leave home. At the same time, 13% of our respondents reported dissatisfaction or strong dissatisfaction with the community of residence, while about 70% declared the wish to migrate. In the light of these results, we should be careful not to overestimate the analogy between variations in propensity to move and residential satisfaction reported in Kirovsk and in Nickel, or to consider these variations as a genuine proof of the relation between residential satisfaction and propensity to move.

### **5.2.2 Residential satisfaction in relation to individual and household factors**

In addition to locational factors, the degree of residential satisfaction may vary depending on the individual and the household background. In fact, as already documented in numerous studies, the criteria according to which people evaluate their dwelling and community, and thus the satisfaction with the location of residence, are likely to vary depending on the practical needs and aspirations of the individual and the other members of the household (McAuley & Nutti, 1985; Amerigo & Aragonés 1997). For instance, older people may evaluate their community of residence depending on the quality of healthcare services, or on the presence of relatives and friends who can provide assistance, while younger people may evaluate their community depending on the presence of recreational facilities, or on the availability of occupational and educational opportunities. Moreover, people may also evaluate their home and community according to the social and emotional relations established in the context of the location of residence (Kasarda &

Yanowitz, 1974; Riger & Lavrakas, 1981). For instance, people who have lived longer in the same community may establish more numerous and intense social bonds with the other community members than people who have just immigrated, and this may eventually foster a higher degree of residential satisfaction in long-term residents than in short-term residents. Taking this into account, the variations in residential satisfaction between people having different individual and household backgrounds could explain why certain categories of people are more likely to display propensity to move than others.

In order to assess how residential satisfaction varies in relation to individual and household factors, we carry out a pair of linear regressions, whose outcome is reported in table 5.10. In these regressions, home satisfaction and community satisfaction are treated as dependent variables, while individual and household indicators are treated as independent variables. Namely, in order to ease the comparison with the results concerning the distribution of propensity to move across the population, we employ the same set of objective indicators that we utilized in the previous section.

**Table 5.10 - Home and community satisfaction according to individual and household factors**

|  | Home satisfaction    | Community satisfaction |
|--|----------------------|------------------------|
| Community of residence                                   | -.451 ***<br>(.130)  | -.814 ***<br>(.138)    |
| Gender   | .161<br>(.140)       | .027<br>(.150)         |
| Age  | -.016 **<br>(.007)   | .007<br>(.008)         |
| Education  | .055<br>(.143)       | -.283 *<br>(.150)      |
| Income   | .060<br>(.154)       | .235<br>(.163)         |
| Marital status I <sup>a</sup><br>(Married or cohabiting) | .275<br>(.216)       | .032<br>(.231)         |
| Marital status II <sup>a</sup><br>(Divorced or widowed)  | .351<br>(.260)       | -.224<br>(.276)        |
| With children  | -.266 *<br>(.154)    | -.407 **<br>(.164)     |
| Length of residence                                      | .006<br>(.007)       | .012 *<br>(.006)       |
| Housing tenure   | -.623 ***<br>(.178)  | -.327 *<br>(.188)      |
| <i>Constant</i>  | 4.4867 ***<br>(.236) | 3.730 ***<br>(.250)    |
| N  | 191                  | 196                    |
| R <sup>2</sup>   | .164                 | .225                   |
| Adjusted R <sup>2</sup>                                  | .119                 | .184                   |

**Notes:** standard errors in parentheses; \*\*\* p < 0.01; \*\* p < 0.05; \* p < 0.1; <sup>a</sup>: the category of reference is singles.

The results presented in table 5.10 appear to confirm the existence of a strong correlation between the community of residence and the degree of residential satisfaction, both at the home and the community level. Also, the table shows that homeowners are significantly more satisfied with their dwelling and their community of residence than renters, an outcome which is in accordance with other studies highlighting the effect of housing tenure on residential satisfaction (e.g. Gruber & Shelton, 1986). Moreover, this

outcome can be deemed to confirm our previous results, which have shown that housing tenure plays a significant role in affecting both the propensity to leave home, and the propensity to leave the community. Taking this into account, it is possible to conclude that, also in the context of communities located in the Russian Arctic, the type of tenure represents a major predictor of the degree of satisfaction with the location of residence, as well as of the desire to leave the home and the community, and that the two facts are interrelated.

As we focus on the individual and household factors influencing home satisfaction, we notice that the degree of satisfaction is higher among the younger population and among people with no children, while it is lower among the older people and among people with children. These results seem to suggest a certain discomfort and unease among people with children in regard to the dwelling of residence, which is confirmed by the fact that people with children are also the ones who are more desirous to leave home. Also in this case, the sense of dissatisfaction recorded among people with children can be referred to specific characteristics which make the dwelling unsuitable for raising a numerous families, such as the relatively small dimensions of housing units, the lack of private gardens, and the lack of appropriate maintenance to the residential infrastructure, characteristics which are common to most dwellings in both Kirovsk and Nickel. Furthermore, the degree of home satisfaction among older people may be influenced by the poor quality of thermal insulation, and from living in a flat located in higher floors: in fact, residential blocks in Kirovsk and Nickel are generally five-stores high or more, but in most cases have no operating lift. On the contrary, the higher degree of satisfaction recorded among young people can be explained with the fact that many can afford to rent or own a flat at a relatively young age, thanks to the low prices of housing, and to the many vacancies due to outmigration. At the same time, young people who are living with their parents may feel attached to the paternal home, and thus feel satisfied with their current housing situation.

Pertaining to the factors affecting community satisfaction, the results presented in table 5.10 show that the degree of satisfaction may depend on the presence of children in the household, on the level of education, and on the length of residence. Namely, people with no children, with a higher education, and who have lived in the community for a longer period appear to be significantly more satisfied with their community than people with children, with a lower education, and with a shorter length of residence. In addition to this, people with higher incomes appear to be more satisfied with the community of residence than people with lower incomes; however, the overall effect of household income on community satisfaction is not significant. The results concerning the effect of length of residence on community satisfaction seem to be in accordance with the ones proposed in other studies dealing with the topic (Speare, 1970, 1974), as well as with our previous findings showing that short-term residents are more likely to display propensity to move than long-term residents. A similar discourse could be proposed in regard to the role played by the education variable. In fact, also in this case, people who are more educated tend to be less satisfied as well as more desirous to leave, while people with lower educational degrees are generally more satisfied as well as more desirous to stay. To some extent, these analogies could be then interpreted as another proof of the relation existing between community satisfaction and propensity to move. In order to explain the reasons underpinning such relation and to assess its actual validity, however, it will be necessary to cast attention on the role played by subjective factors influencing the overall evaluation of the community and the desire to move, which we are going to discuss in the following sections

Even more important than the length of residence and the level of education, the degree of community satisfaction appears to be considerably affected by the presence of children in the household; contrarily to the other two variables, however, the presence of children appears to have an effect on the propensity to leave home, but not on the propensity to leave the community. The low degree of dissatisfaction reported

among people with children may depend on diverse factors. In fact, many parents may deem Kirovsk and Nikel to be unsuitable locations for raising children, in virtue of the poor climatic and environmental conditions. Especially in Nikel, these considerations may be also spurred by the high levels of pollution due to mineral and industrial activities located nearby residential areas, and by the expectation that such pollution may harm the health of the children. Moreover, the low degree of community satisfaction among people with children may potentially reflect a poor evaluation of the educational and recreational services provided by the municipality. Also in this case, however, it is necessary to first analyze the effect of the single subjective factors on residential satisfaction in order to assess the validity of such argumentations.

### 5.3 CONVENIENCE SATISFACTION IN RELATION TO OBJECTIVE FACTORS

In the previous sections of this chapter, we assessed the extent of propensity to move and residential satisfaction across the samples obtained in Kirovsk and Nikel, and we analyzed how these vary depending on locational factors, and on individual and household factors. While the utilization of objective factors enable us to shed light on the distribution of propensity to move and residential satisfaction across the population investigated, however, it does not help us to explain the reasons underpinning such distribution, but only to generate hypotheses concerning why certain categories are more or less desirous to move, or more or less satisfied with their location of residence. Accordingly, in order to understand the distribution of propensity to move and residential satisfaction across our samples, we supported the necessity of considering subjective factors beside objective ones, following the argumentations proposed by Newman (1974, 1975) and by other scholars operating in this ambit of research (Campbell & Converse, 1972; Robinson, 1973; Marans & Rodgers, 1974). For this purpose, in the literature review, we distinguished among three major typologies of subjective aspects which can be deemed to influence the subjective evaluation of the location of residence, hence the propensity to move. The three typologies were defined as: convenience satisfaction; social satisfaction; and emotional satisfaction. In the present section, we are going to investigate how the degree of convenience satisfaction varies across the samples obtained in Kirovsk and in Nikel according to locational, individual and household factors (social and emotional satisfaction will be treated later in section 5.4 and 5.5). Namely, the present section is devoted to answer the following question (**RQ 2a**): *“How do the inhabitants of Kirovsk and Nikel evaluate their location of residence with regard to convenience aspects?”*

In the literature review, we borrowed the expression “convenience satisfaction” from Fried (1984), in order to define the subjective evaluation of various aspects pertaining to the livability, practicality and functionality of the dwelling and community of residence. Namely, the degree of home satisfaction and the propensity to leave home may vary depending on the subjective evaluation of the housing infrastructure, of the space available in the dwelling, and of the level of maintenance (Amerigo & Aragonés, 1990, 1997). At the same time, the degree of community satisfaction and the propensity to migrate may be influenced by

the subjective evaluation of various aspects, such as: the economic and occupational opportunities offered in the community (Marans & Rodgers, 1975; Rodgers, 1980); the public services and other of amenities available in the community (Fried, 1984; Allen *et al.*, 1991; Parkes *et al.*, 2002); and the quality of environmental conditions (Bonaiuto *et al.*, 1999, 2003; Matsuoka & Kaplan, 2008). On one hand, the evaluation of convenience aspects may thus vary depending on the objective characteristics of the dwelling and of the community of residence, while on the other hand it may also vary depending on the individual and the household background. From our perspective, by analyzing how evaluation of convenience aspects varies among the samples obtained in Kirovsk and Nikel, we might be able to obtain useful elements which may ultimately concur to explain the extent and distribution of residential satisfaction and propensity to move across our samples. Moreover, this analysis may offer new information pertaining to the quality of living conditions among the inhabitants of Russian Arctic communities, and thus allow us to recognize specific factors causing distress among the local population.

In order to investigate how the degree of convenience satisfaction varies according to objective factors, the present section is structured as follows. In first place, we present a number of aspects relatable to the dwelling and the community of residence which can be deemed to affect the degree of convenience satisfaction, and we analyze how the subjective evaluation of these aspects varies between respondents in Kirovsk and in Nikel. Specifically, we categorize the aspects affecting convenience satisfaction into five categories, i.e.: housing conditions; economic conditions; public services; other amenities (i.e. cultural, recreational and commercial facilities); and environmental conditions. Following this, in the second part of this section, we investigate how the subjective evaluation of convenience aspects varies depending on the individual and the household background. For this purpose, we employ the same set of objective factors which we have adopted in previous sections.

### **5.3.1 Convenience satisfaction in relation to locational factors**

As already mentioned, the subjective evaluation of convenience aspects may depend to a great extent on the objective characteristics of the location of residence. Taking this into account, in order to define an appropriate set of convenience aspects to be considered in our research, we are compelled to consider the various features and characteristics which are common to most communities located in the Russian Arctic, as well as the peculiar aspects of the two communities we have selected as study cases. For instance, the evaluation of housing conditions may be negatively influenced by the poor housing standards available in most peripheral communities in the Russian Federation, which can be ascribed to an outdated infrastructure as well as to poor levels maintenance and decay of residential units. In addition to this, the evaluation of economic and occupational conditions may resent from manifold issues affecting the economy of the Russian Arctic after the fall of the Soviet Union, especially in a period of global economic recession like the one in which our research took place. Also, the subjective evaluation of public services and other amenities may resent from the budgetary cuts that were carried out by the Russian government over the last decades in all the ambits of the public sector, which determined a decrease in the quantity and the quality of services offered to the population, especially in peripheral regions (Chernova, 2007; Akopov & Gadzhiev, 2008). Finally, the evaluation of environmental conditions may be negatively influenced by the severe climatic conditions affecting the Russian Arctic, as well as by the heavy levels of pollution caused by mineral and industrial activities in the region. Consistently, we expect respondents in Kirovsk and in Nikel to express a relatively low degree of satisfaction in regard to all of the convenience aspects taken into account.

The remarkable differences between the two communities that we have taken as study cases allows us to better specify how the evaluation of convenience aspects may vary depending on the objective attributes of the community of residence. In fact, as already portrayed in chapter 2, Kirovsk has about twice the population of Nickel, and thus presents a higher quantity, quality and diversification of occupational opportunities, as well as of services, retails, and other amenities required by local inhabitants. Moreover, the population of Nickel may resent from relative isolation and peripherality, while on the contrary, people in Kirovsk may enjoy the vicinity to Apatity, hence to the services and jobs offered there. Furthermore, the population in Nickel may resent from the very poor environmental conditions determined by the toxic emissions of the local smelter and mines, while in Kirovsk, most mineral and industrial activities are located out of town. In the light of these remarkable differences, we expect people in Kirovsk to evaluate convenience aspects more positively than people in Nickel. This, in turn, may eventually concur to explain the differential in residential satisfaction and propensity to move which we reported between the two communities.

In order to assess the extent and distribution of convenience satisfaction across the samples obtained in Kirovsk and in Nickel, we employ five indicators which refer to: the satisfaction with housing conditions; the satisfaction with economic conditions; the satisfaction with public services; the satisfaction with other amenities; and the satisfaction with environmental conditions. The five indicators are further defined by the average score reported in the respective sub-indicators, each representing a specific aspect of convenience satisfaction. In order to assess the value of each sub-indicator, we proposed a series of statements concerning the evaluation of specific aspects attributable to convenience satisfaction, and we asked our respondents to state whether they agreed with the statement proposed on a scale from 1 to 5, with 5 given to higher levels of satisfaction. The average scores obtained in Kirovsk and in Nickel for each indicator and their respective sub-indicators are reported in table 5.11.

As documented in table 5.11, respondents in Kirovsk display a significantly higher degree of convenience satisfaction than respondents in Nickel, an outcome which confirms our previous expectations. Specifically, respondents in Kirovsk reported higher scores than respondents in Nickel in all of the indicators taken into account, as well as in 15 out of the 16 sub-indicators. The differential in convenience satisfaction between the respondents in the two communities is underlined by the fact that respondents in Kirovsk reported average scores above the medium value of 3 in all but one of the indicators taken into account, while in Nickel the scores are below the medium value of 3 in all of the indicators considered.

Concerning the satisfaction with housing conditions, the scores obtained in Kirovsk and in Nickel show remarkable differences as well as similarities. In first place, and against our expectations, the quality of dwelling infrastructure and the space available in the dwelling received relatively high scores, both in Kirovsk and in Nickel, while the level of dwelling maintenance is deprecated in both communities. Apart from these similarities, respondents in Kirovsk are significantly more satisfied with housing conditions than respondents in Nickel, especially concerning the quality of dwelling infrastructure and the space available in the dwelling. Such variations may reflect objective differences between the dwellings available in Kirovsk and those available in Nickel; however, after inspecting various residential units both in Kirovsk and in Nickel, we could not notice any substantial difference between the housing conditions available in the two communities. If our impression was correct, the variations in the degree of satisfaction with housing conditions may thus depend on the individual and household backgrounds of our respondents, rather than locational factors *per se*, as we are going to investigate later in this section.



**Table 5.11 - Evaluation of convenience aspects according to community of residence**

|   | Kirovsk     |             | Nikel       |             | Samples<br>t-test |
|---|-------------|-------------|-------------|-------------|-------------------|
|   | Score       | Std. D.     | Score       | Std. D.     |                   |
| Quality of dwelling infrastructure        | 4.03        | .968        | 3.71        | 1.015       | 2.27 **           |
| Space available in the dwelling           | 3.49        | 1.316       | 3.05        | 1.432       | 2.21 **           |
| Dwelling maintenance                      | 2.49        | 1.202       | 2.22        | 1.248       | 1.53              |
| <b>Housing conditions</b>                 | <b>3.36</b> | <b>.845</b> | <b>2.97</b> | <b>.911</b> | <b>3.13 ***</b>   |
| Occupational and career opportunities     | 2.34        | .988        | 1.95        | .943        | 2.81 ***          |
| Cost of life                              | 2.68        | 1.021       | 2.42        | .991        | 1.85 *            |
| <b>Economic conditions</b>                | <b>2.50</b> | <b>.810</b> | <b>2.17</b> | <b>.770</b> | <b>2.97 ***</b>   |
| Safety and security                       | 3.26        | 1.036       | 3.09        | 1.031       | 1.17              |
| Healthcare and medical services           | 2.63        | 1.006       | 2.10        | .936        | 3.79 ***          |
| Education and local schools               | 3.54        | .939        | 2.82        | 1.142       | 4.69 ***          |
| Public transport and degree of isolation  | 3.69        | 1.125       | 2.82        | 1.255       | 5.16 ***          |
| <b>Public services</b>                    | <b>3.28</b> | <b>.710</b> | <b>2.71</b> | <b>.686</b> | <b>5.80 ***</b>   |
| Cultural facilities and events            | 3.11        | 1.026       | 2.43        | 1.042       | 4.52 ***          |
| Recreational facilities                   | 2.93        | 1.143       | 3.59        | 1.129       | -3.97 ***         |
| Retail services and availability of goods | 2.97        | 1.005       | 2.63        | .884        | 2.53 **           |
| <b>Other amenities</b>                    | <b>3.02</b> | <b>.678</b> | <b>2.87</b> | <b>.555</b> | <b>1.75 *</b>     |
| Environmental pollution                   | 2.64        | 1.153       | 1.44        | .681        | 8.71 ***          |
| Presence of green and natural areas       | 3.52        | .937        | 2.32        | .998        | 8.72 ***          |
| Summer climate                            | 2.65        | 1.338       | 2.36        | 1.270       | 1.03              |
| Winter climate                            | 3.60        | 1.186       | 3.41        | 1.302       | 1.54              |
| <b>Environmental conditions</b>           | <b>3.11</b> | <b>.757</b> | <b>2.40</b> | <b>.646</b> | <b>7.14 ***</b>   |

**Notes:** all the scores are comprised between 1 and 5; \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

The results in table 5.11 confirm our expectations of finding widespread dissatisfaction with economic and occupational conditions, both in Kirovsk and in Nikel. Also in this case, such an outcome could be ascribed to an indirect role played by contextual factors. In fact, as already mentioned, local inhabitants may still suffer from the long-term consequences of the prolonged economic crisis which followed the collapse of the Soviet Union, which determined widespread unemployment and poverty among large segments of the population (Round, 2005a; Akopov & Gadzhiev, 2008; Rautio & Tykkyläinen, 2008). Furthermore, the sense of dissatisfaction with economic and occupational conditions could be sharpened by the effects of the ongoing global crisis, which had notable repercussions also on the Russian economy. Although we are not able to recognize the exact causes inducing our respondents to report a low degree of satisfaction with economic and occupational conditions, our results confirm nonetheless that people living in Kirovsk and

Nikel are indeed experiencing a situation of financial distress and occupational precariousness. To some extent, the low degree of satisfaction with economic and occupational conditions may thus concur to explain the very high degree of propensity to migrate recorded in section 5.1.

The existence of a correlation between objective locational factors on one hand, and subjective evaluation of economic conditions on the other, is supported by the fact that people in Kirovsk were significantly more satisfied than people in Nikel, both with occupational and career opportunities and with the cost of life. In fact, the gap regarding occupational and career opportunities may be held to depend on the different degree of urbanity of the two communities, as well as on their location in respect to regional and national centers. From this perspective, people living in Kirovsk may dispose of better employment conditions and opportunities thanks to a more diversified labour market, and to the possibility of making career in the public administration or in private enterprises located in Kirovsk and Apatity. On the contrary, the poor employment conditions reported in Nikel could be ascribed to the mono-functional character of Nikel's economy, and to the shortage of career opportunities in the local sectors of the economy. Finally, the different evaluation of economic and occupational conditions in Kirovsk and Nikel may also depend, to some extent, on the different composition of the samples obtained in the two communities, as respondents in Kirovsk reported a higher income and a higher level of education than respondents in Nikel.

Pertaining to the evaluation of public services and of other amenities available in the community, the inhabitants of Kirovsk display a significantly higher degree of satisfaction than the inhabitants of Nikel in most of the sub-indicators that we take into account. Once again, such a difference may depend on the different dimensions and location of the two communities investigated, as respondents in Kirovsk may take advantage of a higher quantity and quality of public services than in Nikel. Specifically, people in Kirovsk attributed the highest scores to educational facilities, whose quality is confirmed by the special grants awarded to local schools in competitions at the national level. In Nikel instead, the highest scores were attributed to recreational facilities - the only sub-indicator of convenience satisfaction receiving a higher score in Nikel than in Kirovsk. To some extent, this could be explained with the presence of a discreet number of bars and clubs, and by the presence of several resorts for outdoor activities in the surroundings of Nikel. Although Kirovsk presents numerous resorts in the surrounding area, local inhabitants may resent from the scarce quantity and/or quality of other recreational opportunities, e.g. bars and clubs, which appear to be rather limited for a town hosting touristic and winter sport facilities such as Kirovsk.

While the degree of satisfaction with public services and other amenities varies considerably between respondents in Kirovsk and in Nikel, it is interesting to notice that healthcare and medical services are the ones obtaining the lowest scores in both communities, followed by the quality of retail services and the availability of goods. As already mentioned, the dissatisfaction with healthcare and medical services could be ascribed to the shrinking of the welfare system during the post-soviet period, which determined a notable reduction in the provision and in the quality of services offered (Cerami, 2009). Pertaining to the availability of goods, the sense of dissatisfaction could be primarily referred to the limited number and diversification of local retail services, and to the necessity of travelling to Murmansk or to Apatity in order to purchase certain types of goods. Finally, people in Nikel reported dissatisfaction with cultural facilities and events: emblematic is the fact that, at the time of our survey, the palace of culture in Nikel was occupied by stands selling food and clothing, as if it were a market. In Kirovsk, where the palace of culture is actually deputed and utilized to host cultural events such as concerts or festivals, the degree of satisfaction with cultural facilities and events was sensibly higher.

As expectable, the subjective evaluation of environmental conditions appear to vary remarkably between respondents in Kirovsk and in Nikel, thus demonstrating the existence of a meaningful association between

the objective features and characteristics of the location of residence, and the subjective evaluation of the same. Namely, the fact that respondents in Kirovsk are significantly more satisfied with the level of pollution and the presence of green and natural areas than respondents in Nickel can be attributed to the dramatic levels of pollution generated by the smelter and the mines located in the outskirts of Nickel. In fact, the release of poisonous gasses from the smelter has been associated with occasional acid rains and to a general impoverishment of environmental conditions in Nickel and its surroundings, and to the insurgence of health complications among local inhabitants. Also in Kirovsk, however, the degree of satisfaction with environmental pollution appears to be relatively low. To some extent, this may be due to the fact that, both in Kirovsk and in Nickel, the evaluation of environmental pollution may be negatively affected by the emissions produced by heating plants located within the community boundaries, and by the numerous outdated vehicles circulating on local roads, although road traffic and noise is generally low. Furthermore, the presence of industrial and mineral activities can be deemed to have a negative effect on the objective quality of the environment also in Kirovsk; however, these are generally located away from residential areas, and may thus induce fewer concerns among people in Kirovsk than people in Nickel.

Also pertaining to the other indicators of satisfaction with environmental conditions, people in Kirovsk display a higher degree of satisfaction than the inhabitants of Nickel. Concerning the evaluation of green and natural areas, people in Kirovsk may in fact enjoy the presence of lakes and mountains in the surroundings areas. Although Nickel presents vast natural areas too, the evaluation of these may be affected by the high levels of contamination produced by the smelter emissions, which generated a treeless barren in the north of the town. Also, respondents in Kirovsk appear to be more satisfied with climatic conditions and with daylight/darkness periods than respondents in Nickel, both in summer and the winter, although in this case the difference is not significant. More interestingly, respondents in both communities attributed higher scores to climatic conditions in winter than in summer. As it emerged in the informal interviews carried out in Kirovsk and in Nickel, such a difference is likely to depend on the insurgence of psychical and physiological disturbs, such as insomnia, which are caused by the prolonged periods of daylight during the Arctic summer. In Nickel, however, the difference may also be ascribed to the seasonal changes in the direction of the winds, and to the related changes in the quality of environmental conditions.

### **5.3.2 Convenience satisfaction in relation to individual and household factors**

In the previous paragraphs, we found that the degree of convenience satisfaction may vary considerably depending on the community of residence, leading us to suggest that the objective features and characteristics of the location of residence may play an effective role in influencing the degree of residential satisfaction and the propensity to move. As documented in several studies, however, the evaluation of single convenience aspects may also vary according to a variety of individual and household factors (Speare, 1970; Speare & Goldscheider, 1975; Roberts *et al.*, 1983; Trent *et al.*, 1984; Schwirian & Schwirian, 1993; Myers, 2000). In fact, subjective needs and aspirations, and the possibility to satisfy them, are likely to diverge considerably depending on the objective characteristics of the individual (e.g. age, gender, income, level of education, length of residence, housing tenure) and of the household (e.g. marital status, presence of children). Moreover, subjective judgments and evaluations of the location of residence and of single aspects of this may be influenced by subjective and socio-cultural filters, which are also likely to change according to the individual and household background. In line with these argumentations, in the following paragraphs, we are going to analyze how the degree of convenience satisfaction is distributed across the samples obtained Kirovsk and Nickel. In our intentions, this analysis shall provide new insights

concerning the distribution of residential satisfaction and of propensity to move in our sample, as reported in sections 5.1 and 5.2. Furthermore, this analysis may help us recognizing the specific convenience aspects which can be deemed to cause dissatisfaction among the various categories composing the population.

In order to assess how the degree of convenience satisfaction varies according to individual and household factors, we carried out five linear regressions, reported in table 5.12. As we can appreciate from the regressions, there appears to be indeed a strong correlation between the degree of convenience satisfaction and the community of residence, as reported in the first part of this section. In addition to this, the individual and household factors included in the regressions appear to play a determinant role in influencing the degree of convenience satisfaction, although this role varies depending on the factors and indicators considered. Specifically, individual and household factors appear to play a discreet role in influencing: the evaluation of housing conditions; the evaluation of other amenities (cultural, recreational, and retail facilities); and the evaluation of environmental conditions. However, the effect of individual and household factors on the evaluation of economic and occupational conditions, and on the evaluation of public services, appears to be limited to only a few of the objective factors taken into account, as we are now going to clarify.

**Table 5.12 - Evaluation of convenience aspects according to individual and household factors**

|  | Housing conditions  | Economic conditions | Public services     | Other amenities     | Environmental conditions |
|--|---------------------|---------------------|---------------------|---------------------|--------------------------|
| Community of residence                                   | -.328 ***<br>(.106) | -.315 ***<br>(.099) | -.726 ***<br>(.089) | -.086<br>(.071)     | -.673 ***<br>(.097)      |
| Gender   | .073<br>(.114)      | -.200 *<br>(.107)   | -.116<br>(.097)     | .050<br>(.077)      | -.313 ***<br>(.106)      |
| Age  | -.001<br>(.006)     | .001<br>(.006)      | -.019 ***<br>(.005) | -.008 **<br>(.004)  | -.011 *<br>(.006)        |
| Education  | .195 *<br>(.110)    | -.180 *<br>(.108)   | -.094<br>(.094)     | -.029<br>(.076)     | -.064<br>(.106)          |
| Income   | .089<br>(.124)      | .274 **<br>(.119)   | .092<br>(.104)      | .144 *<br>(.082)    | .245 **<br>(.115)        |
| Marital status I <sup>a</sup><br>(Married or cohabiting) | -.336 *<br>(.177)   | -.302 *<br>(.166)   | .103<br>(.144)      | .058<br>(.120)      | -.059<br>(.163)          |
| Marital status II <sup>a</sup><br>(Divorced or widowed)  | .126<br>(.212)      | -.257<br>(.197)     | -.302 *<br>(.173)   | -.025<br>(.145)     | .023<br>(.195)           |
| With children  | -.375 ***<br>(.129) | -.131<br>(.273)     | -.095<br>(.106)     | -.177 **<br>(.084)  | -.259 **<br>(.116)       |
| Length of residence                                      | -.001<br>(.005)     | -.001<br>(.005)     | -.005<br>(.004)     | -.003<br>(.003)     | .003<br>(.005)           |
| Housing tenure   | -.730 ***<br>(.144) | -.034<br>(.138)     | -.098<br>(.122)     | .137<br>(.096)      | -.048<br>(.132)          |
| <i>Constant</i>  | 3.275 ***<br>(.193) | 2.811 ***<br>(.179) | 3.032 ***<br>(.156) | 3.440 ***<br>(.128) | 3.707 ***<br>(.176)      |
| N  | 191                 | 185                 | 188                 | 186                 | 196                      |
| R <sup>2</sup>   | .243                | .155                | .326                | .126                | .315                     |
| Adjusted R <sup>2</sup>                                  | .199                | .107                | .288                | .076                | .279                     |

**Notes:** standard errors in parentheses; \*\*\* p < 0.01; \*\* p < 0.05; \* p < 0.1; <sup>a</sup>: the category of reference is singles.

Pertaining to the evaluation of housing conditions, the regression confirms the fundamental role played by locational factors, with people in Kirovsk being significantly more satisfied than people in Nickel. However, even more important than the community of residence is the type of housing tenure, with people owning their flat being more satisfied than people living in rented flats ( $p < 0.01$ ). Namely, this outcome appears to be in line with the one of numerous other studies investigating the effect of housing tenure on housing satisfaction and propensity to move (Newman, 1975; Morris *et al.*, 1976; Loo, 1986). Furthermore, our results show that the evaluation of housing conditions may vary depending on the level of education, the marital status, and the presence of children in the household. Specifically, people with a lower education, people who are married or cohabiting, and people who have children, are more likely to be dissatisfied with their housing conditions than people belonging to other categories. To some extent, the poor evaluation of housing conditions among people who are married or cohabiting and among those who have children may depend on the objective characteristics of the dwellings available in Kirovsk and in Nickel, which are generally rather small and unfit for raising a numerous family. Given the elements at our disposal, however, we are not able to provide any sound explanation about the correlation between level of education and evaluation of housing conditions. In fact, such correlation may refer to the fact that educated people (such as public workers, managers and engineers) can afford better dwellings than less educated people; however, there appears to be no correlation between the household income and the dependent variable.

Also pertaining to the evaluation of economic conditions, the regressions confirm the remarkable variations between respondents in Kirovsk and respondents in Nickel already described in table 5.11, with the first being more satisfied than the second. In addition to this, the evaluation of economic conditions appears to vary according to different individual and household factors, such as: the household income; the level of education; the gender; and the marital status. The fact that wealthier people reported a higher degree of satisfaction than people with lower income is somewhat expectable, as wealthier people may enjoy better occupational positions as well as a higher purchasing power. Beside this, the sense of satisfaction appears to be lower among people with a higher education, and higher among people with a lower education. On one hand, the sense of dissatisfaction reported among educated people could be attributed to a sense of frustration, caused by the scarcity of prestigious occupational positions in Kirovsk and in Nickel, and by the impossibility of satisfying career and financial aspirations while residing in the same community. On the other hand, this may also represent a symptom of financial or occupational difficulties among people with a high level of education.

The fact that women are less satisfied with their economic conditions than men could be interpreted as an indicator of gender discriminations in the ambit of occupational and career opportunities as well as in retributions. In fact, according to official statistics (FSSS, 2011), women in the Russian Federation have a higher chance of being unemployed than men, and perceive average salaries which are comparatively lower. In addition to this, the dissatisfaction with economic conditions reported among women may be interpreted in the light of the profound social issues affecting Russian society, such as high rates of divorce and low expectancy of life among men. In fact, also in the sample we have gathered in Kirovsk and in Nickel, there are an alarming proportion of women who are divorced or widowed, and who are left with the burden of providing for themselves and for their children. However, the regressions show that neither the presence of children in the household nor the fact of being divorced or widowed were significant predictors of satisfaction with economic conditions. Taking this into account, it is possible that the sense of dissatisfaction reported among women may be primary due to a differential in occupational and economic opportunities between the two genders, rather than to an effect of familiar instability. Namely, the effect of familiar instability could be compensated by public benefits and pensions directed to help households with financial issues, and by the collaboration and support provided by relatives and friends.

As we focus on the factors affecting the subjective evaluation of local public services, we notice that the degree of satisfaction may vary according to the community of residence, on the age, and on the marital status. In fact, as already noticed earlier in this section, respondents in Kirovsk were significantly more satisfied with local public services than respondents in Nickel, an outcome which may be explained with the different quantity and quality of services offered to the population in these communities. In addition to this, the results in the table show that the satisfaction with public services is higher among people with higher incomes, among young people, and among people who are divorced or widowed.

The fact that richer people are more satisfied with public services than poorer people may be adduced to different reasons. In first place, richer people may enjoy the financial possibilities allowing them to resort to private educational and healthcare facilities when needed, while people with lower incomes may not enjoy such possibilities, and thus depend entirely on the services offered by the state. Consequently, people with lower incomes could be more directly affected by the processes of reorganization and privatization which have been occurring in the Russian Federation since the times of the perestroika (Cerami, 2009). Furthermore, if we take into account the notoriously high levels of corruption in the Russian Federation ((Levin & Saratov, 2000; Ledeneva, 2006), it is possible to conjecture that people with higher incomes may obtain better services and favors by establishing informal relationships with public personnel and political figures, while this might be more difficult for people with lower incomes to obtain such benefits<sup>7</sup>. More difficult is to explain why old people as well as divorced or widowed people are more likely to be dissatisfied with local public services than people belonging to the other categories. To some extent, the correlation between age and satisfaction with public services could be adduced to the different utilization of public services among young and old people. In fact, young people may feel more concerned with the quality of local educational services, which received relatively high scores both in Kirovsk and in Nickel, while older people may feel more concerned with the provision of healthcare services, which were evaluated with low scores in both communities. Apart from this, we are not able to provide any valid explanation concerning the relation between marital status and evaluation of public services.

Pertaining to the subjective evaluation of other amenities offered in the community of residence, such as cultural, recreational and commercial facilities, there appears to be no correlation between the community of residence on one hand, and the degree of satisfaction on the other. However, as we documented in table 5.11, the absence of a significant correlation between the two variables can be adduced to the fact that respondents in Kirovsk were more satisfied with certain aspects, such as cultural facilities and events and with retail services, while respondents in Nickel were more satisfied with others, such recreational facilities. Apart from locational factors, the degree of satisfaction with local amenities appears to vary depending on the presence of children in the household, and to a lower extent, on the age and the household income. Namely, the degree of satisfaction is higher among people who are young, among people with higher incomes, and among people with no children, while it is lower among the elderly, the people with low incomes, and the people with children. As in the case of the evaluation of public services, therefore, also the evaluation of local amenities appear therefore to vary considerably depending on the subjective needs and desires of the individual, and on the possibility of finding the desired amenities in the community of residence.

Also concerning the factors affecting the evaluation of environmental conditions, the most significant indicator is the community of residence. As already explained, this variation can be ascribed to the alarming

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<sup>7</sup> The existence of episodes of corruption involving public officers was confirmed in many of the informal interviews carried with local inhabitants, both in Kirovsk and in Nickel. However, no objective proofs of such episodes have been collected.

levels of pollutions reported in Nikel, which can be deemed to produce a negative effect on the surrounding environment as well as on the health of the local population. Moreover, the evaluation of environmental conditions is found to change depending on the gender, the age, the income, and the presence of children in the household. Namely, the level of satisfaction appears to be higher among people who are male, young, wealthy, and with no children, while it is lower among females, the elderly, the poorer, and those who have no children. The fact that people with children were less satisfied with the environmental conditions available in the community of residence than those without children could be possibly ascribed to the parents' worries that pollution and extreme climatic conditions may harm the health of their children. From a similar perspective, the poor environmental conditions available both in Kirovsk and in Nikel might be felt more intensively by women and by the elder population, rather than by males and by the youths. Finally, the effect of income on the evaluation of environmental conditions could be explained with the fact that wealthier people may employ more expensive and efficient strategies to confront with the poor environmental conditions: for example, by isolating the dwelling from climatic agents, by purchasing products isolating from the cold more efficiently, or by residing in more hospital locations during periods when environmental conditions are worse.

## **5.4 SOCIAL SATISFACTION IN RELATION TO OBJECTIVE FACTORS**

In the literature investigating the factors affecting residential satisfaction and propensity to move, most studies include considering a variety of social factors attributable to the location of residence. Namely, scholars have argued that the subjective evaluation of the dwelling and of the community can be influenced by the presence of relatives and friends living in the same location and by the quantity and quality of social ties established in the neighborhood and the community of residence, and that these may eventually affect the propensity to move (Speare, 1970, 1974; Toney, 1976; McAuley & Nutty, 1985; Palo Stoller & Longino, 2001; Johnson *et al.*, 2005). In addition to this, scholars have noticed that the subjective evaluation of the dwelling and of the community of residence may vary according to other factors, such as the degree of social interaction and cooperation among neighbors and fellow community members, the degree of mutual trust and tolerance, and the degree of participation and involvement in local associations and politics (Fried, 1984; Amerigo & Aragones, 1990, 1997; Adriaanse, 2007; Hur & Morrow-Jones, 2008). In this frame of reference, residential satisfaction and propensity to move could be thus associated with other notions concerning the social dimension of people-community relationships, such as social cohesion, social capital, sense of community, and community attachment.

In the ambit of Russian Arctic communities, little or no effort has been devoted so far to investigate how social factors may influence the subjective evaluation of the location of residence and the propensity to move. In fact, very little information is available concerning the social values, attitudes and perceptions characterizing the local inhabitants, and the type and quality of social relationships they establish with their relatives, friends, neighbors, and other community members. Consequently, research dealing with the phenomenon of outmigration in the Russian Arctic has generally omitted to consider how social factors may affect the intention to migrate, with the notable exception of the studies by Round (2005a; 2005b) in the Province of Magadan. Namely, the studies by Round confirm that the social and emotional bonds established by local inhabitants can produce a remarkable effect on the subjective evaluation of the

location of residence and on the propensity to migrate, in a context which is analogous, under many respects, to the one investigated in our study. Taking this into account, by investigating the extent and distribution of social factors among our respondents in Kirovsk and in Nickel, we could obtain valuable insights concerning the variations of propensity to move and residential satisfaction reported in sections 5.1 and 5.2. Furthermore, by means of this investigation, we could recognize specific factors causing distress among the inhabitants of Kirovsk and Nickel, as well as the categories of people who are more prone to this kind of factors. Finally, this investigation could provide useful information about the quality of social conditions among the population of Russian Arctic communities.

In line with the contributions and argumentations presented above, we are now going to investigate how respondents in Kirovsk and in Nickel evaluate their location of residence from a social perspective, and to assess how such evaluation varies depending on the community of residence, and on the individual and household background. Namely, the present section is devoted to answer the following research question (**RQ 2b**): *“How do the inhabitants of Kirovsk and Nickel evaluate their location of residence with regard to social aspects?”* In order to answer this question, we first present the indicators that we utilize in order to assess the degree of social satisfaction among our respondents, and we report and compare the scores obtained for each indicators in Kirovsk and in Nickel. In our intentions, the comparison between the scores obtained in the two communities should enable us to assess whether there is a relation between locational factors and social satisfaction. Following this, we analyze how the evaluation of social aspects varies according to a series of factors relatable to the individual and the household background. Namely, this should allow us to assess how the degree of social satisfaction is distributed across our samples, and to identify any analogy between this and the distribution of residential satisfaction and propensity to move.

#### **5.4.1 Social satisfaction in relation to locational factors**

In the previous sections, we suggested that the degree of residential satisfaction and the propensity to move may vary according to the objective features and characteristics defining the location of residence. For instance, in the previous section, we found that the objective characteristics of the location of residence may play an effective role in influencing the degree of convenience satisfaction among the local population. Consistently, also the degree of social satisfaction can be expected to vary according to the peculiar characteristics of the two communities, and to the different composition of the samples obtained in Kirovsk and in Nickel. Namely, we would expect to detect a higher degree of social satisfaction in a context where people display positive social attitudes towards fellow neighbors and community members, and where people have the opportunity of interacting and taking part in local affairs and politics. On the contrary, people may express dissatisfaction in a context where people do not trust or tolerate each other, or where people cannot participate to the social life of the community. Taking this into account, by analyzing the variations in social satisfaction between Kirovsk and Nickel, we intend to obtain a clearer picture concerning the actual type and quality of social relationships that local inhabitants establish in their community. As already announced, this analysis should also enable us to recognize specific factors which may foster dissatisfaction and propensity to move among the local population.

In order to assess the extent and distribution of social satisfaction among the inhabitants of Kirovsk and Nickel, we employ a set of six indicators. Namely, these indicators are defined in the light of a multitude of sources dealing with the social factors residential satisfaction and propensity to move, and with other notions such as social cohesion, social capital, and sense of community, which are presented more in detail in sections 3.4 of the literature review. The six indicators are: the presence of friends and relatives in the community of residence; the quality of social relations with fellow neighbors; the quality of social



relationships with fellow community members; the degree of social interaction with other community members; the degree of participation in local associations; and the degree of involvement in local politics. As in the case of convenience satisfaction, also the indicators representing the degree of social satisfaction are assessed by means of a set of sub-indicators, which are defined by a series of Likert-scales included in the questionnaire. The six indicators and respective sub-indicators are reported in table 5.13.

As documented in table 5.13, there appear to be major differences in the evaluation of social aspects between respondents in Kirovsk and Nikel. Namely, respondents in Kirovsk appear to enjoy more numerous relatives and friends living in the community of residence than respondents in Nikel, and to display more positive attitudes towards other community members, and more frequent interaction with them. At the same time, though, the results collected in Kirovsk and in Nikel present also remarkable similarities, especially in regard to the subjective attitudes towards the neighbors, the participation in local associations, and the involvement in local politics.

The fact that respondents in Kirovsk are more satisfied with the vicinity to relatives and friends than respondents in Nikel is somehow unexpected, if we consider the size and location of the two communities. In fact, given the small population and relative isolation of Nikel, we expected local residents to display more intense and locally-based social relations than people living in Kirovsk. Furthermore, during our conversations with people residing in Nikel, it appeared that there were not many occasions of mutual acquaintance or interaction with people living in nearby communities, such as Zapoliarny and Pechenga. On the contrary, while interviewing people in Kirovsk, many reported to have relatives, friends or colleagues living in Apatity, as there are several contacts between the inhabitants of the two communities. Moreover, these results are made even more ambiguous if we consider the fact that, on average, our respondents in Nikel have resided in the same community for a longer period of time than people living in Kirovsk. In fact, as documented in numerous studies (e.g. Cuba & Hummon, 1993; Randall *et al.*, 2007), long-term residents are more likely to display numerous and intense social bonds with other community members than people who have just immigrated. In order to explain such an unclear outcome, we should thus await to analyze how the number of relatives and friends varies depending on individual and household factors, which is the topic of the second part of this section.

Still pertaining to the social bonds established in the location of residence, it is interesting to notice that respondents in both communities reported a considerable number of friends and especially of relatives living outside the community of residence. To some extent, this tendency could be ascribed to the peculiar history of these communities, which experienced steady immigration flows until the end of the 1980s, followed by strong outmigration from the early 1990s onwards. In fact, a consistent portion of the population living in Kirovsk and Nikel was born and raised in other regions of the former Soviet Union before migrating to the Province of Murmansk. Accordingly, local inhabitants may still maintain strong ties with relatives and friends living in the community of origin, notwithstanding the number of social bonds activated in the community of current residence. At the same time, the strong outmigration of the last decades may have produced a disruptive effect on the quantity and quality of social bonds established in the community of residence, as local inhabitants saw many of their friends and relatives moving out of their community. Taking this into account, our results seem to suggest that people in Kirovsk and in Nikel may actually suffer the social disruption caused by the ongoing phenomenon of outmigration, and the distance from relatives and friends living elsewhere. Accordingly, it is possible to conjecture that social issues may produce a negative effect on the overall evaluation of the location of residence, and eventually, on the propensity to migrate.

**Table 5.13** - Evaluation of social aspects according to community of residence

|  | Kirovsk     |             | Nikel       |             | Samples t-test   |
|--|-------------|-------------|-------------|-------------|------------------|
|  | Score       | Std. D.     | Score       | Std. D.     |                  |
| Vicinity to relatives                                  | 3.00        | 1.260       | 2.56        | 1.118       | 2.562 **         |
| Vicinity to friends                                    | 3.78        | 1.095       | 3.39        | 1.019       | 2.538 **         |
| <b>Social bonds</b>                                    | <b>3.39</b> | <b>.976</b> | <b>2.97</b> | <b>.904</b> | <b>3.092 ***</b> |
| Trust in neighbors                                     | 2.48        | .959        | 2.63        | 1.070       | - 1.044          |
| Frequency of interaction with neighbors                | 3.55        | .538        | 3.60        | .512        | - .761           |
| Solidarity and cooperation among neighbors             | 3.12        | .799        | 3.08        | .864        | .283             |
| <b>Neighborhood relations</b>                          | <b>3.05</b> | <b>.641</b> | <b>3.11</b> | <b>.677</b> | <b>- .620</b>    |
| Perception of other community members                  | 3.64        | .488        | 3.51        | .574        | 1.814 *          |
| Tolerance towards groups susceptible of discrimination | 4.85        | .417        | 4.86        | .474        | - .132           |
| Perception of public workers <sup>a</sup>              | 2.43        | .753        | 2.31        | .768        | 1.115            |
| Perception of local politicians                        | 2.09        | .760        | 1.81        | .734        | 2.649 ***        |
| <b>Community relations</b>                             | <b>3.25</b> | <b>.373</b> | <b>3.12</b> | <b>.351</b> | <b>2.580 **</b>  |
| Participation in collective praying                    | 2.03        | 1.182       | 1.71        | .857        | 2.196 **         |
| Participation in community celebrations                | 3.52        | 1.480       | 3.08        | 1.107       | 2.380 **         |
| Frequented spaces of social aggregation <sup>b</sup>   | 2.79        | .940        | 2.68        | .799        | .932             |
| Participation in sport and recreational activities     | 2.97        | .741        | 2.81        | .849        | 1.419            |
| <b>Social interaction</b>                              | <b>2.83</b> | <b>.629</b> | <b>2.57</b> | <b>.515</b> | <b>3.186 ***</b> |
| Membership in clubs and other informal associations    | 1.48        | .815        | 1.44        | .869        | .334             |
| Membership in religious, civic and voluntary groups    | 1.41        | .511        | 1.40        | .486        | .047             |
| Membership in labour and political movements           | 1.29        | .434        | 1.23        | .411        | .921             |
| <b>Associationism</b>                                  | <b>1.39</b> | <b>.458</b> | <b>1.36</b> | <b>.435</b> | <b>.518</b>      |
| Interest in local affairs and politics                 | 2.51        | .654        | 2.42        | .542        | 1.059            |
| Attendance to local elections                          | 3.30        | 1.690       | 3.56        | 1.610       | - 1.114          |
| Sense of counting in local decision-making processes   | 2.55        | 1.021       | 2.50        | .990        | .324             |
| <b>Political involvement</b>                           | <b>2.79</b> | <b>.765</b> | <b>2.83</b> | <b>.674</b> | <b>- .357</b>    |

**Notes:** all the scores are standardized on a scale from 1 to 5; \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1.

<sup>a</sup>: such as policemen, teachers, medics and bureaucrats; <sup>b</sup>: such as bars and clubs.

The fact that respondents in Kirovsk reported a higher number of friends and relatives living in the community of residence than respondents in Nikel, as well as more positive relations and frequent interaction with other community members, seem to suggest that respondents in Kirovsk may enjoy a higher degree of social integration in the community of residence than respondents in Nikel. In fact, numerous scholars argued that subjective social attitudes, and especially the degree of trust and tolerance towards other community members, are important antecedents influencing people's degree of participation and involvement in the social life of the community (McMillan, 1996; Chavis & Wandersman, 1990). In a similar way, also the frequency of social interaction is deemed to be a reliable indicator of the degree of social cohesion among the members of a community, and to inform about the quality of social relationships amongst them (Forrest & Kearns, 2001; Friedkin, 2004). Moreover, the quality of social attitudes and the frequency of social interaction, together with the number of social bonds established in the community of residence, are deemed to influence both the subjective identification with the community (Nasar & Julian, 1995; Prezza *et al.*, 2001), as well as the degree of attachment to the community (Kasarda & Janowitz, 1974; Riger & Lavrakas, 1981). Given their remarkable effect on the individual psychological wellbeing as well as on the subjective relationship with the community, the different quality of social relationships recorded in Kirovsk and Nikel may thus concur to explain the differential in residential satisfaction and propensity to move between the two communities.

While the indicators considered so far suggest that people in Kirovsk are better integrated in the community of residence than people in Nikel, our results also display remarkable similarities between the scores reported in Kirovsk and Nikel. Namely, it should be noticed that the differences in the social attitudes reported in Kirovsk and Nikel are limited to only a part of the sub-indicators taken into account. In fact, there is indeed a significant variation between the two communities concerning subjective attitudes towards other community members, and towards local politicians; however, there appears to be no significant difference for what concerns the degree of tolerance towards categories susceptible of discrimination, and for what concerns the evaluation of local public personnel. Also in regard to the degree of social interaction, the difference between Kirovsk and Nikel is significant concerning the participation in community celebrations and events, and the participation in collective praying; however, it is not significant in regard to the frequentation of spaces of social aggregation (such as bars and clubs) and to the participation in sports and other recreational activities. Moreover, no significant differences are recorded in regard to the quality of neighborhood relations, to the degree of associationism, and to the degree of political involvement. Taking this into account, we should thus be careful not to overestimate the actual differences between the two communities in regard to social aspects.

Because of the scarcity of information regarding the social environment of Russian Arctic communities, it is very difficult to provide accurate explanations of the reasons underpinning the variations and similarities between the two communities, as well as the reasons why respondents attributed higher scores to certain indicators than to others. For instance, it is somehow enigmatic that respondents in Kirovsk and in Nikel displayed a low degree of trust towards their neighbors, while at the same time, respondents reported frequent interactions with their neighbors, as well as a positive sense of solidarity and cooperation among neighbors in both communities. Nevertheless, the results in table 5.13 appear to confirm certain aspects which are typical of contemporary Russian society. Namely, the very low degree of participation in associations of any kind reported in both communities and the scarce interest in local affairs and politics can be deemed to confirm the remarkable weaknesses of the civil society in Russia, which have already been discussed in numerous studies (Domrin, 2003; Hudson, 2003; Lemaître, 2006). In addition to this, our results show a low degree of trust in the public personnel as well as in local political figures, which may ultimately depend on the high rates of perceived corruption recorded throughout the Russian Federation

(Taylor, 2006; Transparency.org, 2011). Also in this case, the feelings of dissatisfaction and mistrust towards local institutions and public figures which transpire from our results may ultimately produce a negative effect on the subjective evaluation of the community of residence, and thus concur to foster propensity to move in both communities.

#### **5.4.2 Social satisfaction in relation to individual and household background**

As discussed in the literature review, the quantity and quality of social relations established in the community of residence may depend, to a great extent, on the individual and household background. In this frame of reference, the length of residence in the community is often considered to be a prominent antecedent of the number and intensity of social ties established with other community members, and a notable factor influencing sense of attachment to and identification with the community (Speare, 1974; Toney, 1976; Cuba & Hummon, 1993; Randall *et al.*, 2007). Moreover, the type and quality of social relations, as well as the degree of participation and involvement in the community, can be reasonably expected to vary depending on the gender, age, and level of education of the single individuals, as well as on their marital status and household composition (Wellman & Wortley, 1990; Schwirian & Schwirian, 1993; Miller *et al.*, 1998; Amato, 2000; Myers *et al.*, 2000; Palo Stoller & Longino, 2001; Terhell *et al.*, 2004; Johnson *et al.*, 2005). Given the remarkable lack of literature investigating the variations of social conditions among the inhabitants of Russian Arctic communities, we decided to devote some effort to assess how the various social indicators vary in relation to individual and household factors. In our intentions, this assessment may ultimately provide additional information in order to explain the variations in propensity to move and residential satisfaction which we previously documented. Furthermore, such an assessment may provide useful information about the specific factors causing distress among the population of Kirovsk and Nickel.

In order to assess the relation between social satisfaction and individual and household factors, we carry out a series of six linear regressions: the outcome of the regressions is presented in table 5.14. In these regressions, the social aspects that were defined earlier in this section are treated as dependent variables, which are: social bonds; neighborhood relations; community relations; social interaction; associationism; and political involvement. As independent variables, we employ the same set of indicators that we have adopted to represent individual and household factors in previous sections, plus the variable community of residence. Once again, by including this variable, we intend to discern whether the variations reported between Kirovsk and Nickel are actually due to the influence of locational factors, or rather, to some errors due to the sampling methods employed in our research.

The results displayed in table 5.14 confirm the existence of a strong correlation between the community of residence, and the indicators of social satisfaction which we have previously found to vary between respondents in Kirovsk and in Nickel, i.e. the number of social bonds, the quality of community relations, and the degree of social interaction. Such an outcome seems therefore to confirm our previous results, according to which people in Kirovsk enjoyed more intense relations and more frequent interaction with other community members, as if they were more integrated in the community of residence than people in Nickel. In addition to this, the regressions confirm the lack of significant differences between respondents in Kirovsk and in Nickel in regard to the quality of neighborhood relations, and to the degree of associationism and political involvement.

Apart from confirming the variations reported between the respondents in Kirovsk and in Nikel, the results in table 5.14 confirm that the quality of social conditions can consistently vary depending on the individual and household background. Namely, our results show that the length of residence does indeed play a determinant role in influencing the social aspects taken into account. In fact, in line with our expectations and with the literature aforementioned, it appears that long-term residents present more numerous relatives and friends living in the same community, as well as a higher degree of social interaction and political involvement. Such differences, and especially the one concerning the number of relatives and friend in the community, may thus concur to explain the reasons why short-term residents reported a lower degree of satisfaction with the community of residence than long-term residents, as well as a more intense desire to leave the community (see sections 5.1 and 5.2). At the same time though, it should be noticed that the length of residence has no significant effect on the evaluation of neighborhood and community relations, nor on the degree of associationism. Moreover, there are other factors, amongst which age, which appear to have an equivalent or even stronger effect on the quality of social conditions than the one produced by the length of residence. Taking these elements into account, we should thus be careful not to misjudge the actual relation existing between length of residence and social satisfaction.

**Table 5.14 - Evaluation of social aspects according to individual and household background**

|  | <b>Social bonds</b>        | <b>Neighborhood relations</b> | <b>Community relations</b> | <b>Social interaction</b>  | <b>Associationism</b>      | <b>Political involvement</b> |
|--|----------------------------|-------------------------------|----------------------------|----------------------------|----------------------------|------------------------------|
| Community of residence                                   | -.515 ***<br>(.118)        | -.038<br>(.082)               | -.156 ***<br>(.044)        | -.223 ***<br>(.078)        | -.052<br>(.049)            | .028<br>(.090)               |
| Gender   | .150<br>(.129)             | .044<br>(.089)                | .211 ***<br>(.047)         | .027<br>(.085)             | -.153 ***<br>(.052)        | .135<br>(.098)               |
| Age  | -.026 ***<br>(.007)        | .023 ***<br>(.005)            | .005 *<br>(.003)           | -.014 ***<br>(.004)        | .005 *<br>(.003)           | .011 **<br>(.005)            |
| Education  | .229 *<br>(.128)           | .216 **<br>(.088)             | .039<br>(.047)             | .130<br>(.085)             | .110 **<br>(.052)          | .162 *<br>(.091)             |
| Income   | -.035<br>(.141)            | .060<br>(.095)                | .054<br>(.051)             | .031<br>(.092)             | -.003<br>(.017)            | .258 **<br>(.105)            |
| Marital status I <sup>a</sup><br>(Married or cohabiting) | -.422 **<br>(.198)         | .069<br>(.134)                | .032<br>(.072)             | .068<br>(.129)             | -.088<br>(.080)            | .013<br>(.109)               |
| Marital status II <sup>a</sup><br>(Divorced or widowed)  | -.864 ***<br>(.236)        | -.024<br>(.163)               | .025<br>(.086)             | .100<br>(.156)             | .120<br>(.096)             | .217<br>(.181)               |
| With children  | -.143<br>(.139)            | -.189 *<br>(.097)             | -.103 **<br>(.051)         | -.094<br>(.092)            | .042<br>(.057)             | .076<br>(.108)               |
| Length of residence                                      | .033 ***<br>(.005)         | .003<br>(.004)                | .003<br>(.002)             | .009 **<br>(.004)          | .001<br>(.002)             | .007 *<br>(.004)             |
| Housing tenure   | .053<br>(.165)             | -.118<br>(.112)               | -.069<br>(.059)            | -.342 ***<br>(.106)        | -.026<br>(.065)            | -.145<br>(.124)              |
| <i>Constant</i>  | <i>3.807 ***</i><br>(.214) | <i>2.270 ***</i><br>(.148)    | <i>3.035 ***</i><br>(.080) | <i>3.041 ***</i><br>(.141) | <i>1.164 ***</i><br>(.088) | <i>1.879 ***</i><br>(.161)   |
| N  | 191                        | 191                           | 191                        | 194                        | 186                        | 192                          |
| R <sup>2</sup>   | .335                       | .226                          | .207                       | .168                       | .130                       | .235                         |
| Adjusted R <sup>2</sup>                                  | .298                       | .183                          | .163                       | .123                       | .080                       | .193                         |

**Notes:** standard errors in parentheses; \*\*\* p < 0.01; \*\* p < 0.05; \* p < 0.1; <sup>a</sup>: the category of reference is singles.

According to the results reported in table 5.14, the variable age represents a major factor affecting the degree of social satisfaction. In fact, there is a significant correlation between the variable age and all the social factors taken in consideration; however, the sign of these correlations varies depending from aspect to aspect. In first place, younger people are those who reported more friends and relatives living in the same community, as well as more frequent social interactions with other community members. On the contrary, older people displayed more positive attitudes towards their neighbors and fellow community members, and a more proactive behavior in local associationism and politics. The fact that young people display more numerous social bonds and frequent social interaction could be ascribed to the fact that most young people were born and raised in Kirovsk and Nickel, while most among the older population were born or have lived in other regions of the former Soviet Union. Accordingly, young people are more likely to establish social relationships in the community of residence, while older people may display rather dispersed social relationships and family networks. Furthermore, the number of relatives and friends living in the community may explain why young people reported more frequent social interactions than older people. In this frame of reference, the degree of social interaction among older people may be also hindered by the shortage of facilities and initiatives specifically deputed to the socialization among older community members, and by the poor meteorological conditions during the winter months, which may prevent weaker people from venturing out of home.

Given the shortage of literature dealing with social cohesion and social capital in the ambit of Russian Arctic communities, we do not dispose of enough information in order to explain the remarkable differences between younger and older people in regard to social aspects. Notwithstanding this, our results seem to suggest that young people may cultivate more informal relations in the community of residence than older people, as the first reported more friends and relatives living in the same community, while the latter reported better neighborhood and community relations. Because friend and familiar relations are generally more intense and more meaningful than neighborhood and community relations from a social and emotional point of view, younger people can be thus deemed to display a stronger social attachment in the context of the community of residence than older people. From this perspective, the type of social relations may thus explain the reason why younger people reported a significantly lower propensity to move than older people, as previously reported in section 5.1. Specifically, such an outcome would be also in line with other studies from other geographical contexts, which documented a correlation between the intensity of social bonds established in the community of residence, and the propensity to leave the community among young people (Johnson *et al.*, 2005; Chow & Healey, 2008).

Another factor influencing the quality of social conditions is the level of education. While there are several studies which documented a positive relation between the level of education and the establishment of social capital (e.g. Putnam, 1995, 2000), it is interesting to notice that more educated people displayed not only a higher degree of associationism and political involvement, but also more numerous friends and relatives living in the community of residence, as well as more positive neighborhood relations, than less educated people. However, even more interesting is the fact that, while appearing to be more integrated and involved in the community, more educated people also reported a lower degree of residential satisfaction, as well as a higher degree of propensity to move, than less educated people. While this outcome appears to be rather ambiguous, it is possible that more educated people retain social relations as less relevant when evaluating the dwelling and the community of residence, and when considering about a potential move. Consistently, the sense of dissatisfaction and the propensity to move reported among educated people may primarily depend on other factors, such as the poor evaluation of occupational and economic opportunities, rather than on the degree of social satisfaction.

Apart from the length of residence, the age and the level of education, the other individual factors taken into account appear to have only a marginal effect in influencing the quality of social conditions. For instance, women reported more positive relations with other community members than men, while men reported a more frequent participation in local associations than women; however, no significant variation was previously found between men and women in regard to residential satisfaction and propensity to move in tables 5.8 and 5.10. In the same tables it is also reported that people with a higher income are significantly more desirous to move than people with lower incomes; however, according to our latest results, it is clear that such a difference is not due to variations in the quality of social conditions, as no significant differences were found between the two categories (with the exception of political involvement). In addition to this renters reported a lower degree of social interaction with other community members than home owners. Such a difference may thus concur to explain why home renters reported a lower degree of satisfaction and a higher degree of propensity to move, although to a lower degree than other factors affecting the evaluation of housing and community convenience.

Finally, our results suggest that, among the inhabitants of Kirovsk and Nikel, the household background is likely to play only a marginal role in influencing the quality of social relationships established in the community of residence. Namely, there appears to be indeed a strong correlation between the marital status and the number of social bonds established in the community of residence, as singles reported a higher number of relatives and friends than other categories. At the same time though, the marital status appears to have no effect on the other social aspects taken into account. Moreover, according to our results, the presence of children in the household appears to be correlated with the quality of neighborhood and community relations. However, while most studies report a positive correlation between the presence of children in the household and the degree of social interaction and participation in the community (Schwirian & Schwirian, 1993; Astone et al., 1999; Middleton *et al.*, 2005; Brehm, 2007), our results show that people without children enjoyed better relations with neighbors and community members than people with children. The low degree of social satisfaction, together with the low degree of satisfaction with convenience aspects, may thus concur to explain the widespread sense of dissatisfaction reported among non-singles and among people with children, as well as the higher degree of propensity to move reported among the same categories.

## 5.5 EMOTIONAL SATISFACTION IN RELATION TO OBJECTIVE FACTORS

According to numerous scholars, the degree of residential satisfaction and propensity to move can be considerably affected by the emotional bonds that people establish in the context of the location of residence. In this frame of reference, several scholars noticed that the subjective evaluation of the location of residence can be remarkably affected by the degree of attachment to the home (Amerigo & Aragonés,) and to the community (Fried, 1984; Bonaiuto *et al.*, 1999, 2003; Christakopolou *et al.*, 2001; Adriaanse, 2007). At the same time, scholars proposed that emotional factors may also play a decisive role in influencing propensity to move, as well as the entire process of residential mobility (McHugh & Mings, 1996; Bolan, 1997; Gustafson, 2001). Accordingly, in section 3.5 of the literature review, we devoted our attention to different theorizations proposed in the ambit of place studies, such as sense of place (Tuan, 1977; Hummon, 1992), place attachment (Low & Altman, 1992), and place identity (Proshansky, 1978; Twigger-Ross & Uzzell, 1996). Thanks to this review, we were able to shed more light on the complex and manifold aspects characterizing the emotional bonds that people establish in their location of residence, and thus to devise between the factors determining emotional attachment one hand, and the subjective attitudes and behaviors representing attachment on the other. Moreover, this review confirmed that emotional factors can play indeed a major role in influencing the subjective evaluation of the dwelling and of the community of residence, as well as the inclination to remain or to move.

Because there is still a lack of contributions investigating emotional factors in the context of Russian Arctic communities, we decided to complement our research by investigating the emotional bonds that local inhabitants establish in the location of residence, in order to understand how these may affect residential satisfaction and propensity to move. Accordingly, in the present section, we are going to analyze how the inhabitants of Kirovsk and Nickel evaluate their home and their community from an emotional point of view, and to assess how such evaluation varies according to locational factors, and to individual and household factors. Specifically, the present section is devoted to answer the following research question (**RQ 2c**): *“How do the inhabitants of Kirovsk and Nickel evaluate their location of residence with regard to emotional aspects?”* In order to provide an exhaustive answer, we first introduce the various indicators that we employ in order to represent the degree of emotional satisfaction, and we compare the average scores reported for each indicator in Kirovsk and in Nickel. Following this, we look at how the degree of emotional satisfaction is distributed across our sample according to individual and household factors. In the course of this section, we purposely omit to consider the emotional factors which are more inherently related to the social dimension, such as social bonds and social interaction, in order to avoid redundancies with the topics discussed in the previous section. Consistently, our investigation will verge on the emotional bonds that people establish with physical objects and environments present in the location of residence, and on the symbolical and identity values which people attach to the places in which they live.

### 5.5.1 Emotional satisfaction in relation to locational factors

In sections 5.3 and 5.4, we found that the subjective evaluation of the dwelling and of the community among the inhabitants of Kirovsk and Nickel appears to be majorly influenced by the objective characteristics of the location of residence, both from a convenience and a social perspective. Consistently, also the emotional bonds that people establish with the places they live in could be influenced, to some



extent, by the objective features characterizing the location. Pertaining to this, numerous studies have shown that locational factors may play a remarkable although indirect effect on subjective emotional appraisals, as well as on the establishment of durable feelings of attachment (Amedeo, 1993; Golledge & Stimson, 1997). Furthermore, studies have shown that the presence of green and natural areas may not only improve the subjective evaluation of one place, but also foster emotional and spiritual experiences as well as reinforce the sense of identification with the place (Kaplan & Talbot, 1983; Wilson, 1984). In the light of our previous results and of previous contributions on the topic, it is therefore licit to expect major differences between respondents in Kirovsk and in Nickel for what concerns the emotional bonds they establish in the location of residence. Accordingly, such differences may ultimately concur to explain the variations in residential satisfaction and propensity to move which we recorded between the two communities in sections 5.1 and 5.2 of this chapter.

As already mentioned, in order to represent the extent and distribution of emotional satisfaction among the inhabitants of Kirovsk and Nickel, we do not consider the role played by social factors, which have already been discussed in the last section. Instead, we recur to a set of four indicators, which we compile after having reviewed the literature dealing with people-place and people-community bonding. Namely, the four indicators that we are going to employ in our analysis are: the sense of belonging, or home attachment (Rowles, 2006; Oswald *et al.*, 2006); the subjective attitudes towards the community environment (Amedeo, 1993; Golledge & Stimson, 1997); the subjective attitudes towards natural environments in the community and its surroundings (Kaplan & Talbot, 1983; Wilson, 1984); and the sense of identification with the place of residence (Proshansky, 1978; Twigger-Ross & Uzzell, 1996). As in previous sections, the indicators selected to represent emotional satisfaction are defined by the average of a set of sub-indicators; these sub-indicators, in turn, are measured by means of a series of Likert scales, which were included in our questionnaires. Also in this case, the Likert scales span from a minimum value of 1 to a maximum value of 5. However, the nature of such values varies depending on the single sub-indicator, as some refer to the frequency of certain behaviors, while others refer to the subjective evaluation of specific aspects of the dwelling and of the community of residence, and others concern the subjective attitudes towards the home and the community. The scores reported for each indicator and sub-indicator in Kirovsk and in Nickel are presented in table 5.15.

According to the results in table 5.15, respondents in Kirovsk reported significantly higher scores than respondents in Nickel in all of the indicators as well as in most of the sub-indicators of emotional satisfaction taken into account. Namely, the difference between respondents in the two communities appears to be particularly relevant in regard to the subjective identification with the place, the subjective evaluation of the environment, and the contact with natural environments ( $p < 0.01$ ). In the case of home attachment, the difference between respondents in Kirovsk and Nickel is still significant, but less prominent ( $p < 0.1$ ). Consistently with these results, it appears that objective locational factors might indeed play an effective although indirect role in influencing the subjective evaluation of the dwelling, and especially of the community of residence. In fact, as we are going to debate in the following paragraphs, it is possible to detect remarkable associations between the scores attributed to single emotional aspects in Kirovsk and Nickel, and the peculiar features and characteristics distinguishing these communities.

As already announced, respondents in Kirovsk display a significantly stronger sense of belonging than respondents in Nickel. From a locational perspective, such a difference could be interpreted as depending on the objective characteristics of the dwellings available in the two communities, as well as on their suitability for individual and household purposes. In fact, as we have seen in section 5.3, respondents living in Kirovsk were significantly more satisfied with the quality of housing infrastructure and with the space available in

the flat than respondents living in Nikel, and this may concur to explain why respondents in Kirovsk display a stronger degree of attachment to their home than respondents in Nikel. However, it should be noticed that no significant variation is reported between the respondents in the two communities concerning the subjective aesthetic evaluation of the dwelling and the evaluation of home-related experiences. Consistently with these results, and in line with previous contributions on this issue (Oswald *et al.*, 2006), we should not overestimate the relation between effective housing conditions and home attachment – especially in the light of potential effects due to individual and household factors.

**Table 5.15 – Evaluation of emotional aspects according to community of residence**

|  | Kirovsk     |              | Nikel       |              | Samples t-test   |
|--|-------------|--------------|-------------|--------------|------------------|
|  | Score       | Std. D.      | Score       | Std. D.      |                  |
| Identification with home   | 3.45        | 1.002        | 3.06        | 1.107        | 2.607 **         |
| Home-related experiences   | 2.92        | 1.356        | 2.62        | 1.420        | 1.488            |
| Dwelling appearance  | 3.29        | .992         | 3.29        | .949         | -.058            |
| <b>Home attachment (<i>sense of belonging</i>)</b>               | <b>3.23</b> | <b>.842</b>  | <b>3.01</b> | <b>.870</b>  | <b>1.821 *</b>   |
| Overall community appearance                                     | 3.73        | 1.013        | 2.88        | 1.085        | 5.725 ***        |
| Landscape  | 4.28        | .740         | 2.94        | 1.208        | 9.441 ***        |
| Built environment appearance                                     | 3.40        | .921         | 2.81        | .916         | 4.550 ***        |
| Open spaces appearance   | 3.54        | .757         | 2.69        | .840         | 7.505 ***        |
| <b>Environmental evaluation</b>                                  | <b>3.74</b> | <b>.685</b>  | <b>2.82</b> | <b>.769</b>  | <b>8.868 ***</b> |
| Attitude towards natural objects and places ( <i>biophilia</i> ) | 4.34        | .771         | 3.90        | .914         | 3.699 ***        |
| Frequentation of natural environments                            | 2.49        | .800         | 2.34        | .814         | 1.300            |
| <b>Contact with nature</b>                                       | <b>3.41</b> | <b>.623</b>  | <b>3.10</b> | <b>.668</b>  | <b>3.330 ***</b> |
| Self-identification as a community member                        | 3.94        | .967         | 3.28        | 1.138        | 4.414 ***        |
| Community-related experiences                                    | 3.41        | 1.450        | 3.14        | 1.491        | 1.323            |
| <b>Place identity</b>  | <b>3.67</b> | <b>1.030</b> | <b>3.20</b> | <b>1.099</b> | <b>3.120 ***</b> |

**Notes:** all the scores are standardized on a scale from 1 to 5; \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1

While locational factors seem to provide little or no explanations about the degree of sense of belonging among respondents in Kirovsk and in Nikel, it is possible to propose a logical association between the objective characteristics of the two communities, and the degree of emotional attachment to the community. For instance, when evaluating the community from an environmental perspective, respondents in Kirovsk reported significantly higher scores than respondents in Nikel in all of the sub-indicators considered. In first place, the poor evaluation of the community appearance among people living in Nikel could be ascribed to the heavy contamination due to mining and industrial pollutants, which are dispersed over the surrounding natural areas as well as on inhabited areas. In fact, as already documented in section 5.3, inhabitants in Nikel were significantly less satisfied with the degree of pollution in the community of residence, as well as with the presence of green and natural areas. Moreover, the presence

of industrial and mineral facilities nearby residential units in Nikel, and the visible effects of pollution on the natural environment (treeless barrens, acid rains, etc.), can be deemed to have a negative effect also on the subjective evaluation of the landscape. Also in Kirovsk, the evaluation of the community appearance could be affected by the presence of polluting mineral and industrial activities; however, most of these activities are located in Kukisvumchorr or in other sites away from the city center.

Apart from the presence of industrial and mining activities, the variation in environmental evaluation between the two communities could also be attributed to the specific attributes and characteristics of the respective urban environments. Specifically, both in Kirovsk and in Nikel, the subjective evaluation of the environment may resent from the widespread presence of abandoned or decaying buildings, as well as to the poor aesthetical design and state of maintenance of most residential buildings (see figure 5.1). Moreover, the evaluation of open spaces may resent from the poor upkeep of urban roads, squares and parks in both communities, as well as from frequent littering and acts of vandalism against public properties. In Kirovsk, however, the central area of the town appears to be somewhat spared from the phenomenon of abandonment, and to be instead more prominent in peripheral quarters and in satellite villages such as Kukisvumchorr, while In Nikel the abandoned buildings are scattered all over the town. Furthermore, the appearance of Kirovsk city centre is enhanced by the presence of several buildings of architectural relevance, such as the Palace of Culture, and the buildings located between this and Lenina square. In Nikel instead, the few constructions that are worthy of a note are a few buildings located on Guardeyskiy street, and the Palace of Culture.

The evaluation of the community environment, and especially the evaluation of the landscape, can be deemed to vary also in relation to the morphologies and attributes of the surroundings of the community of residence (Ulrich, 1983; Brown & Raymond, 2007; Wesley Schultz & Tabanico, 2007). In fact, the landscape in Kirovsk assumes a particular esthetic value thanks to the presence of the Khibiny Mountains and of the lake Bolshoy Vud'yavr, and to the pleasant view on the taiga spreading uninterrupted till the horizon, while the surroundings of Nikel are perhaps less spectacular from an aesthetical point of view, notwithstanding the presence of lakes, rivers, and modest hills. The characteristics of the natural environments surrounding Kirovsk and Nikel, together with the level of contamination due to mineral and industrial facilities, may thus concur to explain the different attitudes towards the natural environment reported by respondents in Kirovsk and in Nikel. In fact, as shown in the table, people in Kirovsk have a more positive relation with the natural environment and are more likely to carry out activities in the natural environment than people in Nikel. Also in this case, however, the intensity of the contact with nature may considerably depend on the specific individual and household background, as well as on the presence of relatives and friends with whom to carry out leisure activities in the nature (Brehm, 2007).

The results in table 5.15 also document a remarkable difference between respondents in Kirovsk and in Nikel in regard to the degree of place identity, as respondents in Kirovsk are more likely to identify themselves as community members, and to report positive experiences related to the community environment. As we found in previous paragraphs, such variations could be indirectly attributed to the presence of specific locational features, such as natural areas or historical buildings, which can be deemed to enhance the subjective evaluation of the community of residence (Mesch & Manor, 1998; Brown *et al.*, 2003; Gold & Revill, 2003; Wesley Schultz & Tabanico, 2007). Moreover, such variation may be due to the different quality of social conditions reported in Kirovsk and Nikel, as well as to the different degree of satisfaction with convenience aspects recorded in these communities. In fact, according to Brakewell (1986) and Twigger-Ross & Uzzell (1996), both social and convenience factors are deemed to play a determinant role in influencing the subjective identification with one place. Finally, the degree of place identity may also

depend on the individual and household background, such as age and length of residence in the community. Hence, the variations reported between the two communities may once again depend on the different composition of the samples obtained in the two communities, as we are going to clarify in the next paragraphs.

### 5.5.2 Emotional satisfaction in relation to individual and household factors

In order to assess how the degree of emotional satisfaction varies across the samples obtained in Kirovsk and Nikel, we carry out a series of four linear regressions. In these regressions, emotional factors (i.e. sense of belonging, environmental evaluation, contact with nature, and place identity) are treated as dependent variables. As independent variables, we utilize the same set of indicators which we have utilized in previous sections to represent the individual and household background of our respondents. Once again, among the independent variables, we include the community of residence, in order to appreciate the actual role of this variable in contrast with individual and household variables. The outcome of the regressions is reported in table 5.16.

**Table 5.16 - Evaluation of emotional aspects according to individual and household factors**

|  | Sense of belonging  | Environmental evaluation | Contact with nature | Place identity      |
|--|---------------------|--------------------------|---------------------|---------------------|
| Community of residence                                   | -.198 *<br>(.109)   | -.950 ***<br>(.090)      | -.299 ***<br>(.080) | -.540 ***<br>(.121) |
| Gender   | .260 **<br>(.118)   | .132<br>(.099)           | -.244 ***<br>(.088) | -.047<br>(.132)     |
| Age  | -.028 ***<br>(.006) | .007<br>(.005)           | -.002<br>(.005)     | -.038 ***<br>(.007) |
| Education  | .017<br>(.107)      | -.164 *<br>(.097)        | -.026<br>(.086)     | -.052<br>(.131)     |
| Income   | .225 *<br>(.128)    | .031<br>(.106)           | .278 ***<br>(.094)  | -.120<br>(.143)     |
| Marital status I <sup>a</sup><br>(Married or cohabiting) | .025<br>(.109)      | .035<br>(.105)           | -.066<br>(.102)     | -.063<br>(.172)     |
| Marital status II <sup>a</sup><br>(Divorced or widowed)  | .166<br>(.216)      | -.117<br>(.182)          | .090<br>(.162)      | -.165<br>(.246)     |
| With children  | -.502 ***<br>(.128) | -.204 *<br>(.107)        | -.166 *<br>(.094)   | -.451 ***<br>(.143) |
| Length of residence                                      | .021 ***<br>(.005)  | -.002<br>(.004)          | .008 **<br>(.004)   | .043 ***<br>(.006)  |
| Housing tenure   | -.108<br>(.147)     | -.473 ***<br>(.124)      | -.488 ***<br>(.108) | -.377 **<br>(.165)  |
| <i>Constant</i>  | 3.626 ***<br>(.193) | 3.724 ***<br>(.164)      | 3.496 ***<br>(.143) | 4.429 ***<br>(.220) |
| N  | 191                 | 191                      | 192                 | 194                 |
| R <sup>2</sup>   | .249                | .427                     | .238                | .412                |
| Adjusted R <sup>2</sup>                                  | .207                | .395                     | .196                | .380                |

**Notes:** standard errors in parentheses; \*\*\* p < 0.01; \*\* p < 0.05; \* p < 0.1; <sup>a</sup>: the category of reference is singles.

The results in the table confirm that the degree of emotional satisfaction varies considerably depending on locational factors, both in regard to the dwelling ( $p < 0.1$ ) and to the community of residence ( $p < 0.01$ ). As already noticed, such variation appears to be more intense in the case of environmental evaluation, suggesting that the characteristics of both the artificial and natural environment may indeed produce a remarkable effect on the subjective evaluation of the community of residence. At the same time, however, the results in table 5.16 suggest that the objective characteristics of the location of residence are not the only factor affecting emotional attachment. In fact, with the exception of marital status, there appear to be a number of significant correlations between individual and household factors, and the four aspects of emotional satisfaction taken into account.

Concerning the extent and distribution of sense of belonging across our samples, we find that the main predicting factors are: gender, age, household income, presence of children in the household, and length of residence. Namely, women appear to display a stronger sense of belonging than men, an outcome which is in line with previous literature on the topic (Kasarda & Janowitz, 1974). Also in line with our expectations, the sense of belonging appears to be stronger among long-term residents than among short-term residents: in fact, living for a prolonged period of time in the same dwelling may foster the subjective identification with the home environment as well as the degree of attachment to it. In this regard, however, it is interesting to notice that young people are more attached to their home than old people. Once again, the ambiguity concerning the opposite effect of age and length of residence on sense of belonging may be ascribed to the fact that a majority of young people living in Kirovsk and Nikel were born and raised in the same community or even the same dwelling in which they currently live. On the contrary, most of the older population is composed by people who were born elsewhere and who later migrated in the Murmansk province. Consistently with this interpretation, it is possible that young people may display a stronger degree of attachment than old people, not only at the community level, but also at the home level. Vice versa, older people may identify themselves with the community of origin, or confront the current dwelling with others in which they have previously lived, and thus display a weaker sense of belonging towards their current home.

The sense of belonging appears to be stronger also among people with higher incomes, and among people with no children. The effect of household income on sense of belonging can be explained with the fact that people with higher income may have the financial possibilities of improving the quality of their dwelling, both from a functional and an aesthetical point of view. Consistently, the presence of comforts and adornments may enhance the subjective experience of the dwelling, hence the emotions attributed to it. From a similar perspective, the correlation between presence of children and sense of belonging can be interpreted in the light of the poor evaluation of housing conditions reported among this category (see section 5.3). In fact, the housing conditions available in Kirovsk and Nikel could be reputed to be unsuitable for raising children, for instance because of the lack of space, or because of the inadequacy of housing infrastructure, so that people with children may develop frustration towards the dwelling. While these results seem to suggest a relation between satisfaction with housing conditions and sense of belonging, it should be noticed that the satisfaction with housing conditions was found to vary also in relation to the housing tenure, and to the level education; however, these factors appear to have no significant effect on sense of belonging. In line with these results, we should thus be careful not to overestimate the actual relation between housing conditions and sense of belonging, as already suggested by Oswald *et al.* (2006).

As we shift from the home to the community range of analysis, we find that individual and household factors may also determine significant variations in the subjective evaluations of the community environment, as well as in the subjective attitudes towards the nature, and in the degree of place identity.

For instance, the results in table 5.16 show that young people and long-term residents are more likely to identify themselves with the community of residence in comparison to older people and newcomers. As already argued, such variations may depend on the number and intensity of social bonds established in the community of residence, as well as on the degree of interaction with other community members. Moreover, in the case of long-term residents, the degree of attachment to and identification with the community of residence may also reflect a more intense and frequent contact with the natural environment surrounding the community. The differential in the degree of place identity that we record between long-term and short-term residents, and between young and old people, may thus concur to explain the variations in the degree of community satisfaction and propensity to leave the community which we have previously reported among these categories.

Pertaining to the subjective contact with natural environmental, other important factors at play are the gender and the household income. To some extent, the role of household income may simply depend on the financial possibilities to purchase equipment and to carry out activities in the wildlife as well as sport activities. Beside this, the fact that males reported a more intense contact with nature than women could be ascribed to cultural differences between the two genders in regard to the type and location of recreational and leisure activities. Specifically, men may enjoy hunting or fishing in the forests, rivers and lakes surrounding the community, while these activities appear to be less common among local women. However, such a difference may also be reputed to depend on actual disparities in the amount of spare time enjoyed by men and women, as women are often left alone to take care of the house and of the children, while men are usually spared from this burden outside their working hours.

While the results we have just presented are somehow expectable, the relation between housing tenure and presence of children on one hand, and attachment to the community on the other, appears to be more ambiguous. In fact, as we can see from table 5.nn, home-renters and people with children reported lower scores than their respective counterparts in all of the three indicators considered, i.e. environmental evaluation, contact with nature, and place identity. While we do not have enough elements to explain such variations, it is possible to conjecture that the degree of identification with the community of residence among home-renters and people with children, as well as their evaluation and attitudes towards the physical environment of the community, may be affected by other considerations concerning the convenience and social aspects of the community. Namely, as we have seen in previous paragraphs, home-renters and people with children reported significantly low scores in both convenience and social indicators taken into account. Consistently, the sense of dissatisfaction and marginalization among these categories may affect the subjective evaluation of both the social and the physical environment of the community, and ultimately condition the degree of attachment to and identification with the place of residence. According to this interpretation, it appears that the overall evaluation of the community of residence may affect the degree of emotional attachment to it, rather than vice versa.

## 5.6 RESIDENTIAL SATISFACTION IN RELATION TO SUBJECTIVE FACTORS

The present section is devoted to analyze the effect of convenience, social and emotional factors on the degree of residential satisfaction among the inhabitants of Kirovsk and Nickel. Specifically, the present section will attempt to answer the following research question (**RQ 3**): “*How does residential satisfaction vary depending on the evaluation of convenience, social and emotional aspects?*” In order to answer this question, we are going to analyze the variations in the degree of residential satisfaction between respondents in Kirovsk and in Nickel, and between people with different individual and household backgrounds, and will attempt to explain such variations by seeking analogous variations in the degree of convenience, social and emotional satisfaction. Specifically, we redefine the notion of residential satisfaction by means of two distinct components, i.e. home satisfaction and community satisfaction, in order to discern how single subjective factors affect the overall evaluation of the dwelling and of the community of residence. This analysis will allow us to ascertain to what extent subjective factors actually determine the variations in home and community which we previously recorded in section 5.2. Finally, by means of this analysis, we intend to obtain new information in order to later assess how residential satisfaction and related subjective factors may ultimately affect propensity to move, which is the topic of the last section of this chapter.

In accordance with the objectives fixed above, the present section is organized as follows. In the first part, we analyze the effect of subjective factors on the overall evaluation of the dwelling among the inhabitants of Kirovsk and Nickel, and confront such effect with the one produced by locational, individual, and household factors. For this purpose, we carry out a series of linear regressions by means of which we test different models of home satisfaction, each model employing a different combination of subjective and objective factors. Following this, in the second part of this section, we carry out the same kind of procedures, this time substituting the degree of home satisfaction with the one of community satisfaction in the role of dependent variable.

### 5.6.1 Home satisfaction according to subjective factors

As mentioned above, in order to assess the relation between subjective factors and *home satisfaction*, we carry out a series of linear regressions in which we test five different models, each consisting of a different combination of objective and subjective indicators. The first model (model I) replicates the results obtained in section 5.2, and shows the distribution of residential satisfaction across the population in regard to locational, individual, and household factors. The second model (model II) includes all the subjective indicators which we have taken into account in the sections 5.3, 5.4 and 5.5, i.e. convenience, social, and emotional factors, while objective factors are excluded. The following models are dedicated to contrast and compare the effect of subjective factors on residential satisfaction with the one produced by objective factors. Namely, because of potential issues of reliability due to the utilization of a large number of independent variables in the same regression, we decided to include convenience, social and emotional aspects into separate models, i.e. model III, IV and V, respectively. The outcome of the linear regressions analyzing the effect of objective and subjective factors on home satisfaction is displayed in table 5.17.

**Table 5.17 - Home satisfaction in relation to objective and subjective factors: linear regressions**

|                          |   | Home satisfaction   |                     |                     |                    |                   |
|--------------------------|---|---------------------|---------------------|---------------------|--------------------|-------------------|
|                          |   | I                   | II                  | III                 | IV                 | V                 |
| OBJECTIVE FACTORS        | Individual and household factors  |                     |                     |                     |                    |                   |
|                          | Community of residence  | -.451 ***<br>(.130) | -                   | -.244 *<br>(.131)   | -.352 **<br>(.137) | -.075<br>(.124)   |
|                          | Gender  | .161<br>(.140)      | -                   | .181<br>(.125)      | .171<br>(.146)     | .163<br>(.115)    |
|                          | Age   | -.016 **<br>(.007)  | -                   | -.015 **<br>(.029)  | -.016 *<br>(.008)  | -.004<br>(.007)   |
|                          | Education   | .055<br>(.143)      | -                   | -.031<br>(.123)     | -.035<br>(.142)    | .074<br>(.114)    |
|                          | Income  | .060<br>(.154)      | -                   | .051<br>(.133)      | .137<br>(.155)     | -.076<br>(.124)   |
|                          | Marital status I <sup>a</sup><br>(Married or cohabiting)                        | .275<br>(.216)      | -                   | .211<br>(.182)      | .227<br>(.212)     | .223<br>(.169)    |
|                          | Marital status II <sup>a</sup><br>(Divorced or widowed)                         | .351<br>(.260)      | -                   | .232<br>(.223)      | .317<br>(.265)     | .153<br>(.204)    |
|                          | With children   | -.266 *<br>(.154)   | -                   | -.189<br>(.132)     | -.241<br>(.151)    | .050<br>(.124)    |
|                          | Length of residence   | .006<br>(.007)      | -                   | -.001<br>(.005)     | -.002<br>(.007)    | -.004<br>(.006)   |
|                          | Housing tenure  | -.623 ***<br>(.178) | -                   | -.182<br>(.159)     | -.367 **<br>(.186) | -.262 *<br>(.150) |
| SUBJECTIVE FACTORS       | Convenience factors   |                     |                     |                     |                    |                   |
|                          | Evaluation of housing conditions  | -                   | .348 ***<br>(.068)  | .540 ***<br>(.071)  | -                  | -                 |
|                          | Evaluation of economic conditions   | -                   | -.054<br>(.071)     | -.088<br>(.077)     | -                  | -                 |
|                          | Evaluation of public services   | -                   | .217 **<br>(.086)   | .040<br>(.094)      | -                  | -                 |
|                          | Evaluation of other amenities<br>(retail, cultural and recreational facilities) | -                   | .145 *<br>(.080)    | .189 **<br>(.093)   | -                  | -                 |
|                          | Evaluation of environmental<br>conditions                                       | -                   | -.016<br>(.078)     | .015<br>(.091)      | -                  | -                 |
|                          | Social factors  |                     |                     |                     |                    |                   |
|                          | Social bonds  | -                   | .009<br>(.058)      | -                   | .081<br>(.076)     | -                 |
|                          | Neighborhood relations  | -                   | -.069<br>(.087)     | -                   | .082<br>(.115)     | -                 |
|                          | Community relations   | -                   | .398 **<br>(.158)   | -                   | .307<br>(.201)     | -                 |
|                          | Social interaction  | -                   | -.006<br>(.101)     | -                   | -.029<br>(.137)    | -                 |
|                          | Associationism  | -                   | -.059<br>(.125)     | -                   | -.058<br>(.168)    | -                 |
|                          | Political involvement   | -                   | -.099<br>(.072)     | -                   | -.041<br>(.101)    | -                 |
|                          | Emotional factors   |                     |                     |                     |                    |                   |
| Sense of belonging       | -   | .420 ***<br>(.069)  | -                   | -                   | .550 ***<br>(.068) |                   |
| Environmental evaluation | -   | .282 ***<br>(.087)  | -                   | -                   | .315 ***<br>(.089) |                   |
| Contact with nature      | -   | .097<br>(.089)      | -                   | -                   | .152 *<br>(.090)   |                   |
| Place identity           | -   | -.057<br>(.061)     | -                   | -                   | -.073<br>(.067)    |                   |
| Constant                 | 4.486 ***<br>(.236)   | .995 *<br>(.531)    | 3.390 ***<br>(.480) | 3.151 ***<br>(.727) | .947 **<br>(.417)  |                   |
| n                        | 191   | 182                 | 188                 | 189                 | 190                |                   |
| R <sup>2</sup>           | .164  | .535                | .392                | .181                | .492               |                   |
| Adjusted R <sup>2</sup>  | .119  | .493                | .339                | .105                | .452               |                   |

**Notes:** standard errors in parentheses; \*\*\* p < 0.01; \*\* p < 0.05; \* p < 0.1; <sup>a</sup>: the category of reference is singles.



As we can appreciate from a first look at the results in table 5.17, subjective factors appear to be more significant than objective factors in predicting the degree of home satisfaction among the inhabitants of Kirovsk and Nickel. This outcome confirms therefore the argumentations proposed by other scholars, such as Newman (1975) and others (Campbell & Converse, 1972; Robinson *et al.*, 1973), advocating the utilization of subjective indicators beside objective ones when investigating residential satisfaction and propensity to move, also in a peculiar context of study such as the one of Russian Arctic communities. However, as we look at the degree of significance of single subjective factors presented in model II, we notice that only part of the indicators taken into account are significantly correlated with the degree of home satisfaction. Namely, our results show that the degree of home satisfaction can be majorly affected by emotional factors and, to a lower extent, by convenience factors, while social factors appear to play only a marginal role in this respect. These results are clearly confirmed by the outcomes of models III, IV and V, showing that emotional and convenience factors may indeed cause a major effect on home satisfaction, also when objective factors are included in the regression. Furthermore, the outcomes of models III, IV and V also show that the degree of significance of single subjective factors may vary considerably depending on whether objective indicators are included or not in the regression.

Consistently with these results, we should thus be careful not to overestimate the effective role played by subjective factors in influencing home satisfaction. Specifically, while subjective factors may provide valuable information concerning the degree of home satisfaction, such information should be interpreted and contextualized in the light of the objective characteristics of the location and of the population investigated. Moreover, notwithstanding the results at our disposal, it is not possible for us to clearly define the exact regime of causality between single subjective factors and home satisfaction, namely to recognize whether it is the subjective factors which affect the degree of home satisfaction, or vice versa. The same kind of issues can be deemed to analogously affect the analysis that we are going to conduct next on the relation between subjective factors and community satisfaction.

As we look more closely at the effect of single subjective factors shown in model II, we find that the major predictors of home satisfaction are the ones which explicitly refer to the home environment, such as the evaluation of housing conditions and the sense of belonging. Namely, people who evaluate housing conditions in positive terms, and who display a stronger sense of belonging, were also more likely to report a higher degree of home satisfaction. In addition to this, it is interesting to notice that the degree of home satisfaction could also be affected by other factors referring to the neighborhood and community of residence, as already found in other contributions (Amerigo & Aragones, 1990, 1997). Specifically, in our context of study, the degree of home satisfaction is significantly and positively correlated with: the subjective evaluation of public services and other amenities available in the community of residence; the quality of relations established in the community; and the subjective evaluation of the community environment. However, as already noticed, the degree of significance of these factors appears to vary considerably depending on whether objective factors are included in the regression.

Pertaining to convenience factors, model III confirms that the evaluation of housing conditions and of other amenities available in the community of residence may produce a notable effect on the degree of home satisfaction while, in contrast with model II, the evaluation of public services is not significant when objective indicators are taken into account. To some extent, the lack of a significant relation between the evaluation of public services and home satisfaction could be ascribed to the fact that both variables are strongly correlated with the community of residence and the age, which are the only objective indicators to be significant in model III. In addition to this, if we compare the results of model III with ones of model I, we notice that the inclusion of convenience aspects in the regression has the effect of reducing the degree of

significance of the objective factors taken into account, namely the community of residence, the housing tenure, and the presence of children in the household, while the degree of significance of the variable age remains unaltered. In the light of these results, it is therefore possible to confirm that the degree of home satisfaction among the inhabitants in Kirovsk and in Nickel can be considerably affected by convenience factors, especially by the subjective evaluation of housing conditions, and by the evaluation of public services as well as cultural and recreational amenities available in the community of residence. Furthermore, our results suggest that convenience factors may determine an effective variation in the degree of home satisfaction between respondents in the two communities, between respondents with and without children, and between homeowners and renters. At the same time, the evaluation of convenience aspects appears to play no salient role in explaining why young people are more satisfied with their dwelling than older people.

The results obtained by means of model IV confirm that social factors play only a marginal role in affecting the degree of home satisfaction among the inhabitants of Kirovsk and Nickel. Namely, when social factors are included in the regression beside objective factors, all social indicators appear to be not significant, including the quality of community relations, which was found to be correlated with home satisfaction earlier in model II. In this case, the lack of a significant correlation between community relations and home satisfaction could be ascribed to not only to the concurrent effect of other subjective and objective indicators, but also to the fact that the social indicators taken into account refer more explicitly to the neighborhood and the community of residence rather than to the dwelling. At the same time, however, it is interesting to notice that the inclusion of social factors in the regression has the effect of reducing the degree of significance of all the objective variables taken into account, although to a lower extent than in the case of convenience factors. Consistently with these results, and in the light of the variations in the degree of social satisfaction reported in section 5.4, we are thus not able to completely exclude the existence of a relation between the degree of home satisfaction on one hand, and the subjective evaluation of social aspects ascribable to the neighborhood and the community of residence on the other.

As documented in model V, the relation between emotional factors and the degree of home satisfaction appears to be remarkable, not only in contrast with the one produced by objective factors, but also in comparison with the one produced by other typologies of subjective factors. Namely, when objective indicators are taken into account, the effect of sense of belonging on home satisfaction appears to be in the same magnitude of the one due to the evaluation of housing conditions. Such an outcome appears therefore to confirm the previous studies by Oswald *et al.* (2006), arguing that the evaluation of the dwelling is primarily a question of subjective attributions of meanings and values to the home environment, rather than of objective or functional characteristics of the same. In addition to this, our results show that the degree of home satisfaction may also depend on the subjective emotional involvement with and attitudes towards the physical environment of the community, although no correlation is found between the degree of place identity and home satisfaction. To some extent, these results appear to suggest that people in Kirovsk and Nickel might evaluate their dwelling also in function of the subjective experience of the environment surrounding their home; this, in turn, is likely to depend on the objective characteristics of the place, as well as on the individual and household background, as documented in section 5.5.

Still pertaining to the results obtained in model V, it should be noticed that, when emotional factors are included in the regression, the effect of objective factors on home satisfaction is not significant for all of the indicators taken into account, with the exception of housing tenure. Such an exception could be ascribed to the fact that home owners enjoy a much higher level of satisfaction with housing conditions than home renters, and this produces a remarkable variation in the degree of home satisfaction between homeowners

and renters, as documented in model III. Apart from this exception, our results seem therefore to suggest that emotional factors might concur to explain all the variations in the degree of home satisfaction which we reported across our sample in section 5.2. Namely, the degree of sense of belonging and the subjective evaluation of the community environment may explain why the degree of home satisfaction is higher among people living in Kirovsk, among young people, among people without children, and among home owners, and why it is lower among people living in Nikel, among older people, among people with children, and among renters.

### 5.6.2 Community satisfaction according to subjective factors

After having analyzed the effect of subjective factors on the degree of home satisfaction, we now pass to analyze how subjective factors can influence the extent and distribution of *community satisfaction* among the population of Kirovsk and Nikel. As already announced, our analysis is carried out by means of the same tools and procedures which were adopted in order to investigate home satisfaction. Namely, we perform a series of five linear regressions, each one adopting a different model consisting of a combination of objective and subjective indicators: model I will include only objective factors; model II will include only subjective factors; and the third, fourth and fifth model will include objective factors beside convenience, social and emotional factors, respectively. The results of the regressions are presented in table 5.18.

As we can appreciate from the results in table 5.18, subjective factors appear to provide a more reliable explanation of community satisfaction than objective indicators, a result which is in line with what we have previously found in regard to home satisfaction. Moreover, also in the case of community satisfaction, the effect of subjective factors appears to vary considerably depending on the single indicators taken into account. Specifically, the results in model II show that the degree of community satisfaction can be majorly affected by the emotional factors and, to a lower extent, by convenience factors; in this case, however, the effect of social factors appears to be more significant than in the case of home satisfaction. These results are further confirmed by the outcomes obtained in models III, IV and V, showing that convenience, social and emotional factors can indeed produce a significant effect on the degree of community satisfaction, even when objective indicators are included in the regression. However, as in the case of home satisfaction, the degree of significance of single subjective factors appears to vary considerably depending on whether objective factors are excluded from the regression (model II) or included (models III, IV and V). On one hand, our results seem thus to confirm once again the reliability of subjective factors in explaining residential satisfaction at the community level, also in a peculiar context such as the one of Russian Arctic communities. On the other hand, our results suggest using caution while assessing the effective role of subjective factors in influencing community satisfaction, namely in the light of the fact that such role may vary depending on locational as well as individual and household factors.

As we focus on the role played by convenience factors, the results in model II display a strong correlation between the evaluation of environmental conditions in the community of residence on one hand, and the degree of community satisfaction on the other, while the other convenience factors taken into account are not significant. When objective factors are included in the regression beside convenience ones in model III, however, we notice that the evaluation of housing conditions and public services become significant predictors of community satisfaction, while the evaluation of environmental conditions is no more significant - possibly because of the concurrent effect of objective locational factors, expressed by the variable location of residence. Moreover, if we compare the effect of objective factors in models I and III, we find that the variable housing tenure becomes not significant when convenience aspects are taken into

account, while the other variables maintain their degree of significance almost unaltered. Consistently with this outcome, the relatively low degree of community satisfaction that we reported among renters in section 5.2 could be thus attributed to a poor evaluation of the housing conditions and of the public services available in the community. At the same time, however, convenience factors appear to be irrelevant in explaining the variations in community satisfaction: between people living in Kirovsk and people living in Nikel; between more educated and less educated people; between people with children and people without; and between short-term and long-term residents.

Pertaining to the role played by social factors, the results in model II show that the degree of community satisfaction is higher among people who enjoy better neighborhood relations, and who display more frequent social interactions. However, when objective factors are taken into account in the regression beside social ones in model IV, the degree of community satisfaction results to be correlated with the number of social bonds established in the community, and with the quality of neighborhood relations, while the degree of social interaction becomes not significant. In addition to this, if we compare models I with model IV, we notice that the inclusion of objective factors beside social ones has effect of reducing the degree of significance of the length of residence and the housing tenure, while increasing the one of education and income. On one hand, these results seem therefore to suggest that short-term residents and renters in Kirovsk and Nikel may indeed suffer from certain social issues, such as a lack of social bonds and limited social interaction in the location of residence (see section 5.4), which determine a negative effect on the degree of community satisfaction among these categories. On the other hand, these results confirm that long term-residents and home-owners may enjoy more numerous and intense social bonds as well as a higher degree of integration in the community of residence, which eventually determine a positive influence on the subjective evaluation of the community of residence. Consistently with these evidences, our results appear to be in line with other contributions investigating the distribution of residential satisfaction according to housing tenure and length of residence (Speare, 1974; Newman, 1975; Lu, 1998; Kearns & Parkes, 2003), but in radically different contexts than the one of Russian Arctic communities. Finally, in the light of our results, it is possible to conclude that social factors do not play any relevant role in determining a higher degree of community satisfaction among less educated people than among more educated people.

As already announced, emotional factors appear to be the most reliable indicators of community satisfaction among the inhabitants of Kirovsk and Nikel, both when confronted with other subjective factors (model II) and with objective factors (model V). Namely, in both models II and V, the degree of community satisfaction appears to be majorly affected by the subjective evaluation of the physical environment of the community, by the subjective identification with the place of residence, and to a lower extent, by the subjective contact with the nature. The correlation between these factors and community satisfaction becomes particularly evident when emotional factors are included besides objective ones, as all objective factors that were significantly correlated with community satisfaction in model I are found to be non significant in model V. In the light of these results, emotional factors appear therefore to play a distinct role in determining all the variations in community satisfaction which we have previously found among our respondents, i.e.: between people living in Kirovsk and in Nikel; between more educated and less educated people; between people with children and people without; between long-term and short-term residents; and between homeowners and renters. Accordingly, our results attest the necessity of including emotional factors beside other types of subjective factors when investigating the degree of residential satisfaction, both at the home and the community level, as already proposed in other studies (Fried, 1984; Bonaiuto *et al.*, 1999, 2003; Christakopolou *et al.*, 2001; Adriaanse, 2007).

**Table 5.18 - Community satisfaction in relation to objective and subjective factors: linear regressions**

|   |  | Community satisfaction   |                                  |                     |                     |                    |                    |
|---|--|--------------------------|----------------------------------|---------------------|---------------------|--------------------|--------------------|
|   |  | I                        | II                               | III                 | IV                  | V                  |                    |
| OBJECTIVE INDICATORS  | Community of residence                                   | -.814 ***<br>(.138)      | -                                | -.529 ***<br>(.161) | -.704 ***<br>(.142) | .096<br>(.114)     |                    |
|   | Gender   | .027<br>(.150)           | -                                | .088<br>(.153)      | -.033<br>(.152)     | .040<br>(.104)     |                    |
|   | Age  | .007<br>(.008)           | -                                | .006<br>(.008)      | .006<br>(.008)      | .010<br>(.006)     |                    |
|   | Education  | -.283 *<br>(.150)        | -                                | -.281 *<br>(.151)   | -.349 **<br>(.146)  | -.147<br>(.102)    |                    |
|   | Income   | .235<br>(.163)           | -                                | .187<br>(.163)      | .316 **<br>(.160)   | .027<br>(.113)     |                    |
|   | Marital status I <sup>a</sup><br>(Married or cohabiting) | .032<br>(.231)           | -                                | -.044<br>(.225)     | .109<br>(.223)      | .101<br>(.155)     |                    |
|   | Marital status II <sup>a</sup><br>(Divorced or widowed)  | -.224<br>(.276)          | -                                | -.226<br>(.275)     | .061<br>(.279)      | -.092<br>(.187)    |                    |
|   | With children  | -.407 **<br>(.164)       | -                                | -.337 **<br>(.164)  | -.405 **<br>(.159)  | .026<br>(.115)     |                    |
|   | Length of residence                                      | .012 *<br>(.006)         | -                                | .011 *<br>(.006)    | .008<br>(.007)      | -.006<br>(.005)    |                    |
|   | Housing tenure   | -.327 *<br>(.188)        | -                                | -.176<br>(.193)     | -.300<br>(.189)     | .099<br>(.130)     |                    |
|   | SUBJECTIVE INDICATORS                                    | Convenience factors      | Evaluation of housing conditions | -                   | .030<br>(.066)      | .209 **<br>(.086)  | -                  |
| Evaluation of economic conditions   |  |                          | -                                | .039<br>(.071)      | .067<br>(.096)      | -                  | -                  |
| Evaluation of public services   |  |                          | -                                | .090<br>(.085)      | .240 **<br>(.116)   | -                  | -                  |
| Evaluation of other amenities<br>(retail, cultural and recreational facilities) |  |                          | -                                | -.008<br>(.060)     | .084<br>(.115)      | -                  | -                  |
| Evaluation of environmental<br>conditions                                       |  |                          | -                                | .221 ***<br>(.076)  | .014<br>(.091)      | -                  | -                  |
| Social factors  |  | Social bonds             | -                                | .011<br>(.057)      | -                   | .231 ***<br>(.079) | -                  |
|   |  | Neighborhood relations   | -                                | .182 **<br>(.086)   | -                   | .253 **<br>(.120)  | -                  |
|   |  | Community relations      | -                                | .090<br>(.158)      | -                   | .231<br>(.207)     | -                  |
|   |  | Social interaction       | -                                | .302 ***<br>(.098)  | -                   | .190<br>(.141)     | -                  |
|   |  | Associationism           | -                                | -.064<br>(.124)     | -                   | -.153<br>(.172)    | -                  |
|   |  | Political involvement    | -                                | -.091<br>(.070)     | -                   | -.151<br>(.104)    | -                  |
| Emotional factors   |  | Sense of belonging       | -                                | .079<br>(.069)      | -                   | -                  | .092<br>(.062)     |
|   |  | Environmental evaluation | -                                | .580 ***<br>(.084)  | -                   | -                  | .569 ***<br>(.082) |
|   |  | Contact with nature      | -                                | .188 **<br>(.088)   | -                   | -                  | .144 *<br>(.082)   |
|   |  | Place identity           | -                                | .361 ***<br>(.061)  | -                   | -                  | .386 ***<br>(.061) |
| <i>Constant</i>   |  | 3.730 ***<br>(.250)      | .637<br>(.524)                   | 1.996 ***<br>(.596) | 2.713 ***<br>(.748) | -.848 **<br>(.374) |                    |
| n   |  | 196                      | 186                              | 192                 | 194                 | 192                |                    |
| R <sup>2</sup>  |  | .225                     | .649                             | .291                | .302                | .655               |                    |
| Adjusted R <sup>2</sup>   |  | .184                     | .619                             | .231                | .239                | .628               |                    |

**Notes:** standard errors in parentheses; \*\*\* p < 0.01; \*\* p < 0.05; \* p < 0.1; <sup>a</sup>: the category of reference is singles.

While the results presented above suggest that emotional factors are the major predictors of community satisfaction among the population of Kirovsk and Nickel, we should be careful not to overestimate the causal relation between these two dimensions. In fact, the development of a strong emotional bond with the physical and social environment of the community of residence may indeed improve the subjective experience of such location, and thus produce a positive effect on the degree of community satisfaction. However, it is also possible to conjecture that people who are satisfied with their location of residence may consequently develop a stronger emotional bond with the same location, while on the contrary, people who are dissatisfied or in a condition of distress may eventually develop contempt and resentment towards the location of residence. Consistently with this argument, our results allow us to corroborate the existence of a strong correlation between emotional factors and residential satisfaction among the inhabitants of Kirovsk and Nickel, but not to prove which variable is the affecting the other, or whether the two variables mutually influence each other.

## **5.7 PROPENSITY TO MOVE IN RELATION TO RESIDENTIAL SATISFACTION AND RELATED SUBJECTIVE FACTORS**

Thanks to the information gathered in the previous sections, we are finally in the position to investigate how residential satisfaction and related subjective factors influence the extent and distribution of propensity to move among the inhabitants of Kirovsk and Nickel, and thus to explain the results obtained in section 5.1. Accordingly, the present section is devoted to answer the last research question we have posed in the introduction (**RQ 4**): *“How does propensity to move vary depending on residential satisfaction, and on the evaluation of convenience, social and emotional aspects?”* To this end, in the present section, we are going to investigate how the propensity to move is related to the overall evaluation of the dwelling and of the community of residence, i.e. to home and community satisfaction, and to the single factors ascribable to convenience, social and emotional satisfaction. Namely, also in this case, the notion of propensity to move is separated in two components, i.e. propensity to leave home and propensity to leave the community, allowing us to discern between different ranges of analysis. From our perspective, this investigation shall enable us to explain why the degree of propensity to move varies between people living in different communities, and among people with different individual and household backgrounds. Furthermore, this investigation will allow us to evaluate and compare the role played by single subjective factors among the various groups composing the population of Kirovsk and Nickel, hence to recognize the actual causes influencing propensity to move among these groups. Finally, by means of this investigation, it will be possible to test the actual relation between residential satisfaction and propensity to move in a context, such as the one of Russian Arctic communities, where this has never been done before.

In accordance with the topics and objectives stated above, the present section is organized as follows. In first place, we analyze the effect of residential satisfaction and related subjective factors on the propensity to leave home, and we compare this effect with the one due to objective factors. Following this, we carry out a similar procedure in order to assess how subjective factors influence the propensity to leave the community, also in regard to concurrent objective factors. Finally, we propose a new conceptual scheme of propensity to move among the population of Kirovsk and Nickel, based on the results obtained in the present chapter.

### 5.7.1 Propensity to leave home in relation to subjective factors

In order to analyze the effect of subjective factors on the propensity to leave home among the inhabitants of Kirovsk and Nikel, we follow a procedure which is similar to the one employed earlier when investigating the effect of subjective factors on home and community satisfaction. Specifically, we carry out a series of six logistic regressions, each one employing a different model of propensity to leave home. In model I, we show the distribution of the propensity to leave home according to locational, individual and household factors, as reported in section 5.1. In model II, we assess the effect of residential satisfaction on the propensity to leave home, and confront this with the effect due to objective factors. In model III, we compare the effect of single subjective factors on the propensity to leave home, while objective factors are not taken into account. Finally, in models IV, V and VI, we analyze the effect of convenience, social and emotional factors on the propensity to leave home, this time taking into account the effect produced by objective factors. The outcome of the regressions is presented in table 5.19.

The results displayed in table 5.19 confirm that the propensity to leave home among the inhabitants of Kirovsk and Nikel can be majorly influenced by the degree of residential satisfaction as well as by the other subjective factors taken into account. Namely, subjective factors appear to provide a more reliable explanation of the propensity to leave home than objective factors, as we can appreciate by comparing the outcome of model I with the one of the following models. Although only at the home level, these results appear therefore to validate the argumentations advanced by various scholars (Campbell & Converse, 1972; Robinson et al., 1973; Marans & Rodgers, 1975; Newman, 1974, 1975) supporting the utilization of subjective factors beside objective ones when investigating the propensity to move. Moreover, the remarkable correlation between residential satisfaction and the propensity to leave home appears to essentially confirm the validity of the residential satisfaction model proposed by Speare (1974), in spite of the peculiar characteristics of our context of research.

The remarkable role played by residential satisfaction in influencing the propensity to leave home is clearly documented in model II. Namely, the model shows that the propensity to leave home is significantly correlated with the subjective evaluation of the community of residence and of the dwelling, as well as with the length of residence in the community, and the housing tenure. Furthermore, the model shows that, when the variables home satisfaction and community satisfaction are included in the regression, the variables community of residence and the presence of children become non significant in explaining the propensity to leave home. In first place, these results suggest that the variations in the propensity to leave home between respondents in Kirovsk and Nikel, and between people with children and without children, could be indeed attributed to a different degree of residential satisfaction among these categories, as already suggested by the results obtained in sections 5.2 and 5.6. Furthermore, these results confirm that, also in the context of Russian Arctic communities, the propensity to leave home is likely to be higher among renters and short-term residents, and to be lower among homeowners and long-term residents, an outcome which is in line with other contributions on the topic (Speare, 1974; Newman, 1975; Lu, 1998; Kearns & Parkes, 2003). In the light of these results, it is therefore possible to conclude that the effect of locational and household factors on the propensity to leave home is indeed mediated by the intervening effect of residential satisfaction, while the housing tenure and the length of residence appear to produce a more direct effect in influencing the propensity to leave home.

**Table 5.19 - Propensity to leave home in relation to objective and subjective factors: logistic regressions.**

|                            |   | Propensity to leave home |                       |                      |                      |                      |                     |
|----------------------------|---|--------------------------|-----------------------|----------------------|----------------------|----------------------|---------------------|
|                            |   | I                        | II                    | III                  | IV                   | V                    | VI                  |
| OBJECTIVE INDICATORS       | Individual and household factors  |                          |                       |                      |                      |                      |                     |
|                            | Community of residence  | .872 ***<br>(.337)       | .233<br>(.382)        | -                    | .293<br>(.461)       | .927 **<br>(.403)    | .100<br>(.454)      |
|                            | Gender  | -.272<br>(.358)          | -.260<br>(.378)       | -                    | -.340<br>(.459)      | .214<br>(.417)       | .088<br>(.437)      |
|                            | Age   | .024<br>(.019)           | .026<br>(.021)        | -                    | .033<br>(.196)       | .025<br>(.024)       | .049 *<br>(.026)    |
|                            | Education   | .461<br>(.359)           | .427<br>(.383)        | -                    | .588<br>(.438)       | .865 **<br>(.421)    | .707 *<br>(.413)    |
|                            | Income  | -.280<br>(.392)          | -.182<br>(.412)       | -                    | -.503<br>(.486)      | -.354<br>(.448)      | -.238<br>(.467)     |
|                            | Marital status I <sup>a</sup><br>(Married or cohabiting)                        | -.435<br>(.554)          | -.285<br>(.560)       | -                    | -.548<br>(.708)      | -.408<br>(.605)      | -.780<br>(.669)     |
|                            | Marital status II <sup>a</sup><br>(Divorced or widowed)                         | -.669<br>(.664)          | -.557<br>(.706)       | -                    | -.811<br>(.850)      | -1.322 *<br>(.745)   | -1.081<br>(.793)    |
|                            | With children   | .742 *<br>(.391)         | .380<br>(.408)        | -                    | .713<br>(.500)       | .647<br>(.435)       | .521<br>(.484)      |
|                            | Length of residence   | -.028 *<br>(.016)        | -.030 *<br>(.017)     | -                    | -.033 *<br>(.020)    | -.017<br>(.019)      | -.058 ***<br>(.022) |
| Housing tenure             | 1.075 ***<br>(.503)   | 1.336 **<br>(.641)       | -                     | 2.177 **<br>(1.066)  | 1.777 ***<br>(.682)  | 2.982 ***<br>(.903)  |                     |
| SUBJECTIVE INDICATORS      | Convenience factors   |                          |                       |                      |                      |                      |                     |
|                            | Home satisfaction   | -                        | -.520 **<br>(.218)    | -                    | -                    | -                    | -                   |
|                            | Community satisfaction  | -                        | -.573 ***<br>(.205)   | -                    | -                    | -                    | -                   |
|                            | Evaluation of housing conditions  | -                        | -                     | -1.353 ***<br>(.355) | -1.618 ***<br>(.326) | -                    | -                   |
|                            | Evaluation of economic conditions   | -                        | -                     | .297<br>(.339)       | .229<br>(.301)       | -                    | -                   |
|                            | Evaluation of public services   | -                        | -                     | -.741 *<br>(.399)    | -.891 **<br>(.357)   | -                    | -                   |
|                            | Evaluation of other amenities<br>(retail, cultural and recreational facilities) | -                        | -                     | -.437<br>(.402)      | -.294<br>(.368)      | -                    | -                   |
|                            | Evaluation of environmental<br>conditions                                       | -                        | -                     | -.116<br>(.367)      | .173<br>(.333)       | -                    | -                   |
|                            | Social factors  |                          |                       |                      |                      |                      |                     |
|                            | Social bonds  | -                        | -                     | -.500 *<br>(.262)    | -                    | -.595 ***<br>(.226)  | -                   |
|                            | Neighborhood relations  | -                        | -                     | .153<br>(.411)       | -                    | -.603 *<br>(.344)    | -                   |
|                            | Community relations   | -                        | -                     | -1.241 *<br>(.705)   | -                    | -1.526 ***<br>(.593) | -                   |
|                            | Social interaction  | -                        | -                     | -.470<br>(.443)      | -                    | -.078<br>(.393)      | -                   |
|                            | Associationism  | -                        | -                     | -.669<br>(.567)      | -                    | -1.030 **<br>(.509)  | -                   |
|                            | Political involvement   | -                        | -                     | -1.279 ***<br>(.362) | -                    | -.848 ***<br>(.312)  | -                   |
| Emotional factors          |   |                          |                       |                      |                      |                      |                     |
| Sense of belonging         | -   | -                        | -.799 **<br>(.358)    | -                    | -                    | -1.318 ***<br>(.328) |                     |
| Environmental evaluation   | -   | -                        | -.537<br>(.426)       | -                    | -                    | -1.323 ***<br>(.393) |                     |
| Contact with nature        | -   | -                        | -.079<br>(.429)       | -                    | -                    | -.056<br>(.344)      |                     |
| Place identity             | -   | -                        | -.437<br>(.307)       | -                    | -                    | -.935 ***<br>(.300)  |                     |
| Constant                   | .028<br>(.594)  | 4.652 ***<br>(1.332)     | 18.126 ***<br>(3.731) | 8.385 ***<br>(2.036) | 8.809 ***<br>(2.302) | 6.006 ***<br>(1.740) |                     |
| n                          | 198   | 191                      | 193                   | 192                  | 191                  | 189                  |                     |
| Cox & Snell R <sup>2</sup> | .122  | .191                     | .396                  | .343                 | .261                 | .305                 |                     |
| Nagelkerke R <sup>2</sup>  | .168  | .262                     | .543                  | .474                 | .358                 | .419                 |                     |
| Model $\chi^2$             | 25.994  | 40.252                   | 91.613                | 78.260               | 57.840               | 68.713               |                     |

**Notes:** standard errors in parentheses; \*\*\* p < 0.01; \*\* p < 0.05; \* p < 0.1; <sup>a</sup>: the category of reference is singles.



The existence of a meaningful relation between the propensity to leave home and residential satisfaction is corroborated by the results obtained in model III, showing numerous correlations between the propensity to leave home and single subjective factors ascribable to convenience, social and emotional satisfaction. Specifically, as in the case of home satisfaction, the propensity to leave home appears to be significantly affected: by the evaluation of housing conditions; by the evaluation of public services; and by the degree of home attachment, or sense of belonging. Contrarily to the degree of home satisfaction, however, the propensity to leave home appears to be considerably affected also by social factors, such as: the degree of political involvement; the presence of relatives and friends; and the quality of community relations. Namely, the propensity to leave home appears to be higher among people displaying little interest in local political affairs, among people with few relatives and friends living in the same community, and among people who complained about the quality of social relations with other community members. On one hand, these results appear therefore to confirm the remarkable role played by subjective factors in influencing the propensity to leave home, especially by those factors which explicitly refer to the home range of analysis. On the other hand, these results also show that subjective factors, and especially social ones, may produce a different effect on the degree of home satisfaction, and on the propensity to leave home. In order to appreciate the actual effect of the single subjective factors taken into account on the propensity to leave home, however, it is necessary to confront such effect with the one determined by objective factors.

Pertaining to the effect of convenience factors on the propensity to leave home, the results in model IV confirm the remarkable role played by the evaluation of housing conditions (Morris *et al.*, 1976; Gruber & Shelton, 1986; Amerigo & Aragonés, 1990, 1997; Myers *et al.*, 1997) and of public services rendered in the community of residence (Marans & Rodgers, 1975; Rodgers, 1980; Allen *et al.*, 1991). In addition to this, the results in the model show that, when we include convenience factors beside objective ones, the community of residence and the presence of children in the household are no more significantly related with the propensity to leave home. In the light of our results, it is possible to conclude that the variations in propensity to leave home recorded between respondents in Kirovsk and Nikel, and between people with children and without children, can be partially attributed to a different evaluation of housing conditions and of public services among these categories. In turn, such evaluation can be deemed to vary depending on the objective characteristics of the location of residence, as well as on the specific individual and household background, as already explained in section 5.3. Moreover, our results suggest that convenience factors play only a negligible role in determining the variations in propensity to leave home which we previously reported between homeowners and renters, and between long-term and short-term residents. Pertaining to the housing tenure, these results confirm an objective situation of dissatisfaction or even distress among renters, which can be positively associated with their intention to leave the home, as already documented by the results in model II. Pertaining to the length of residence, these results suggest that short-term residents may desire to leave their home not because of a negative evaluation of the dwelling and community convenience, but rather because of intervening social and emotional factors, as documented in the following models (Speare, 1970, 1974).

The results in model V show the effect of social factors on the propensity to leave home in contrast with objective factors. The results in the model confirm the correlation between the propensity to leave home on one hand, and the number of social bonds, the quality of community relations, and the degree of political involvement on the other, as already documented in model III. In comparison with our previous results, however, the results in model V suggest that the propensity to leave home may also be affected by the quality of neighborhood relations, as well as by the degree of associationism. Namely, people who enjoy positive relationships with their neighbors, and who are engaged in some type of associationism, are less willing to leave their dwelling than people who reported poor neighborhood relations and who do not

participate in associations. In line with these results, it is therefore possible to conclude that the quality of social relations shared with kin and friends living in the same community, as well as with other neighbors and community members, may indeed produce a notable effect on the propensity to leave home among the inhabitants of Kirovsk and Nikel. In addition to this, the degree of social involvement in local associations and politics can be assumed to be a valid predictor of the intention to remain or to leave the dwelling of residence. Specifically, this outcome could be explained with the fact that people who are willing to leave their home (and possibly also the neighborhood and the community) may be uninterested to get actively involved in local affairs, while on the contrary, the people who are willing to remain may be also more interested in contributing to ameliorate the location of residence.

Still pertaining to the results in model V, it is interesting to notice that, when social factors are included in the regression, the presence of children and the length of residence are no more significantly correlated with the propensity to leave home. Also in the light of the results obtained in sections 5.4, it is possible that people who have children as well as short-term residents may be willing to move in response to a situation of social distress, which may be caused by the lack of social bonds in the community of residence, or by a poor quality of neighborhood and community relations. On the contrary, long-term residents and people with no children may be willing to remain in their home, as they enjoy better social relations in their neighborhood and community of residence than their counterparts. Furthermore, if we compare model V with the other models which include objective indicators, we notice that the inclusion of social factors has the effect of increasing the significance of the variables education and marital status. Namely, the propensity to leave home appears to be higher among people with a higher level of education, and to be lower among people who are divorced or widowed. In the light of the information at our disposal, however, we are not able to provide a valid explanation of the reasons underpinning such correlations.

Concerning the effect of emotional factors on the propensity to leave home, model VI confirms that people who are attached to their home, who have a positive perception of the community environment, and who identify themselves with the place of residence, are also less desirous to leave their home than people reporting a low degree of home and/or community attachment. In addition to this, the inclusion of emotional factors beside objective ones has the effect of reducing the degree of significance of the variable community of residence, and of the presence of children in the household. Consistently with this outcome, it is possible to conclude that emotional factors may indeed concur to affect not only the subjective evaluation of the location of residence, but also the desire to leave the current dwelling. Furthermore, this outcome suggest that emotional factors may contribute to explain why people living in Nikel and people with children are more desirous to leave their home than people living in Kirovsk and people with no children, as already suggested in section 5.5. These results appear therefore to support the opportunity of employing emotional factors beside convenience and social ones when investigating the extent and distribution of the propensity to leave home, also in a peculiar context such as the one of Russian Arctic communities.

### **5.7.2 Effect of subjective factors on the propensity to leave the community**

After having discussed the effect of residential satisfaction and related subjective factors on the propensity to leave home, we are now going to analyze the effect of the same factors on the propensity to leave the community, i.e. the propensity to migrate. As already announced, in order to provide a clear and exhaustive explanation of the role played by subjective factors in influencing the propensity to leave the community, we employ the same procedures which we adopted while investigating the propensity to leave

home. Specifically, also in this case, we carry out a series of logistic regressions, in which the propensity to leave the community is treated as dependent variable, while objective and subjective factors are treated as independent variables. Consistently, we propose six different models of propensity to leave the community. Model I replicates the results obtained in section 5.1, showing the distribution of propensity to leave the community according to locational, individual, and household factors. Model II shows the effect of home and community satisfaction on the propensity to leave the community in contrast with the effect due to objective factors. Model III compares the effect of single subjective factors attributed to convenience, social and emotional satisfaction, while objective factors are not considered. Finally, models IV, V and VI contrasts the effect of single convenience, social and emotional factors with the one produced by objective factors. The outcome of the six models is presented in table 5.20.

From a first look at the results in table 5.20, there appear to be numerous correlations between the propensity to leave the community on one side, and the degree of residential satisfaction and related subjective factors on the other. Namely, the subjective factors taken into account appear to provide a more reliable explanation of the propensity to leave the community than objective factors, as we can appreciate by comparing the outcome of model I with the outcome of the following models. Moreover, the results in model II suggest that the propensity to leave the community is majorly affected by the subjective evaluation of the community of residence, while in this respect, the evaluation of the dwelling appear to be irrelevant. In the light of these results, it is therefore possible to conclude that subjective factors can indeed provide a valid explanation of the reasons influencing the propensity to leave the community among the inhabitants of Kirovsk and Nikel. Accordingly, these results confirm once again the argumentations proposed by Newman (1975) and others (Campbell & Converse, 1972; Robinson et al., 1973; Marans & Rodgers, 1975;) supporting the primacy of subjective indicators over objective ones in explaining the propensity to move, also in a particular context such as the one investigated in our research. In addition to this, the strong correlation between community satisfaction and the propensity to leave the community appears to corroborate the validity of the residential satisfaction model proposed by Speare (1974) in the context of Russian Arctic communities.

While the subjective factors taken into account seem to provide a valid explanation of the extent of propensity to leave the community among the inhabitants of Kirovsk and Nikel, they appear nonetheless to fall short in explaining why the propensity to leave the community varies between the samples obtained in the two communities, and between people with a different individual and household background. Namely, when confronting the effect of subjective and objective factors on the propensity to leave home earlier in this section, we found that the inclusion of subjective indicators had the effect of reducing the degree of significance of the single objective factors taken into account. In the light of these results, we then argued that the effect of objective factors on the propensity to leave home is mediated by the intervening role played by subjective factors. In the case of the propensity to leave the community, however, the inclusion of subjective factors beside objective ones does not produce any major reduction in the degree of significance of the objective factors taken into account; on the contrary, the degree of significance of certain objective factors appears to increase when subjective factors are included in the regression. Accordingly, these results seem to suggest that locational, individual and household factors may produce a direct effect on the propensity to leave the community, and that such an effect is only marginally mediated by the intervening role played by subjective factors. Consistently with these results, subjective and objective factors appear therefore to play a distinct and complementary role in influencing the propensity to leave the community among the inhabitants of Kirovsk and Nikel. In line with these observations, we should thus be careful not to overestimate the actual opportunities enabled by the utilization of subjective factors when investigating propensity to move in the context of Russian Arctic communities.

**Table 5.20 - Propensity to leave home in relation to objective and subjective factors: logistic regressions.**

|                            |   | Propensity to leave the community |                       |                      |                      |                      |                      |
|----------------------------|---|-----------------------------------|-----------------------|----------------------|----------------------|----------------------|----------------------|
|                            |   | I                                 | II                    | III                  | IV                   | V                    | VI                   |
| OBJECTIVE INDICATORS       | Individual and household factors  |                                   |                       |                      |                      |                      |                      |
|                            | Community of residence  | 1.950 ***<br>(.413)               | 1.012 **<br>(.445)    | -                    | 1.047 **<br>(.504)   | 2.219 ***<br>(.504)  | 1.249 **<br>(.499)   |
|                            | Gender  | -.618<br>(.404)                   | -.219<br>(.432)       | -                    | -1.146 **<br>(.505)  | -.137<br>(.472)      | -.301<br>(.443)      |
|                            | Age   | .044 **<br>(.022)                 | .075 ***<br>(.026)    | -                    | .107 ***<br>(.032)   | .098 ***<br>(.030)   | .037<br>(.027)       |
|                            | Education   | .673 *<br>(.402)                  | .234<br>(.431)        | -                    | .764 *<br>(.453)     | .512<br>(.462)       | .548<br>(.423)       |
|                            | Income  | 1.123 **<br>(.442)                | 1.163 **<br>(.471)    | -                    | 1.671 ***<br>(.527)  | 1.462 ***<br>(.537)  | 1.432 ***<br>(.491)  |
|                            | Marital status I <sup>a</sup><br>(Married or cohabiting)                        | -1.235 **<br>(.624)               | -1.981 ***<br>(.751)  | -                    | -2.548 ***<br>(.797) | -2.225 ***<br>(.745) | -1.897 ***<br>(.708) |
|                            | Marital status II <sup>a</sup><br>(Divorced or widowed)                         | -1.210 *<br>(.703)                | -2.598 ***<br>(.914)  | -                    | -2.412 ***<br>(.934) | -2.685 ***<br>(.918) | -2.151 ***<br>(.835) |
|                            | With children   | .366<br>(.425)                    | -.095<br>(.469)       | -                    | -.513<br>(.531)      | .283<br>(.490)       | .094<br>(.466)       |
|                            | Length of residence   | -.029 *<br>(.017)                 | -.022<br>(.019)       | -                    | -.049 **<br>(.022)   | -.044 *<br>(.023)    | -.004<br>(.021)      |
| Housing tenure             | .938 *<br>(.530)  | .563<br>(.613)                    | -                     | .129<br>(.638)       | 1.311 *<br>(.700)    | .734<br>(.632)       |                      |
| SUBJECTIVE INDICATORS      | Convenience factors   |                                   |                       |                      |                      |                      |                      |
|                            | Home satisfaction   | -                                 | -.075<br>(.229)       | -                    | -                    | -                    | -                    |
|                            | Community satisfaction  | -                                 | -1.291 ***<br>(.263)  | -                    | -                    | -                    | -                    |
|                            | Evaluation of housing conditions  | -                                 | -                     | -.663 **<br>(.303)   | -.801 ***<br>(.287)  | -                    | -                    |
|                            | Evaluation of economic conditions   | -                                 | -                     | -.654 *<br>(.331)    | -.792 ***<br>(.305)  | -                    | -                    |
|                            | Evaluation of public services   | -                                 | -                     | -1.148 ***<br>(.416) | -.985 ***<br>(.365)  | -                    | -                    |
|                            | Evaluation of other amenities<br>(retail, cultural and recreational facilities) | -                                 | -                     | -.343<br>(.387)      | -.388<br>(.391)      | -                    | -                    |
|                            | Evaluation of environmental<br>conditions                                       | -                                 | -                     | -.265<br>(.354)      | -.050<br>(.343)      | -                    | -                    |
|                            | Social factors  |                                   |                       |                      |                      |                      |                      |
|                            | Social bonds  | -                                 | -                     | -.518 *<br>(.289)    | -                    | -.116<br>(.238)      | -                    |
|                            | Neighborhood relations  | -                                 | -                     | -.879 **<br>(.404)   | -                    | -1.276 ***<br>(.397) | -                    |
|                            | Community relations   | -                                 | -                     | -.567<br>(.771)      | -                    | -1.206 *<br>(.664)   | -                    |
|                            | Social interaction  | -                                 | -                     | -.158<br>(.450)      | -                    | -.113<br>(.455)      | -                    |
|                            | Associationism  | -                                 | -                     | -2.476 ***<br>(.717) | -                    | -1.650 **<br>(.670)  | -                    |
|                            | Political involvement   | -                                 | -                     | -.489<br>(.334)      | -                    | -.415<br>(.327)      | -                    |
| Emotional factors          |   |                                   |                       |                      |                      |                      |                      |
| Sense of belonging         | -   | -                                 | .598 *<br>(.330)      | -                    | -                    | -.203<br>(.248)      |                      |
| Environmental evaluation   | -   | -                                 | -.147<br>(.390)       | -                    | -                    | -.771 **<br>(.369)   |                      |
| Contact with nature        | -   | -                                 | .345<br>(.418)        | -                    | -                    | .107<br>(.350)       |                      |
| Place identity             | -   | -                                 | -1.351 ***<br>(.351)  | -                    | -                    | -.521 *<br>(.276)    |                      |
| Constant                   | -.453<br>(.659)   | 4.875 ***<br>(1.450)              | 11.000 ***<br>(3.027) | 8.966 ***<br>(2.078) | 3.893 *<br>(2.342)   | 4.990 ***<br>(1.794) |                      |
| n                          | 196   | 194                               | 195                   | 194                  | 194                  | 193                  |                      |
| Cox & Snell R <sup>2</sup> | .193  | .300                              | .356                  | .348                 | .303                 | .279                 |                      |
| Nagelkerke R <sup>2</sup>  | .276  | .422                              | .503                  | .495                 | .435                 | .397                 |                      |
| Model $\chi^2$             | 42.079  | 69.071                            | 80.938                | 80.484               | 68.596               | 63.122               |                      |

**Notes:** standard errors in parentheses; \*\*\* p < 0.01; \*\* p < 0.05; \* p < 0.1; <sup>a</sup>: the category of reference is singles.

Following these necessary considerations, we can now focus on the results obtained in the single models of propensity to leave the community presented in table 5.19. As already announced, model II shows that the degree of propensity to leave the community can be majorly affected by the subjective evaluation of the community of residence, while at the same time, the evaluation of the dwelling is not significant in this respect. These results appear therefore to confirm the argumentations we have proposed earlier, according to which the propensity to leave home is essentially the outcome of a condition of dissatisfaction with the community of residence, and of the consequent desire to leave the community. In addition to this, if we compare the results in model II with those obtained in model I, we notice that the inclusion of home satisfaction and community satisfaction has the effect of reducing the degree of significance of the variables education and housing tenure, and to a lower extent, of the variable community of residence. At the same time, however, the variables age, income and marital status maintain or even increase their degree of significance. On one hand, our results suggest that the degree of community satisfaction may indeed explain why the propensity to leave the community is higher among renters than among homeowners, and among educated people than among less educated. Also, these results may partially explain why the propensity to leave the community is higher among respondents in Kirovsk than respondents in Nikel, although in this case, objective locational factors remain a significant predictor of the dependent variable. On the other hand, the degree of community satisfaction does not explain why people who are older, wealthier, and single are more desirous to leave their community than others.

The existence of a meaningful relation between the subjective evaluation of the location of residence and the propensity to leave the community is corroborated by the results obtained in model III. Namely, the model shows that the propensity to leave the community can be remarkably influenced by diverse subjective factors ascribable to both convenience, social, and emotional satisfaction. From a convenience perspective, the most reliable predictors of the propensity to leave the community are the evaluation of local public services and the evaluation of housing conditions (which were also significantly correlated with the degree of community satisfaction), followed by the evaluation of economic conditions. From a social perspective, the propensity to leave the community appears to be considerably influenced by the degree of involvement in local associations and by the quality of neighborhood relations, and only secondarily, by the number of social bonds established in the community of residence. Finally, from an emotional perspective, the degree propensity to leave the community appears to be majorly affected by the degree of identification with the place of residence, and to a lower extent, by the degree of home attachment. Altogether, the results obtained in model III appear therefore to confirm the multifacetedness and complexity of the subjective factors influencing the propensity to leave the community among the inhabitants of Russian Arctic communities, and to support the necessity of considering a wide range of objective and subjective variables when investigating this topic. At the same time, however, these results do not allow us yet to specify how subjective factors affect the variations in propensity to leave the community between the inhabitants of Kirovsk and Nikel, and between people with different individual and household backgrounds. In order to clarify how subjective factors influence the propensity to leave the community depending on locational, individual and household factors, we now analyze and compare the results obtained in models IV, V and VI, which show the effect objective factors beside convenience, social and emotional factors, respectively.

In first place, the results in models IV, V and VI corroborate the existence of a direct and meaningful relation between the propensity to leave the community and certain objective factors, such as the community of residence, the household income, and the marital status. In fact, as documented in model II, there appears to be a strong correlation between these variables and the propensity to leave, which cannot be explained in the light of the subjective factors taken into account. As already discussed in sections 5.4,

5.4 and 5.5, the existence of a correlation between the community of residence and the propensity to leave the community could be explained in the light of the remarkable analogies between the objective locational factors available in Kirovsk and Nikel, and the subjective evaluation of the location of residence among the inhabitants of the two communities. In addition to this, the correlation between marital status and propensity to leave the community could be interpreted in the light of the risks and constraints, both objective and perceived, which may affect the potential migration. In fact, people who are married or cohabiting may feel restricted in their mobility plans by the will of their partner and other household members, while this is less likely to happen among people who are single. Moreover, people who are divorced or widowed may feel more vulnerable than other groups, and thus depend more intensely on the support of relatives and friends living in the same community. From a similar perspective, also the correlation between household income and the propensity to leave the community may depend on the objective and perceived constraints which might affect a potential move away from the community. Notwithstanding the plausibility of these argumentations, however, the results at our disposal do not allow us to further specify the reasons why the propensity to leave the community varies depending on the income and marital status.

As we further compare the results of models IV, V and VI, it is interesting to notice that convenience factors are the ones which provide the most reliable explanation of propensity to leave the community when considered beside objective factors, followed by subjective factors, and by emotional factors. On one hand, these results confirm the outcome of model III, according to which the propensity to leave the community can be affected simultaneously by both convenience, social and emotional factors. On the other hand, these results appear to suggest that the way in which subjective factors affect the propensity to leave the community may vary considerably from the way in which the same factors affect the degree of community satisfaction. In fact, in section 5.6, we found that the degree of community satisfaction can be majorly affected by emotional factors, and only secondarily by social and convenience factors. In the light of these results, we can thus conclude that, while the subjective evaluation of the community is principally influenced by the emotional bonds that the individual establish in the location of residence, the propensity to leave the community is affected by more practical and material issues, such as those described by convenience factors.

The results presented in model IV confirm that the propensity to leave the community among the inhabitants of Kirovsk and Nikel can be majorly affected by the subjective evaluation of the housing and economic conditions, and of the public services offered in the community. On the contrary, the evaluation of cultural and recreational facilities in the community and the evaluation of environmental conditions appear to play no salient role in this respect. Furthermore, when convenience factors are included in the regression beside objective ones, it is possible to notice that the variables community of residence and housing tenure decrease of significance, while the variables gender, age and length of residence increase of significance. In line with this outcome, it is possible to conclude that convenience factors may partially concur to explain the variations in propensity to leave the community between respondents in Kirovsk and respondents in Nikel, and between homeowners and renters. On the contrary, convenience factors appear to be insufficient in explaining the variations in propensity to move between younger and older respondents, between men and women, and between long-term and short-term residents. Namely, such variations are more likely to depend on differences related to the quality of social conditions and to the degree of emotional attachment between these categories, as suggested by models V and VI.

Concerning the effect of social factors on the propensity to leave the community, the results in model V confirm that respondents who entertain more positive relations with their neighbors and with other

community members, and who participate more frequently in local associations, are also the ones who are less desirous to leave their community. These results appear therefore to partially confirm the results obtained in model III as well as the ones obtained in section 5.6, which document the remarkable effect of neighborhood relations and social involvement on both the subjective evaluation of the community of residence, and on the propensity to leave the community. At the same time, however, the results in model V also show that the presence of relatives and friends in the community of residence, and the frequency of social interaction with other community members, have no significant effect on the propensity to leave the community. On one hand, it is possible that these variables may indeed produce no relevant effect on the propensity to leave the community, as demonstrated by our results; on the other hand, however, it is also possible that such an outcome may be affected by the strong correlation between the various social factors taken into account, even if no regime of collinearity was reported between them. Accordingly, it is possible to conclude that social factors can indeed affect the propensity to leave the community among the inhabitants of Kirovsk and Nikel; nonetheless, we find it difficult to establish the actual role played by single social factors in comparison to each other.

As we look at how social factors affect the variations in the propensity to leave the community across objective categories, we notice that the inclusion of social factors has the effect of decreasing the level of significance of the variables education and length of residence in explaining the dependent variable. Namely, model I shows that people with a higher level of education and long-term residents are more desirous to leave the community than less educated people and short-term residents. However, when social factors are included in the model, the level of significance of the variables education and length of residence decreases considerably. On one hand, this outcome suggests that social factors, and especially the quality of neighborhood and community relations and the degree of social involvement, may indeed determine a variation in the propensity to leave the community among people with a different level of education and length of residence. At the same time, social factors appear to provide no reliable explanations concerning the distribution of the propensity to leave the community, among people living in different communities, and among people with a different age, household income, and marital status.

Pertaining to the effect of emotional factors on the propensity to leave the community, the results in model VI confirm the existence of a negative correlation between the desire to move on one hand, and the degree of identification with the community of residence on the other. In contrast with the results obtained in model III, however, the degree of home attachment is no more significant in explaining the propensity to leave the community, while the subjective evaluation of the physical environment becomes significant. To some extent, the fact that home attachment is no more a significant predictor of the propensity to leave the community could be ascribed to the competing role of the objective variable housing tenure, which also loses of significance if compared to previous models. Furthermore, if we compare the results in models III and VI, it appears that emotional factors may concur to determine a variation in the propensity to leave the community between people with a lower education and people with a higher education, between young people and older people, and between long-term residents and short-term residents. Specifically, the effect of emotional factors on the propensity to leave the community among long-term and short-term residents is in line with other contributions based in other contexts of study, according to which long-term residents are more likely to develop strong emotional bonds with the place of residence, and are thus less desirous to display the desire to migrate (Speare, 1974; Newman, 1975; Lu, 1998; Kearns & Parkes, 2003). In our context of research, however, this relation does not imply that older people are more desirous to remain in the community, as we have previously explained in section 5.5.

# 6. CONCLUSIONS

The present chapter is devoted to summarize and discuss the results that we have obtained in the previous chapter, and to debate about the limitations and potential applications of the present research. In first place, we restate the aims and purposes announced in the introduction, and we provide a concise answer to the research questions inspiring our study. Secondly, we employ our results in order to debate about the extent and distribution of propensity to move among the inhabitants of Russian Arctic communities, and about the objective and subjective factors which may foster propensity to move in this context. Similarly, we then review our results in order to discuss about the degree of residential satisfaction among the inhabitants of Russian Arctic communities in the light of both objective and subjective factors. Following this, we outline the bias and limitations which may have influenced our research, and we propose suggestions for future research investigating propensity to move and residential satisfaction in the context of Russian Arctic communities.

## 6.1 Summary of the results

In the introductory chapter, we stated that the aim of the present research is: *to investigate how subjective factors affect the degree of residential satisfaction and the propensity to move among the inhabitants of two communities located in the Province of Murmansk, i.e. the city of Kirovsk and the settlement of Nikel.* Specifically, we outlined three main purposes inspiring our research: the first purpose is to assess the extent and distribution of propensity to move in relation to locational, individual and household factors; the second is to assess the extent and distribution of residential satisfaction and related dimensions (i.e. convenience, social, and emotional satisfaction) according to the same objective factors; and the third is to assess the relation between single subjective factors and the degree of residential satisfaction, and between these and the propensity to move. In order to better define the scope of our analysis, we also proposed a series of research questions, which we attempted to answer in the course of the previous chapter. A synthetic resume of the results is proposed in table 6.1 in the following page.

The first research question (RQ 1) asks: *“To what extent are the inhabitants of Kirovsk and Nikel willing to leave their location of residence?”* The results presented in section 5.1 show that, both in Kirovsk and in Nikel, a majority of people is willing to leave their home as well as their community. Additionally, our results prove that the degree of propensity to move can vary considerably depending on the community of residence, and according to certain factors ascribable to the individual and household background. We found that respondents in Nikel were significantly more desirous to leave their home and their community than respondents in Kirovsk. Moreover, we found that the propensity to leave home is higher among people with children, among short-term residents, and especially, among renters. At the same time, the propensity to leave the community is higher among: older people; people with higher levels of education; people with higher incomes; people who are not single; short-term residents; and renters.



**Table 6.1 - Correlations between propensity to move, residential satisfaction, and related factors.**

|  |                                  | HOME SATISFACTION                                     | COMMUNITY SATISFACTION | PROPENSITY TO LEAVE HOME         | PROPENSITY TO MIGRATE |     |
|--|----------------------------------|---|------------------------|----------------------------------|-----------------------|-----|
| OBJECTIVE FACTORS  | Individual and household factors | Community of residence (0 = Kirovsk; 1 = Nikel)       | ③                      | ③                                | ① ③                   |     |
|  |                                  | Gender (0 = males; 1 = females)                       |                        |                                  |                       |     |
|  |                                  | Age   | ③                      |                                  |                       | ③   |
|  |                                  | Education   |                        | ③                                |                       | ② ③ |
|  |                                  | Income  |                        |                                  |                       |     |
|  |                                  | Marital status I <sup>a</sup> (Married or cohabiting) |                        |                                  |                       |     |
|  |                                  | Marital status II <sup>a</sup> (Divorced or widowed)  |                        |                                  |                       |     |
|  |                                  | With children   | ① ② ③                  | ③                                | ① ③                   |     |
|  |                                  | Length of residence                                   |                        | ② ③                              | ②                     | ③   |
|  |                                  | Housing tenure (0 = homeowner; 1 = renter)            | ① ②                    | ① ② ③                            |                       | ① ③ |
|  |                                  | SUBJECTIVE FACTORS                                    | Convenience factors    | Evaluation of housing conditions |                       | ② ③ |
| Evaluation of economic conditions  |                                  |   |                        |                                  |                       |     |
| Evaluation of public services  | ④                                |   |                        | ② ③                              |                       |     |
| Evaluation of other amenities (retail, cultural and recreational facilities) |                                  |   |                        |                                  |                       |     |
| Evaluation of environmental conditions                                       |                                  |   |                        | ④                                |                       |     |
| Social factors   | Social bonds                     |   |                        | ① ③                              |                       | ④   |
|  | Neighborhood relations           |   |                        |                                  | ① ③                   |     |
|  | Community relations              |   | ④                      |                                  |                       | ① ③ |
|  | Social interaction               |   |                        | ④                                |                       |     |
|  | Associationism                   |   |                        |                                  | ① ③                   |     |
| Emotional factors  | Political involvement            |   |                        |                                  |                       |     |
|  | Sense of belonging               |   |                        |                                  |                       | ④   |
|  | Environmental appraisal          |   |                        |                                  | ① ②                   | ① ② |
|  | Contact with nature              |   | ① ②                    |                                  |                       |     |
|  | Place identity                   |   |                        | ① ②                              |                       |     |

**Symbols:** ■ Positive correlation ( $p < 0.01$ ); ■ Positive correlation ( $0.01 < p < 0.1$ );

■ Negative correlation ( $p < 0.01$ ); ■ Negative correlation ( $0.01 < p < 0.1$ ); ■ Correlation not significant;

① Not significant when convenience factors are considered; ② Not significant when social factors are considered;

③ Not significant when emotional factors are considered; ④ Not significant when objective factors are considered.

**Notes:** <sup>a</sup>: the category of reference is singles. For an explanation of objective variables and respective measurements, see table 5.6. For an explanation of subjective variables and respective measurements, see sections 5.3, 5.4, and 5.5.

The second research question (RQ 2) asks: *“To what extent are the inhabitants of Kirovsk and Nickel satisfied with their location of residence?”* As documented by the results presented in section 5.2, residential satisfaction appears to be remarkably influenced by locational factors as well as by individual and household factors. Namely, people in Kirovsk and in Nickel display a relatively high degree of residential satisfaction, both in relation to the dwelling and the community. However, there appears to be remarkable differences between the two communities, as people in Kirovsk are significantly more satisfied than people in Nickel, especially in regard to the community of residence. In addition to this, our results show that the degree of home satisfaction is higher among young people, among people with no children, and especially among homeowners. At the same time, the degree of community satisfaction is higher among: people with a lower education; people with no children; long term residents; and homeowners.

In order to better define the actual extent and distribution of residential satisfaction, the second research question was further specified by means of three sub-questions. The first sub-question (RQ 2a) asks: *“How do the inhabitants of Kirovsk and Nickel evaluate their location of residence with regard to convenience aspects?”* Namely, by means of convenience aspects, we refer to those aspects which can be deemed to improve the livability, practicality and functionality of the dwelling and the community (Fried, 1984). The results in section 5.3 show that respondents in Kirovsk are significantly more satisfied than respondents in Nickel in most of the indicators of convenience satisfaction taken into account. Furthermore, our results show that, both in Kirovsk and in Nickel, respondents reported a prominent sense of dissatisfaction with: the availability of occupational and career opportunities; the cost of life; the degree of dwelling maintenance; the quality of local healthcare and medical services; and the climatic and environmental conditions during summer months. Additionally, respondents in Nickel reported a strong dissatisfaction with: the degree of environmental pollution; the presence of green and natural areas; the availability of cultural facilities and events; and the quality of retail services and availability of goods.

In addition to this, the results in section 5.3 confirm that the degree of convenience satisfaction can be majorly influenced by the individual and household background; also in this case, however, the effect of individual and household factors varies considerably depending on the specific aspect of convenience satisfaction taken into account. Specifically, our results show that the satisfaction with housing conditions is particularly low among people with children and among renters, and to a lower extent, among people with a higher education, and among people who are married or cohabiting. As expectable, the satisfaction with economic and occupational conditions is higher among wealthier people, and lower among people with a higher education, among women, and among people who are married or cohabiting. The satisfaction with public services is particularly low among older people, and among people who are divorced or widowed people. Also the satisfaction with other amenities, such as cultural and recreational facilities, is especially low among older people, as well as among people with children, and among people with lower incomes. Finally, the satisfaction with environmental conditions is poor among: women; people with lower incomes; people with children; and older people.

The second sub-question (RQ 2b) asks: *“How do the inhabitants of Kirovsk and Nickel evaluate their location of residence with regard to social aspects?”* In first place, the results in section 5.4 corroborate the existence of significant differences between respondents in Kirovsk and in Nickel also in regard to social perceptions, attitudes and behaviors. Namely, respondents in Kirovsk reported more numerous friends and relatives living in the same community, and displayed more positive attitudes towards fellow community members, and more frequent social interaction. Notwithstanding these differences, the inhabitants of the two communities appear to display also remarkable similarities, especially pertaining to the quality of neighborhood relations, and the degree of associationism and political involvement. Specifically,

respondents both in Kirovsk and in Nikel reported a relatively positive evaluation of fellow community members, as well as frequent interaction with fellow neighbors, often in the ambit of mutual solidarity and cooperation. At the same time, respondents in both communities reported a rather low degree of trust in their neighbors as well as in public workers (such as policemen, teachers and doctors) and political figures. Moreover, respondents in both communities reported low levels of participation in local associations, both lay and religious, as well as a certain disinterest for local affairs and politics.

As we can appreciate from the results in section 5.4, the degree of social satisfaction among the inhabitants of Kirovsk and Nikel can also vary in relation to individual and household factors; also in this case, however, the effect of individual and household factors depends on the social factors taken into account. Specifically, the number of relatives and friends living in the same community is higher among young people, long-term residents, singles, and people with a higher education. In addition to this, the evaluation of neighborhood relations is particularly positive among older people and among more educated people, while it is negative among people with children. The evaluation of community relations is positive among older people and among women, and negative among people with children. Moreover, our results show that the degree of social interaction with other community members is higher among young people and long-term residents, and lower among renters. Finally, the degree of associationism appears to be higher among men, people with a higher education, and older people, while the degree of political involvement is higher among people with a higher education, older people, long-term residents, and people with higher incomes.

The third sub-question (RQ 2c) asks: *“How do the inhabitants of Kirovsk and Nikel evaluate their location of residence with regard to emotional aspects?”* As in the case of convenience and social satisfaction, also the degree of emotional satisfaction appears to be remarkably higher in Kirovsk than in Nikel. Namely, the results in section 5.6 suggest the existence of significant differences between the inhabitants of these communities in regard to: the identification with the home and with the community of residence; the subjective appraisal of the physical environment of the community; and the personal contact with nature. Moreover, our results confirm that the degree of emotional satisfaction can be significantly affected by individual and household factors. Namely, the degree of home attachment is higher among women, young people, long-term residents, people with no children, and people with higher incomes. The subjective evaluation of the environment is more positive among homeowners, and among less educated people. The contact with nature is more intense among: men; people with higher incomes; homeowners; long-term residents; and people with no children. Finally, the degree of identification with the community is more intense among homeowners, long-term residents, people with no children, and young people.

After having clarified the extent and distribution of convenience, social and emotional satisfaction in relation to objective factors, we proceeded to assess how convenience, social and emotional factors affect the degree of residential satisfaction, in order to answer the following question (RQ 3): *“How does residential satisfaction vary depending on the evaluation of convenience, social and emotional aspects?”* In order to answer this question, we first looked According to the results presented in section 5.6, the degree of home satisfaction appears to vary considerably in relation to emotional factors, especially in relation to: the degree of home attachment; and to the subjective evaluation of the community physical environment. Specifically, emotional factors appear to explain why the degree of home satisfaction was higher among people living in Kirovsk, and among younger people, people with no children, and homeowners. In addition to this, the extent and distribution of home satisfaction appears to be considerably influenced by the subjective evaluation of convenience aspects, such as housing conditions, local public services, and amenities such as cultural and recreational facilities. Finally, the effect of social factors on the extent and distribution of home satisfaction appears to be negligible.

Also pertaining to community satisfaction, there appears to be a remarkable relation between this and the emotional factors taken into account, especially concerning: the subjective evaluation of the community physical environment; the degree of identification with the community of residence; and the personal contact with nature. Namely, also in this case, emotional factors appear to provide a valid explanation to the variations in community satisfaction that we recorded: between respondents in Kirovsk and in Nickel; between people with different levels of education; between people with children and without children; between long-term and short-term residents; and between homeowners and renters. Moreover, community satisfaction can be significantly affected by social and convenience factors, although to a lower extent than in the case of emotional factors. Pertaining to social factors, the degree of community satisfaction appears to be influenced: by the presence of friends and relatives living in the same community; by the quality of neighborhood relations; and by the degree of social interaction with other community members. Pertaining to convenience factors, the degree of community satisfaction appears to be affected by the evaluation of housing conditions, public services, and environmental conditions. Nevertheless, social factors and convenience factors appear to provide little or no explanations about the variations and distribution of propensity to move between the two communities, and across the different groups composing their population.

The last research question (RQ 4) asks: *“How does propensity to move vary depending on residential satisfaction, and on the evaluation of convenience, social and emotional aspects?”* In first place, the results in section 5.7 largely confirm the existence of a significant relation between the propensity to move and the degree of residential satisfaction, both at the home and the community level. Namely, the propensity to leave home appears to be influenced by both the degree of home satisfaction and of community satisfaction, while the propensity to leave the community appears to be affected only by the degree of community satisfaction. Moreover, home satisfaction and community satisfaction appear to explain why the propensity to leave home is higher among people living in Nickel than among people living in Kirovsk, and among people with children than among people without. At the same time though, home and community satisfaction do not explain the variations in propensity to leave home between long-term and short-term residents, and between homeowners and renters. Furthermore, home and community satisfaction appear to provide only limited explanations about the distribution of propensity to leave the community between respondents in Kirovsk and in Nickel, and across the different individual and household categories.

Pertaining to the effect of single subjective factors, the results in section 5.7 suggest that the propensity to leave home can be significantly affected by convenience factors and, to a lower extent, by emotional and social factors. Pertaining to convenience aspects, the main predictors of the propensity to leave home are the evaluation of housing conditions, and the evaluation of local public services. Namely, convenience factors appear to explain why the propensity to leave home is higher between respondents in Nickel and among people with children, but do not explain why it is lower among long-term residents and homeowners. From an emotional point of view, the propensity to leave is majorly affected by the degree of home attachment, by the subjective evaluation of the community environment, and by the degree of identification with the community. Also in this case, emotional factors appear to explain the distribution of propensity to leave home between people living in the two communities and in relation to the presence of children, but not in relation to the length of residence and the housing tenure. Finally, all the social factors taken into account are significantly correlated with the propensity to leave home, with the exception of the variable social interaction. Specifically, social factors concur to explain why the propensity to leave home is higher among people with children and among short-term residents, but not why it varies between Kirovsk and Nickel, and between homeowners and renters.

The results in section 5.7 also show the effect of subjective factors on the propensity to leave the community. As in the case of propensity to leave home, also the propensity to leave the community appears to be majorly influenced by convenience factors, followed by social factors and emotional factors. Namely, the convenience factors which most intensely affect the propensity to leave the community are: the subjective evaluation of housing conditions; of economic and occupational conditions; and of local public services. From a social perspective, the propensity to leave the community can be majorly influenced by the subjective attitudes towards neighbors and fellow community members, and by the presence of friends and relatives living in the same community. Moreover, there is a negative correlation between the propensity to leave the community and the degree of involvement in local associations. Finally, the propensity to leave the community can be significantly influenced by the degree of identification with the community of residence, and to a lower extent, by the subjective appraisal of the physical environment, and by the degree of home attachment.

## **6.2 Discussion: propensity to move in the context of Russian Arctic communities**

As supported in the introduction and documented by our results, the employment of a subjective approach allows us to better understand the factors affecting propensity to move among the inhabitants of Russian Arctic communities. In fact, objective factors such as locational, individual and household indicators represent a necessary instrument in order to measure the extent and distribution of propensity to move; however, objective factors alone are not sufficient to explain why the propensity to move is higher in certain locations, or among certain groups. Accordingly, subjective factors can be successfully employed as a complementary instrument in order to appreciate the actual relation between propensity to move, and the objective features of the communities and populations of the Russian Arctic, as supported by several authors (e.g. Campbell & Converse, 1972; Robinson et al., 1973; Newman, 1975). Moreover, the utilization of subjective factors allow us to include considering certain factors which are generally neglected in the literature dealing with outmigration in the Russian Arctic, such as social and emotional factors, which we found to play a considerable role in influencing both the propensity to leave home and the propensity to leave the community. Taking this into account, subjective factors give us the opportunity to identify a relation of causality between the propensity to move and the subjective evaluation of single aspects ascribable to the locations investigated, also in peculiar contexts such as the one of Russian Arctic communities.

Another important outcome which emerges from our results is the strong correlation between propensity to move and the degree of residential satisfaction. As already argued, our results appear to corroborate the validity of the residential satisfaction model proposed by Speare (1974), and to justify the utilization of residential satisfaction as an intervening variable influencing propensity to move. However, the utilization of residential satisfaction as an intervening variable presents some issues. In first place, we underlined the fact that, while a majority of our respondents was willing to move, only a minority reported a low degree of satisfaction with the home and the community. To some extent, this outcome could be explained with the different role that subjective factors play in influencing the degree of residential satisfaction, and in influencing the propensity to move. In fact, the results in sections 5.2, 5.3 and 5.4 suggest that people living in Kirovsk and Nikel display a relatively high degree of emotional and social satisfaction, but a rather low degree of convenience satisfaction. Furthermore, the results in section 5.6 show that residential satisfaction can be considerably affected by emotional factors, and only secondarily, by social and convenience factors. At the same time, the results in section 5.7 show that the propensity to move is

principally influenced by convenience factors, followed by social and emotional factors. In the light of these results, and in line with the studies conducted by Round (2005) in Magadan, it appears that people living in Russian Arctic communities may indeed display a relatively high degree of social and emotional bonding with the place of residence, which increases the degree of residential satisfaction, and fosters the desire to remain. At the same time, though, the effect of social and emotional factors on the propensity to move is surpassed in intensity by the effect of convenience factors, so that many people are willing to move, notwithstanding their attachment to the place of residence, and the social bonds they have established in the community.

A second issue pertains to the fact that the variable residential satisfaction does not allow us to entirely explain the extent and distribution of propensity to move among the inhabitants of Kirovsk and Nickel. In fact, as documented in section 5.7, the propensity to move can be directly affected by diverse locational, individual and household factors, also when home and community satisfaction are included in the regression. Moreover, our results confirm that the effect of residential satisfaction on the propensity to move can be better understood by focusing on the subjective evaluation of single aspects ascribable to the location of residence, rather than on the overall evaluation of the dwelling or the community. Accordingly, the variables home satisfaction and community satisfaction appear to be somewhat redundant in respect to the other subjective factors of propensity to move taken into account. At the same time, however, the inclusion of the variable residential satisfaction can be deemed to provide an useful instrument to assess the overall effect of subjective factors on the propensity to move, and to contrast the effect of these with the one produced by locational, individual and household factors. This is especially the case when a large number of objective and subjective factors is included in the analysis.

Aside from theoretical and methodological considerations, the results obtained among the inhabitants of Kirovsk and Nickel allow us to draw some general conclusions about the extent and distribution of propensity to move among the population of Russian Arctic communities, and about the factors, both objective and subjective, which may ultimately foster outmigration in these communities. To this end, however, it is necessary to remind certain distinctions and limitations which may affect the interpretation of our results. In first place, we should be careful not to overgeneralize our results to the rest of the communities located in the Russian Arctic. In fact, as already mentioned in chapter 2, there appear to be major differences between the single regions of the Russian Arctic, not only from a historical and geographical point of view, but also in terms of social and economic development (Akopov & Gadzhiev, 2008; Rautio & Tykkyläinen, 2008). Furthermore, as we have seen in our study, the extent and distribution of propensity to move, and its relation with objective and subjective factors, can vary considerably depending on the peculiar characteristics of the communities taken into account and of their population. In addition to this, we should not forget the important distinction between propensity to move and residential mobility, as “mobility refers to whether or not a move occurred, while propensity to move refers to desires, plans, inclinations or expectations about future mobility” (Morris *et al.*, 1976:309). Consistently, when discussing about the potential relations between propensity to move and residential mobility, we should bear in mind the manifold constraints and factors which may hinder or force mobility.

The first point that we would like to remark is the fact that respondents in Nickel are significantly more desirous to leave their home and community of residence than respondents in Kirovsk. On one hand, this outcome confirms that the propensity to move can vary considerably not only between regions following different socio-economic developments (Akopov & Gadzhiev, 2007), but also between communities located in the same region. Consistently, this outcome reaffirms the difficulty of generalizing our results to the whole of the communities located in the Russian Arctic. On the other hand, this outcome suggests that the

propensity to move among the inhabitants of Russian Arctic communities can be remarkably affected by specific locational factors, such as the relative dimensions and location of the community. Namely, when comparing the results obtained in Kirovsk and in Nickel, it appears that the propensity to move is higher in those communities which are less populated and more isolated. In fact, as documented in section 5.7, people living in smaller communities can be negatively affected by the poor availability and quality of public services and of other amenities, such as cultural and recreational facilities. Furthermore, our results show that the propensity to move among the inhabitants of smaller and more isolated communities can be affected by the shortage of occupational and career opportunities available in the location of residence. In addition to this, the degree of propensity to move could also be affected by other locational factors concerning the quality of the environment. Specifically, the results in section 5.7 confirm that the widespread desire to migrate that we reported among the respondents in Nickel can be also attributed to the high levels of pollution determined by local industrial and mineral activities. Consistently with these results, we could hypothesize that the propensity to migrate may be comparatively higher in those communities located in the Russian Arctic which are affected by similar environmental issues, such as Norilsk in the Territory of Krasnoyarsk, and Monchegorsk in the same Province of Murmansk.

Another result that we would like to underline is the high percentages of people willing to migrate that we recorded in our sample, both in Kirovsk and in Nickel. Namely, we found that 57% of the respondents in Kirovsk and 82% of those in Nickel were willing to leave their community. These percentages appear therefore to be substantially higher than those reported by Vuorinen (2008) in Kirovsk and Apatity, where only 19.4% was willing to migrate elsewhere, while 34.5% did not express a preference, and 46.1% wanted to remain. To some extent, the gap between our results and the ones obtained by Vuorinen could be ascribed to the employment of different study locations, and of different sampling and measurement criteria. In fact, it is possible that people living in Apatity are sensibly less desirous to migrate than people living in Kirovsk and in Nickel. Furthermore, the study by Vuorinen is based on a sample composed by students studying in Kirovsk and Nickel and by their parents, while our sample includes also other categories. In the case of Kirovsk, however, the gap could also be ascribed to an increasing desire to leave the community between 2006 (when Vuorinen conducted the survey) and 2010 (the year of our survey). In fact, the financial crisis started in 2008 may have affected the local population in terms of employment opportunities and economic conditions, and this could ultimately represent a factor fostering the propensity to migrate, as already debated. Unfortunately, the information at our disposal does not allow us to clarify whether there was an actual increase in the propensity to leave the community among people living in Kirovsk during that period; however, this increase appears to be rather unlikely, if we consider that migration rates in Kirovsk have been rather steady in the last years (FSSS, 2011).

A second major difference between our results and those obtained by Vuorinen (2008) pertains to the distribution of propensity to move across different age groups. Namely, in the study by Vuorinen, the “willingness to migrate” is considerably higher among young people than among older people, while in our study it is vice versa. Also in this case, the difference could be influenced by the diverse methodologies, and especially, by the different study locations employed in the research. In fact, according to Vuorinen, who quotes an earlier study by Rautio (2003) in the Pechenga District, most young people living in Kirovsk are students attending local high schools or the university in Apatity, while in Nickel, a majority of young people is already employed in local activities. Accordingly, young people in Kirovsk may be willing to migrate, in order to seek for better job opportunities once they have graduated, while in Nickel they may wish to remain in order to maintain their occupational and economic positions. However, this discourse is not supported by our results, which show that younger people are less desirous to leave their community than

older people, both in Kirovsk and in Nikel. In addition to this, we found no significant difference between younger and older people in regard to the evaluation of economic and occupational opportunities.

From our perspective, the distribution of propensity to move across different age groups should be interpreted in the light of the historical and demographic development of the Province of Murmansk in the last decades. In fact, as already argued in section 5.1, a majority of the older people living in Kirovsk and in Nikel were born in other communities or in other territories of the former Soviet Union, while a majority of young people was born in the same community where they currently live. Accordingly, older people could still maintain social and affective bonds with the place of origin, which may foster the desire of returning in order to spend the retirement age among friends and relatives, as proposed in the studies by Litwak & Longino (1987) and by Palo Stoller & Longino (2001). On the contrary, young people may feel rooted in the community of residence, and this may foster the desire to remain, as suggested by Johnson *et al.* (2005) and by Chow & Healey (2008). These argumentations are corroborated by the results obtained in section 5.4 and 5.5, showing that young people living in Kirovsk and in Nikel present more numerous social bonds in the community of residence than older people, as well as a stronger degree of attachment to and identification with the place of residence. Moreover, these argumentations are supported by the results in section 5.6 and 5.7, showing that social and emotional bonds may indeed play a significant role in influencing the propensity to migrate among people living in Kirovsk and in Nikel.

According to our results, the propensity to leave the community can also vary according to the household income, and the level of education. Namely, the propensity to leave the community appears to be higher among people with higher incomes and with a higher level of education. This result is particularly interesting, as it shows that the desire to migrate is not necessarily fostered by a poor evaluation of the dwelling and of the community of residence. In fact, people with higher incomes reported not only a higher degree of satisfaction with convenience aspects, but also a more intense attachment to the place of residence. At the same time, people with a higher level of education appear to be dissatisfied with their economic and occupational conditions; however, they are comparatively more satisfied with their current housing conditions, and they reported a significantly higher score in most of the social aspects taken into account. In line with these results, the notion of residential satisfaction appears to be inadequate to explain the variations of propensity to move in relation to the household income and to the level of education that we recorded among the inhabitants of Kirovsk and Nikel. Rather, these variations may be related to the fact that people who are wealthier and more educated may present different residential aspirations, as well as less impediments and constraints, than people who are poorer and less educated. In fact, wealthier and more educated people may aspire to move to a more urbanized and central location, such as Moscow and Sankt Petersburg, possibly because of the desire to attain a higher social and economic status. Moreover, as suggested by Vuorinen (2008), the propensity to migrate among people with a lower income and with a lower level of education could be hindered by the perception of potential constraints affecting residential mobility, such as financial and bureaucratic limitations, and the difficulty of finding a new employment in another community. However, the results at our disposal do not allow us to confirm these hypotheses.

Another point emerging from our results is that, also among the inhabitants of Russian Arctic communities, the propensity to move can vary considerably according to the marital status, and to the presence of children in the household. As discussed in section 5.7, the fact that singles are significantly more desirous to leave the community than other categories could be ascribed to the fact that singles may feel less constrained by familiar ties, and thus perceive less impediments which may discourage an eventual move (Speare & Goldscheider, 1987). Also, it is possible that singles are willing to migrate in order to seek for a partner outside the community of residence; however, our results do not allow us to verify this hypothesis.



In addition to this, young couples who are interested in starting a family, and people who are divorced or widowed, could be interested in maintaining vicinity to friends and relatives living in the same community, for they may provide a source of support and collaboration (Madigan & Hogan, 1991; Schwirian & Schwirian, 1993). Still pertaining to the household background, it is interesting to notice that the presence of children is significantly correlated with the propensity to leave home, but not with the propensity to leave the community. Namely, people with children are willing to leave their home but not their community, notwithstanding a low degree of home and community satisfaction. To some extent, this outcome could be ascribed to the fact that people with children may be willing to remain in the community of residence in order not to interrupt the educational and social development of their children (Astone & McLanahan, 1994). Also, this outcome could depend on other constraints which are perceived as limiting the possibility to move, such as financial issues or lack of housing alternatives in other communities. Also in this case, however, further research is necessitated in order to test these hypotheses.

The next point that we would like to underline is the relation between propensity to move and the length of residence. Pertaining to this, our results appear to be in line with other studies based in other contexts of research (Speare, 1974; Newman, 1975; Lu, 1998; Kearns & Parkes, 2003), showing that the propensity to move is generally higher among short-term residents than among long-term residents. As suggested in previous contributions, such a difference can be ascribed to the fact that long-term residents reported a higher degree of social and emotional satisfaction than short-term residents. In fact, the results in section 5.4 show that long-term residents display more numerous friends and relatives living in the same community, as well as a higher degree of social interaction and political involvement. In addition to this, the results in section 5.5 show that long-term residents reported a higher degree of attachment to and identification with the place of residence in comparison to short-term residents. Consistently, these results appear to reiterate the opportunity of including taking into account both social and emotional aspects when investigating the factors affecting propensity to move and residential mobility among the population of Russian Arctic communities, as already suggested by Round (2005).

The last point that we would like to highlight is that the propensity to move tends to be higher among renters, and to be lower among homeowners. Namely, our results appear to confirm the outcome of other studies investigating propensity to move in relation to housing tenure (Speare, 1970; Morris *et al.*, 1976; Walker *et al.*, 2002), but in different contexts than the one of Russian Arctic communities. As already suggested in these contributions, the fact that renters are more desirous to leave their dwelling could be attributed to the aspiration of owning a home, and of improving current housing conditions. This interpretation is corroborated by our results, showing that renters are significantly less satisfied with current housing conditions, and less attached to their home in comparison to homeowners. Accordingly, also the desire to leave the community that we record among renters could be fostered by the low degree of home satisfaction, as well as to the difficulty of finding suitable housing alternatives in the same community. In fact, as already noticed in chapter 2, the outmigration of the last decades has determined a high number of vacant accommodations, both in Kirovsk and in Nikel; however, many of these appear to be in poor conditions of maintenance and need to be renovated, while others have been made inhabitable by prolonged decay and abandonment.

### **6.3 Discussion: residential satisfaction in the context of Russian Arctic communities**

As already discussed in our literature review, the notion of residential satisfaction can be employed for two different and complementary purposes (Weidemann and Anderson, 1985; Adriaanse, 2007). In first place, we have seen that the degree of residential satisfaction can provide useful information concerning the

overall effect of subjective factors on the extent and distribution of propensity to move. In addition to this, the notion of residential satisfaction can be employed to investigate how people evaluate their location of residence, and to investigate the factors affecting such evaluation. Consistently with this second purpose, we argued that the notion of residential satisfaction could offer new insights concerning the quality of living conditions among the inhabitants of Russian Arctic communities, and the relation between this and both objective and subjective factors. In accordance with these premises, we are now going to review the results obtained in our research in the light of other studies dealing with residential satisfaction and related social and emotional aspects, and in the light of previous contributions investigating living conditions among the population of Russian Arctic communities. Also in this frame of reference, we shall be aware of the difficulty to generalize our results to communities other than those investigated in our research. In addition to this, we shall remind about the essential distinction between objective living conditions, and the subjective evaluation of these, which is what the notion of residential satisfaction refers to.

Contrarily to our expectations, the inhabitants of Kirovsk and Nickel reported a relatively high degree of residential satisfaction, both at the home and at the community level. In Kirovsk, for example, 80% of our respondents are satisfied with their home, while only 6% are dissatisfied; also, 69% are satisfied with the community of residence, while only 5% are dissatisfied. In Nickel, the respondents who are satisfied with their home are about 60%, while 13% are dissatisfied; at the same time, 44% is satisfied with the community of residence, while 21% is dissatisfied. As already mentioned earlier in this chapter, the relatively high degree of satisfaction reported in the two communities can be deemed to depend on a strong emotional attachment to the dwelling and to the community of residence. This is especially the case of younger people, most of whom were born in the same community they currently live, and who display more intense social bonds in the community of residence; older people, the majority of whom were born in other regions of the former USSR, appear to be less attached to their place of residence, as well as less satisfied. Also, we already noticed that our results appear to differ considerably from those collected by Vuorinen (2008:68) in Kirovsk and in Apatity, where 29.7% of the respondents were “satisfied with life in this place” while 24.6% were not, the remaining being indifferent. As we already discussed above, the gap between our results and the ones obtained by Vuorinen should not be attributed to the different locations taken as study cases. Rather, we believe that the gap is due to the different methodologies employed to sample the population and in the measurement of residential satisfaction.

The remarkable differences between respondents in Kirovsk and in Nickel which emerge from the results in section 5.2, 5.3, 5.4 and 5.5 allow us to draw some conclusions concerning the potential effect of locational factors on the degree of residential satisfaction among the population of Russian Arctic communities. In first place, our results suggest that the degree of residential satisfaction is likely to be higher among the inhabitants of larger and more centrally-located communities, than among the inhabitants of smaller and peripheral communities. In fact, people who live in larger and more centrally-located communities are likely to enjoy better occupational and career opportunities, thanks to a greater quantity and diversification of economic activities located in the community. Moreover, people living in larger and more centrally-located communities could also enjoy a higher quantity and quality of public services and of other amenities, such as retail and recreational facilities. Furthermore, if we consider the relative isolation and atomization of the communities located in the Russian Arctic, it is likely that people living in larger and more centrally-located communities may enjoy more opportunities to establish social relationships and to interact with other community members, and to participate in social activities and associations available in the community. As already mentioned, we should nevertheless be careful to generalize the results obtained in Kirovsk and Nickel to the rest of the communities located in the Russian Arctic. In addition to this, we should be very cautious in attempting to define a causal relation between the degree of residential

satisfaction, and specific locational factors, such as the community size, its location, and the degree of urbanity (Buttel *et al.*, 1979; Rodgers, 1980; Wasserman, 1982).

The degree of residential satisfaction among the inhabitants of Kirovsk and Nikel, and especially the evaluation of economic conditions and of public services available in the community, may also be interpreted in the light of the socio-economic development of Russian Arctic regions in the last decades. Namely, the results presented in section 5.3 suggest that the local population may suffer the lack of satisfactory occupational and career opportunities, as well as the inadequacy of incomes in respect to the cost of living, as already suggested by Akopov & Gadzhiev (2008) and by Rautio & Tykkyläinen (2008). Consistently, the poor evaluation of medical and healthcare services among the inhabitants of Kirovsk, and of all types of public services among the inhabitants of Nikel, could be put in relation with the reforms carried out by the Russian government in the last two decades, directed to reduce the intervention of the state in the social welfare in favor of private investors (Cerami, 2009). However, more research is needed in order to assess what is the actual relation between the social and economic policies carried out at the regional and national level, and the actual quality of living conditions among the inhabitants of Russian Arctic communities. Also, we proposed that the poor evaluation of economic conditions may refer to the current financial crisis, which has also been affecting Russia and plausibly also the Arctic regions. Also in this case, however, we do not dispose of enough information to assess the actual effect of the current crisis on the quality of living conditions.

As already suggested by Vuorinen (2008), the degree of residential satisfaction can also be influenced by the peculiar climatic and environmental conditions affecting the communities located in the Russian Arctic. Pertaining to this, we expected that people would be dissatisfied with the conditions during winter months, in virtue of the manifold difficulties which may be caused by extremely low temperatures, hazardous weather, and prolonged periods of darkness. Nevertheless, our results show that, both in Kirovsk and in Nikel, respondents are generally satisfied with the climatic and environmental conditions experienced during winter months. On the contrary, respondents in both communities reveal a certain degree of dissatisfaction with the conditions in summer months. As it emerged during the informal interviews we have conducted in Kirovsk and in Nikel, this result could be attributed to the physiological and psychological distress caused by prolonged periods of daylight, and to the fact that, also during the summer, average temperatures are often below the 10° C. However, in the light of the information at our disposal, we are unable to explain the relatively high degree of satisfaction with winter conditions recorded in our sample.

The presence of sources of environmental pollution appears to be another important factor affecting residential satisfaction among the inhabitants of Russian Arctic communities, especially where industrial and mineral activities are located in the proximity of inhabited areas, such as Nikel. The effects of environmental pollution on the subjective evaluation of the location of residence appear to be manifold. In first place, the environmental pollution due to mineral and industrial activities can be deemed to represent a negative factor *per se*, in consideration of the negative effects it produces on the health of the local population. Furthermore, the results obtained in section 5.5 suggest that the presence of environmental pollution could negatively affect the subjective perceptions and evaluations of the community physical environment; this, in turn, can be deemed to have a negative influence on the aesthetical appraisal of the place of residence, as well as on the degree of attachment to and identification with the community and the surrounding environment (Bonaiuto *et al.*, 2003). Moreover, the pollution of the air and the waters, and the contamination of vast natural areas, can be deemed to produce undesirable effects also on the habits and routines of local inhabitants, namely by dissuading certain activities which are carried out in the nature, such as fishing, hunting, and collecting local varieties of fruits, herbs and mushrooms. Apart from

the effect of environmental pollution, the results in section 5.5 suggest that the subjective evaluation of the local environment and the contact with nature may also vary according to the attractiveness of the area surrounding the community, and on the presence of certain features, such as mountains, lakes and rivers.

As aforementioned, another outcome which we did not expect is the high degree of home satisfaction among the inhabitants of Kirovsk and in Nickel. In fact, a common trait of most communities located in the Russian Arctic is the monotonous repetition of obsolete and unattractive residential buildings, and the absence of other types of housing units. Accordingly, we expected our respondents to show a relatively low degree of housing satisfaction, both from a convenience and emotional point of view. Nevertheless, the results in section 5.3 and 5.5 suggest that people living in Kirovsk and Nickel are substantially satisfied with the quality of housing infrastructure and the space available in the dwelling, and considerably attached to the home environment. On one hand, the gap between our expectations and our results could be interpreted as if the evaluation of housing conditions were primarily influenced by the degree of emotional attachment to and identification with the home environment, and detached from the objective characteristics of the dwelling (Oswald *et al.*, 2006). On the other hand, this gap may also depend on the biases of foreign visitors, who may judge local dwellings from a different perspective than the one of local inhabitants.

The information collected in Kirovsk and Nickel suggests that, among the inhabitants of Russian Arctic communities, the degree of residential satisfaction may be influenced by diverse social factors. Specifically, the results presented in section 5.6 appear to be in line with those of other studies investigating residential satisfaction in different contexts of research, showing that the degree of satisfaction can be affected by the presence of relatives and friends living in the same community, as well as by the quality of neighborhood and community relationships, and by the degree of social interaction with other community members (Speare, 1974; Goudy, 1977; Fried, 1984; Herting & Guest, 1985; Filkins *et al.*, 2000). This outcome is further supported by the results in section 5.4, which attest the presence of positive attitudes and behaviors among neighbors and fellow community members, as well as the absence of particular elements of social tension, such as racial or religious discriminations. At the same time, though, our results show a relatively low degree of trust in neighbors, and especially in public personnel (such as policemen, doctors, and teachers) and political figures. Furthermore, both in Kirovsk and in Nickel, we reported a very low degree of involvement in local associations, as well as a certain disinterest for local politics and affairs. To some extent, these results appear to suggest that the communities located in the Russian Arctic may experience certain issues which are deemed to affect the modern Russian society at large. Namely, the low degree of involvement in local associationism and politics could be interpreted as a symptom of the weakness of the Russian civil society, which has already been discussed in several studies (Domrin, 2003; Hudson, 2003; Lemaître, 2006). In addition to this, the low degree of trust in public personnel and political figures may ultimately depend on the high rates of perceived corruption recorded in the Russian Federation (Taylor, 2006; Transparency International, 2010). However, it appears that such issues may have little or no effect on the overall evaluation of the community of residence, as documented by the results in section 5.6.

Another outcome which emerges from the results in section 5.6 is the remarkable role played by emotional factors in influencing the subjective evaluation of the community of residence. Also in this case, our results can be deemed to be in line with other studies based in different geographical contexts, showing that community satisfaction can be substantially affected by the degree of attachment to and identification with the location of residence (Fried, 1984; Bonaiuto *et al.*, 2003; Kearney, 2006; Hur & Morrow-Jones, 2008; Matsuoka & Kaplan, 2008). Moreover, our results confirm that, also in the ambit of Russian Arctic communities, the subjective evaluation of the community could be substantially affected by the aesthetical

and emotional appraisal of the physical environment, and by the possibility to carry out leisure and recreational activities in the natural areas surrounding the community (Bonaiuto et al., 1999, 2003; Brehm, 2007). Furthermore, the sense of attachment to and identification with the community of residence could also be fostered by the wide participation to collective manifestations and celebrations involving the whole community, as suggested by Low (1992). As already argued above, our results suggest that, among the inhabitants of Russian Arctic communities, emotional factors may considerably improve the subjective evaluation of the community, hence increasing the degree of community satisfaction. Accordingly, emotional factors can be deemed to counterbalance the negative effect determined by the poor evaluation of convenience aspects, such as economic conditions, public services, and environmental conditions, which explains the relatively high degree of community satisfaction that we reported among the inhabitants of Kirovsk and Nikel.

#### **6.4 Limitations of the present research and suggestions for future research**

As announced in the chapter dedicated to the methodology, the possibility of carrying out field research in Russian Arctic communities is constrained by a variety of factors, which we also experienced in the course of our survey, and which can be deemed to produce a negative impact on the validity and reliability of our results. In first place, the limited financial resources and time at our disposal, together with the prohibitive environmental conditions and the numerous bureaucratic obstacles, did not allow us to venture in most remote and isolated communities, or to include considering a higher number of study cases. As already warned in our discussions, we should thus be very prudent to generalize our results to the whole of the communities located in the Russian Arctic, especially given the lack of other contributions dealing with residential satisfaction and propensity to move in this context of research, and the consequent impossibility to propose comparisons with other communities. At the same time, however, the results obtained in our research could be employed as a term of comparison in the ambit of future research investigating the same subjects in other regions of the Russian Arctic.

Another potential source of bias which may affect our results is the sampling method adopted in our survey. In fact, the resources at our disposal did not allow us to extend our survey to a large number of respondents, so that we had to limit our sample to 100 respondents in each community. In first place, this issue reduces the possibility of including a large number of factors in the same regression, given the potential issues of reliability which may occur when the regression is conducted on a relatively small sample (Bryman, 2008). Consequently, we felt compelled to exclude certain factors from our regressions, such as the place of birth and the type of occupation, which we retained to be redundant or less important in contrast with the other factors taken into account, but which may potentially play a role in influencing propensity to move and residential satisfaction among the population of the Russian Arctic. In addition to this, the utilization of a relatively small sample compelled us to define each objective factor by means of a small number of categories, in order to have a sufficient number of respondents representing each category. However, this issue appears to cause no major consequences on the reliability of our results.

Still pertaining to the bias induced by the sampling method, we already mentioned that our initial intention was to employ a random sampling, so that the composition of our sample would resemble more closely the actual composition of the population of the communities investigated. However, this approach had to be abandoned because of the diffidence of the local position to participate in our survey, and because of the explicit warnings posed by police agents not to distribute questionnaires door to door. Because of these limitations, we decided to employ a snowball sampling, namely by recurring to the help of a number of

intermediaries, who helped us in distributing and collecting the questionnaires among the local population. Eventually, this procedure allowed us to gather a sufficient number of respondents, both in Kirovsk and in Nikel, and to maintain a certain degree of randomness across our sample. At the same time, however, this procedure did not allow us to control the ratio of respondents allocated to each category, with the consequence that some groups are overrepresented (e.g. women), while others are underrepresented (e.g. the elderly). Given the unavailability of statistical information about the actual composition of the communities investigated, it is difficult to estimate how these misrepresentations may ultimately affect our results. Namely, the overrepresentation of women in the sample could be deemed to produce only marginal effects on the reliability of our results. In fact, no salient differences were found between the two genders in regard to propensity to move and residential satisfaction. At the same time, the absence of respondents older than 65 prevents us from extending our results to this section of the population. In response to this lacuna, future research could focus on the factors affecting residential satisfaction and residential mobility among the elderly living in the Russian Arctic.

Another methodological issue that we must underline concerns the measurement that we employed in order to represent the propensity to move. Specifically, with the benefit of hindsight, we think that it would have been more suitable to define the propensity to move by means of Likert scales, rather than by means of dichotomous variables. In fact, the employment of Likert scales would allow us to assess the intensity of the desire to leave the home and the community, making it easier to recognize the effect of single factors on the propensity to move - especially in virtue of the disproportion between respondents willing to move and respondents willing to remain reported in our samples. In addition to this, our definition of propensity to move lacks of any reference to when the person is willing to move. In fact, some people may be willing to remain in the same dwelling or community for a certain period of time and then move to another location, while others may be willing to move immediately or be already involved in planning their move. As we simply asked our respondents whether they were willing to move from their home and their community if they had the chance to, we were thus unable to specify the time horizon in which the person intends to move. As demonstrated in various studies employing a longitudinal approach (Lu, 1998; De Groot *et al.*, 2007), the consideration of time variables may represent a fundamental instrumental for future research investigating the relation between propensity to move and residential mobility in the context of Russian Arctic communities.

Aside from practical and methodological issues, our results can be deemed to resent from conceptual biases determined by the selection and measurement of subjective indicators. In fact, as already noticed in the literature review, every attempt to categorize the multitude and complexity of interrelated factors affecting residential satisfaction and propensity to move is inevitably affected by the conceptual and methodological approach employed in the study, by the purposes and contexts of the research, and ultimately, by the subjective choices of the single author. The task of defining an exhaustive and reliable set of factors is especially complicated in the case of social and emotional factors, because of the intrinsic difficulty of categorizing and measuring concepts such as social relationships and emotions. Moreover, this task is obstructed by the lack of documentation about the lifestyle, habits and traditions of the population of these communities, and by the shortage of ethnographic and anthropological research on the modern inhabitants of the Province of Murmansk. Accordingly, the indicators employed to represent social and emotional satisfaction should not be treated as a definitive and exact measure of social cohesion and place attachment among the inhabitants of Kirovsk and Nikel, but merely as an instrument to assess the effect of social and emotional factors on residential satisfaction and propensity to move between different communities and across the different groups of the population. At the same time, however, we would like to recommend the necessity of further research investigating the quality of social relationships among the

inhabitants of Russian Arctic communities, especially in regard to specific aspects such as social cohesion and social capital. Moreover, more documentation is needed concerning the effect of socio-cultural filters on the subjective perceptions and evaluations of the residential environment and the community by local inhabitants, for these may radically differ from the ones that are common in the Western world.

In consideration of what has been said so far, we think that a great deal of work is still to be done in order to thoroughly appreciate the actual quality of living conditions among the inhabitants of Russian Arctic communities, and to assess the actual reasons prompting outmigration among them. In first place, there is a great need of information concerning the lifestyles and habits of the inhabitants of Russian Arctic communities, especially in regard to the degree and forms of social cohesion and social capital among the local population. Moreover, future research may replicate the current study by investigating propensity to move and residential satisfaction in other regions of the Russian Arctic, or in more remote and isolated communities, in order to assess and compare the role of single factors across different contexts of research. Also, future research dealing with outmigration in the Russian Arctic could focus on the relation between propensity to move and residential mobility, possibly by means of a longitudinal approach; however, the feasibility of this type of research in the ambit of Russian Arctic communities is uncertain, as it requires considerable time and financial resources, and it may be precluded by environmental and transportation constraints. Furthermore, as already mentioned, future research could address residential satisfaction and propensity to move among specific groups of the population (for instance, the elderly) which we were not able to include considering in our sample. Finally, future research may investigate what is the relation between certain issues affecting the Russian society (e.g. high rates of divorce and widespread alcohol abuse), and the degree of residential satisfaction, propensity to move and residential mobility among the inhabitants of Russian Arctic communities.

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## 8. INTERNET SOURCES

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# АНКЕТА



Университет г. Утрехт, Недерланды

Уважаемые жители г. Кировска

Мы благодарны Вам за то, что Вы согласились заполнить нашу анкету. Цель анкетирования – узнать о Вашем отношении к дому, семье, обществу, в котором Вы живете. Вам понадобится около 30 минут, чтобы ответить на все вопросы. Принять участие в анкетировании могут только жители г. Кировска старше 16 лет. Вся информация конфиденциальна.

СПАСИБО ЗА ВАШУ ПОМОЩЬ!

1. Пожалуйста, поставьте «X» напротив подходящего Вам ответа и/или дополните его, если это потребуется:

• ВОЗРАСТ: \_\_\_\_\_ • ПОЛ:  М  Ж

• МЕСТО РОЖДЕНИЯ:  Кировск  Другое (уточните): \_\_\_\_\_

• НАЦИОНАЛЬНОСТЬ:  Русский (-ая)  Другое (уточните): \_\_\_\_\_

• ВЕРОИСПОВЕДАНИЕ:  Атеист  Православный христианин  Другое (уточните): \_\_\_\_\_

• ПРОФЕССИЯ (на данный момент): \_\_\_\_\_

• МЕСТО РАБОТЫ (город):  Кировск  Другое (уточните): \_\_\_\_\_

• ОБРАЗОВАНИЕ:  н/о среднее  средне-специальное  высшее  
 среднее  н/о высшее  два высших и более

• СКОЛЬКО ЧЕЛОВЕК ИМЕЮТ ДОХОД В ВАШЕЙ СЕМЬЕ:  Один  Два или более

• СУММАРНЫЙ СЕМЕЙНЫЙ ДОХОД В МЕСЯЦ:  
 менее чем 10000 руб.  от 20000 до 30000 руб.  от 40000 до 50000 руб.  
 от 10000 до 20000 руб.  от 30000 до 40000 руб.  более чем 50000 руб.

• В КАКОМ ТИПЕ ЖИЛЬЯ ВЫ ПРОЖИВАЕТЕ?  
 частный дом  съемная квартира  собственная квартира  
 Другое (уточните): \_\_\_\_\_

• КАК ДОЛГО ВЫ ПРОЖИВАЕТЕ В ВАШЕМ ДОМЕ/КВАРТИРЕ? \_\_\_\_\_

• КАК ДОЛГО ВЫ ПРОЖИВАЕТЕ В г. КИРОВСКЕ? \_\_\_\_\_

• У ВАС ЕСТЬ ДАЧА?  Да  Нет

• ЕСЛИ ЕСТЬ, ТО СКОЛЬКО НЕДЕЛЬ В ГОД ВЫ ПРОВОДИТЕ НА ВАШЕЙ ДАЧЕ? \_\_\_\_\_

• СЕМЕЙНОЕ ПОЛОЖЕНИЕ:  холост/не замужем  женат/замужем  разведен/разведена  
 вдовец/вдова  гражданский брак

• С КЕМ ВЫ ПРОЖИВАЕТЕ НА ДАННЫЙ МОМЕНТ?  
 один/одна  с мужем/женой  с парнем/девушкой  
 с детьми  с другими родственниками  другое

• ЕСЛИ ВЫ ПРОЖИВАЕТЕ С ДЕТЬМИ, СКОЛЬКО У ВАС ДЕТЕЙ ТАКОГО ВОЗРАСТА?  
– младше 2 лет: \_\_\_\_\_ – от 6 до 10 лет: \_\_\_\_\_ – старше 16 лет: \_\_\_\_\_  
– от 2 до 5 лет: \_\_\_\_\_ – от 11 до 16 лет: \_\_\_\_\_

• ЕСЛИ ВЫ ПРОЖИВАЕТЕ С ДЕТЬМИ, ТО СКОЛЬКО ДЕТЕЙ ПОСЕЩАЮТ ШКОЛУ ИЛИ ДЕТСКИЙ САД В г. КИРОВСКЕ? \_\_\_\_\_

2. Пожалуйста, для данных утверждений выберите одну из позиций, которая наиболее полно соответствует Вашему мнению: 1 = абсолютно не согласен; 2 = не согласен; 3 = сомневаюсь; 4 = согласен; 5 = абсолютно согласен.

|   | 1                        | 2                        | 3                        | 4                        | 5                        |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <i>Я счастлив, что живу в своём доме</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Мне нравится дом, в котором я живу</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Я чувствую, что дом, в котором я живу, поистине мой</i>                              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Мой дом напоминает мне место, где я родился и/или вырос</i>                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Интерьер моего дома нравится мне</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Мне нравится внешний вид здания, в котором находится моя квартира</i>                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Я сам подобрал мебель для своей квартиры</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Мне нравится наводить порядок в моём доме</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Жить в моем жилье легко и комфортно для меня</i>                                     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>В моем жилье столько пространства, сколько мне необходимо</i>                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Качество постройки моего жилья оставляет желать лучшего (может из-за «старости»)</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>В моем жилье есть все необходимое</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Мне жаль, если мне придется переехать из моего дома</i>                              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| <b>ЗАПОЛНИТЕ ТОЛЬКО ЕСЛИ ВЫ ЖИВЕТЕ В СЪЁМНОМ ЖИЛЬЕ:</b>    | 1                        | 2                        | 3                        | 4                        | 5                        |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <i>Для меня является проблемой жить в арендуемом жилье</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Для меня является проблемой платить арендную плату</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| <b>ЗАПОЛНИТЕ ТОЛЬКО ЕСЛИ ВЫ ЖИВЕТЕ НЕ ОДИН:</b>  | 1                        | 2                        | 3                        | 4                        | 5                        |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <i>Мне нравится проводить время с семьей</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Между мной и членами моей семьи безупречное взаимопонимание</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Я всегда могу обратиться за помощью к членам семьи, а они - ко мне</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Я нуждаюсь в помощи и поддержке членов моей семьи, и они нуждаются во мне</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Мне легко общаться с членами моей семьи</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Это счастье, что ссоры между нами случаются редко</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Когда принимается важное решение, мое мнение имеет весомое значение и всегда учитывается членами моей семьи, также, как я всегда уважаю их мнение</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Я люблю проводить выходные с членами своей семьи</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Я провожу все важные праздники с членами моей семьи</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Я делаю подарки членам семьи в День рождения</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

3. Пожалуйста, укажите сколько времени Вы тратите на дорогу от Вашего дома до приведенных ниже мест, если идете пешком: 1 = если менее 5 минут; 2 = от 5 до 15 минут; 3 = если более 15 минут; Н/П = если указанное место не применимо к Вам.

|   | 1                        | 2                        | 3                        | Н/П                      |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| <i>Ближайший медицинский центр или поликлиника/больница</i>                                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Ближайший магазин, в котором вы обычно покупаете продукты</i>                            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Место работы или учебы</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Ближайшая школа, где учится один из ваших детей</i>                                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Ближайшее место, где Вы обычно отдыхаете (бар, боулинг, бильярд, ночной клуб и т.п.)</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

4. Пожалуйста, укажите, сколько из перечисленных ниже людей сейчас живут в г. Кировске или покинули город в последние 20 лет: 1 = несколько; 2 = очень мало; 3 = довольно много; 4 = большинство из них.

|   | 1                        | 2                        | 3                        | 4                        |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| <i>Сколько ваших друзей сейчас живут в г. Кировске?</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Сколько ваших родственников сейчас живут в г. Кировске?</i>                                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Сколько ваших друзей, которые жили в г. Кировске, покинули город за последние 20 лет?</i>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Сколько ваших родственников, которые жили в г. Кировске, покинули город за последние 20 лет?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



5. Пожалуйста, для данных утверждений выберите одну из позиций, которая наиболее полно соответствует Вашему мнению: 1 = абсолютно не согласен; 2 = не согласен; 3 = сомневаюсь; 4 = согласен; 5 = абсолютно согласен.

|   | 1                        | 2                        | 3                        | 4                        | 5                        |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <i>Я стараюсь поддерживать хорошие отношения со своими соседями</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Я могу смириться со многими действиями моих соседей</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Если я ненадолго уезжаю из своего дома, я могу оставить ключи моим соседям, чтобы они ухаживали за домом (поливали цветы, кормили и выгуливали собаку и т.п.), и это обоюдно</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Я несу ответственность за чистоту подъезда и окрестностей дома, в котором живу</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Я охотно сотрудничаю с моими соседями в улучшении состояния подъезда и окрестностей дома, в котором живу</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Я счастлив, что живу в г. Кировске</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Я горжусь тем, что я кировчанин</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Я считаю, что жить в г. Кировске очень хорошо</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Мне очень нравится панорама г. Кировска</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Мне нравится проводить время на природе в окрестностях г. Кировска</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Здания г. Кировска имеют приятный вид</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Улицы и площади г. Кировска имеют приятный вид</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>г. Кировск – чистый и аккуратный город</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>В г. Кировске достаточно зеленых насаждений и парков</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>г. Кировск напоминает мне место, где я родился и/или вырос</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Мне нравятся люди, живущие в г. Кировске</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>У меня много общего с остальными людьми, живущими в г. Кировске</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Люди, живущие в г. Кировске добрые и дружелюбные</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Я всегда в курсе событий, происходящих в г. Кировске</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Я думаю, что люди, живущие в г. Кировске, заботятся только о себе и своем благополучии</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Я чувствую, что смогу принять участие и повлиять на решения местных властей</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Я одобряю путь, выбранный администрацией г. Кировска, для решения местных проблем</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

6. Пожалуйста, выберите одну из позиций, которая наиболее точно определяет, как часто Вы принимаете участие в данных мероприятиях: 1 = никогда; 2 = как минимум один-два раза в год; 3 = как минимум один раз в несколько месяцев; 4 = один или больше раз в неделю.

|  | 1                        | 2                        | 3                        | 4                        |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| <i>Религиозные церемонии (церковные службы/мессы, посещение церкви/храма)</i>                            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Митинги и мероприятия, организовываемые религиозными организациями</i>                                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Митинги и мероприятия, организовываемые общественными и волонтерскими организациями</i>               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Митинги и мероприятия, организовываемые политическими партиями</i>                                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Митинги и мероприятия, организовываемые профессиональными союзами</i>                                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Митинги и мероприятия, организовываемые различными клубами (клуб ветеранов, клуб горняков и т.п.)</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Митинги и мероприятия, организовываемые коммунальными службами</i>                                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

7. Пожалуйста, отметьте, бывали ли у Вас разногласия в делах с Вашими соседями по следующим причинам.

|  | Да                       | Нет                      |
|--|--------------------------|--------------------------|
| <i>Он/она иного вероисповедания?</i>                     | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Он/она другой национальности?</i>                     | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Он/она придерживается иных политических взглядов?</i> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Он/она нетрадиционной сексуальной ориентации?</i>     | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Он/она намного богаче, чем Вы?</i>                    | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Он/она намного беднее, чем Вы?</i>                    | <input type="checkbox"/> | <input type="checkbox"/> |

8. Пожалуйста, выберите одну из позиций, которая наиболее точно определяет, как часто Вы совершаете указанные действия: 1 = никогда; 2 = всего несколько раз; 3 = иногда; 4 = часто; 5 = очень часто.

|   | 1                        | 2                        | 3                        | 4                        | 5                        |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Разговариваю со своими соседями   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ссорюсь со своими соседями  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Хожу в гости к своим соседям, или они приходят ко мне   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Досаждаю моим соседям своим поведением/поступками   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Помогаю соседям в небольших хозяйственных делах или они помогают мне (заем небольших денежных сумм, хозяйственных инструментов или продуктов, и т.п.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Посещаю места отдыха (бар, боулинг, бильярд, ночной клуб и т.п.)  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Посещаю культурные центры (библиотека, театр, дом культуры, выставки и т.п.) или принимаю участие в культурных мероприятиях                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Принимаю участие в спортивных соревнованиях с другими людьми  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Выезжаю на природу или пикник с другими людьми в летний период  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Хожу по магазинам с другими людьми  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Посещаю парикмахерскую или салон красоты  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Хожу на прогулки или выезжаю на экскурсии по окрестностям г. Кировска   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Занимаюсь спортом на природе в окрестностях г. Кировска   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Рыбачу или охочусь на природе, в окрестностях г. Кировска   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

9. Пожалуйста, выберите одну из позиций, которая наиболее точно определяет, как сильно вы доверяете данным людям: 1 = никогда; 2 = немного; 3 = время от времени; 4 = очень доверяю; 5 = абсолютно.

|  | 1                        | 2                        | 3                        | 4                        | 5                        |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Вашим соседям  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Вашим коллегам   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Вашим друзьям  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Местным милиционерам   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Местному общественному персоналу (учителя, доктора, офисные сотрудники и т.п.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Местным политикам  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

10. Пожалуйста, для данных утверждений выберите одну из позиций, которая наиболее полно соответствует Вашему мнению: 1 = абсолютно не согласен; 2 = не согласен; 3 = сомневаюсь; 4 = согласен; 5 = абсолютно согласен; Н/П = если данное утверждение не применимо к Вам или Вы не знаете, как ответить.

|   | 1                        | 2                        | 3                        | 4                        | 5                        | Н/П                      |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Для меня жить в г. Кировске легко и комфортно   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Я удовлетворен образованием, предлагаемым в г. Кировске   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Я чувствую себя в безопасности, прогуливаясь по улицам ночного города   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Я удовлетворен медицинским обслуживанием, предлагаемым в г. Кировске  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Я удовлетворен городским транспортом в г. Кировске  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| В г. Кировске достаточно предложений от работодателей и перспектив для карьеры  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Я удовлетворен уровнем обслуживания, предоставляемым центрами розничной торговли в г. Кировске  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| В г. Кировске я всегда могу найти все товары и продукты, в которых нуждаюсь   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| В г. Кировске цены на товары слишком высокие для меня   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Холод и длительная темнота в зимнее время года негативно сказывается на моем физическом и психическом здоровье                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Длительная продолжительность светлого времени суток в летнее время года негативно сказывается на моем физическом и психическом здоровье | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Загрязненная окружающая среда является проблемой для г. Кировска  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Я удовлетворен количеством и качеством культурных центров и событий в г. Кировске (библиотеки, музеи, дома культуры, театры и т.п.)     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| В г. Кировске сложно с инфраструктурой развлечений (бары, боулинг, кинотеатры и т.п.)   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| В г. Кировске достаточно спортивных центров (бассейн, стадион и т.п.)   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| В г. Кировске я чувствую себя «отрезанным» от остального мира   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

11. Пожалуйста, выберите одну из позиций, которая наиболее точно определяет, как часто Вы принимаете участие в данных публичных мероприятиях: 1 = никогда; 2 = всего один или несколько раз; 3 = практически постоянно/ постоянно. Также отметьте, принимаете ли Вы активное участие в их организации/подготовке.

|                                    | 1                        | 2                        | 3                        | Участвую в подготовке    |                          |
|------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                                    |                          |                          |                          | Да                       | Нет                      |
| Новогодние праздники               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| День шахтера                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Выборы в местные органы управления | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |                          |                          |

12. Пожалуйста, выберите один из вариантов и заполните графы, если требуется.

• ЕСЛИ БЫ ВАМ ПРЕДОСТАВИЛАСЬ ВОЗМОЖНОСТЬ, ВЫ БЫ СМЕНИЛИ ЖИЛЬЕ?  Да  Нет

•• ЕСЛИ ВЫ ОТВЕТИЛИ «ДА», ТО УКАЖИТЕ, ДВЕ ОСНОВНЫЕ ПРИЧИНЫ, ПОЧЕМУ ВЫ БЫ СДЕЛАЛИ ЭТО:

1. \_\_\_\_\_

2. \_\_\_\_\_

•• ЕСЛИ ВЫ ОТВЕТИЛИ «ДА», ТО УКАЖИТЕ, ДВЕ ОСНОВНЫЕ ПРИЧИНЫ, ПО КОТОРЫМ ВЫ ДО СИХ ПОР НЕ ПЕРЕЕХАЛИ:

1. \_\_\_\_\_

2. \_\_\_\_\_

• ЕСЛИ БЫ ВАМ ПРЕДОСТАВИЛАСЬ ВОЗМОЖНОСТЬ ПЕРЕЕХАТЬ, ВЫ БЫ УЕХАЛИ ИЗ Г. КИРОВСКА?  Да  Нет

•• ЕСЛИ ВЫ ОТВЕТИЛИ «ДА», ТО УКАЖИТЕ ДВЕ ОСНОВНЫЕ ПРИЧИНЫ, ПО КОТОРЫМ ВЫ БЫ ПОМЕНИЛИ МЕСТО ЖИТЕЛЬСТВА:

1. \_\_\_\_\_

2. \_\_\_\_\_

•• ЕСЛИ ЖЕ ВЫ ОТВЕТИЛИ «ДА», ТО УКАЖИТЕ ДВЕ ОСНОВНЫЕ ПРИЧИНЫ, ПО КОТОРЫМ ВЫ ДО СИХ НЕ УЕХАЛИ:

1. \_\_\_\_\_

2. \_\_\_\_\_

• НАЗОВИТЕ, ПОЖАЛУЙСТА, МАКСИМУМ ТРИ МЕСТА В САМОМ Г. КИРОВСКЕ ИЛИ В ЕГО ОКРЕСТНОСТЯХ, КОТОРЫЕ ВАМ ОСОБЕННО ПРАВЯТСЯ, ЕСЛИ ТАКИЕ МЕСТА ЕСТЬ?

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

13. Пожалуйста, выберите один из вариантов.

• СКОЛЬКО ВРЕМЕНИ В ДЕНЬ ВЫ ПРОВОДИТЕ ЗА ПРОСМОТРОМ ТЕЛЕВИЗОРА?  
 У меня нет телевизора или я его совсем не смотрю  менее 1 часа  от 1 до 3 часов  более 3 часов

• СКОЛЬКО ВРЕМЕНИ В ДЕНЬ ВЫ В СРЕДНЕМ ТРАТИТЕ НА ПОЛЬЗОВАНИЕ ИНТЕРНЕТОМ?  
 У меня нет интернета или я его совсем не использую  менее 1 часа  от 1 до 3 часов  более 3 часов

• ЕСЛИ ВЫ ИСПОЛЬЗУЕТЕ ИНТЕРНЕТ, ТО С КАКОЙ ЦЕЛЬЮ? (возможно несколько вариантов ответа)

чаты и/или телефонные звонки (ICQ, MSN, Skype, и т.п.)  электронная почта (e-mail)

общаюсь со своими друзьями (odnoklassniki, vkontakte, facebook, и т.п.)

ищу информацию (новости, культура, блоги)  для работы или учебы

для развлечения: играю в игры on-line, просматриваю сайты для совершеннолетних и т.д.

СПАСИБО ЗА ВАШЕ ТЕРПЕНИЕ И СОТРУДНИЧЕСТВО!



# QUESTIONNAIRE



University of Utrecht, the Netherlands

Dear Sir / Madam,

We are very grateful to you for compiling our questionnaire. The aim of the questionnaire is to gather information about the way in which people relate to their home, their community, and the people living in these environments. The information that you will provide will remain absolutely confidential, and will be used only for statistical purposes. The whole compilation of the questionnaire will take you approximately 20 to 30 minutes. Please compile the questionnaire ONLY if you currently live in Kirovsk and if you are older than 16 years of age.

THANK YOU VERY MUCH FOR YOUR HELP!

1. Please cross the proper alternative and fill in the blanks when required.

• AGE: \_\_\_\_\_ • GENDER:  m  f

• BIRTHPLACE:  Kirovsk  Other (specify): \_\_\_\_\_

• NATIONALITY:  Russian  Other (specify): \_\_\_\_\_

• RELIGION:  Atheist  Christian Orthodox  Other (specify): \_\_\_\_\_

• OCCUPATION: \_\_\_\_\_

• LOCATION OF EMPLOYMENT:  Kirovsk  Other (specify): \_\_\_\_\_

• EDUCATION DEGREE:  Lower than secondary  Secondary and corresponding degrees  
 Bachelor and corresponding degrees  Higher degrees

• NUMBER OF PEOPLE EARNING AN INCOME IN YOUR HOUSEHOLD:  One  Two or more

• TOTAL HOUSEHOLD INCOME PER MONTH:  
 Less than 10000 rub  10000 to 20000 rub  20000 to 30000 rub  
 30000 to 40000 rub  40000 to 50000 rub  More than 50000 rub

• IN WHAT TYPE OF DWELLING DO YOU LIVE?  
 Private house  Flat, rented from privates  Flat, private  
 Other (specify): \_\_\_\_\_

• HOW LONG HAVE YOU LIVED IN YOUR CURRENT HOME? \_\_\_\_\_

• HOW LONG HAVE YOU LIVED IN KIROVSK? \_\_\_\_\_

• DO YOU OWN A DACHA?  Yes  No

• IF YES, HOW MANY WEEKS DO YOU USUALLY SPEND THERE IN A YEAR? \_\_\_\_\_

• MARITAL STATUS:  Single  Married  Divorced  Widowed  Cohabiting

• WITH WHOM DO YOU LIVE? (Multiple answers possible)  
 Alone  Spouse  partner  Sons / Daughters  Other relatives  Other

• IF YOU LIVE WITH CHILDREN, HOW MANY OF THEM ARE IN THE FOLLOWING CLASSES OF AGE?  
 – Younger than 2 y.o.: \_\_\_\_\_ – Between 2 and 5 y.o.: \_\_\_\_\_ – Between 5 and 10 y.o.: \_\_\_\_\_  
 – Between 10 and 16 y.o.: \_\_\_\_\_ – Older than 16 y.o.: \_\_\_\_\_

• IF YOU LIVE WITH CHILDREN, HOW MANY OF THEM ATTEND SCHOOLS OR KINDERGARDENS IN KIROVSK? \_\_\_\_\_

2. For each of these statements, please cross (1) if you strongly do not agree, (2) if you do not agree, (3) if you are indifferent, (4) if you agree, (5) if you strongly agree.

|  | 1                        | 2                        | 3                        | 4                        | 5                        |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <i>I am happy to live in my home</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I like the flat or the house in which I live in</i>                             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I feel the home I live as mine</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>My home reminds me of the dwelling where I was born or where I was grown up</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>The interiors of my home have a pleasant look</i>                               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>The exteriors of the building in which I live has a pleasant look</i>           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>My home has been furnished by myself</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I like to clean and tidy up my home</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>It is easy and comfortable for me to live in my dwelling</i>                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>My dwelling is spacious enough for my needs</i>                                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>My dwelling is falling apart and is poorly maintained</i>                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>In my dwelling there are all commodities I need</i>                             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I would feel very sad if I had to move from my home</i>                         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| <b>COMPILE ONLY IF YOU LIVE IN A RENTED FLAT:</b>              | 1                        | 2                        | 3                        | 4                        | 5                        |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <i>It is a problem for me to live in a rented dwelling</i>     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>It is a problem for me to afford the rental of my house</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| <b>COMPILE ONLY IF YOU LIVE YOUR FAMILY:</b>   | 1                        | 2                        | 3                        | 4                        | 5                        |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <i>I like to spend time with my family</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Between me and my kinsmen there is understanding and respect</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>When I am in need, I can ask for help to my family, and they to me</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I need the help and the vicinity of my family, and they need mine</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>It is easy for me to communicate with my kinsmen</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>It happens only very seldom to quarrel with my kinsmen</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>When it comes to decisions, my opinion is taken into consideration by my kinsmen, and I take into consideration their opinion</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I use to go on holiday with my family</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I use to spend important celebrations with my family</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I use to make gifts to my kinsmen for their birthday</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

3. Please indicate how much walking time it takes to reach the following locations from your home. Cross (1) if less than 5 minutes; (2) if between 5 and 15 minutes; (3) if more than 15 minutes; (N.A.) if not applicable to your case.

|  | 1                        | 2                        | 3                        | N.A.                     |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| <i>The closest medical center or hospital</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>The closest retail or commercial center where you use to make purchases</i>                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>The place where you study or work</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>The closest school where one of your children study</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>The closest place that you usually frequent for recreation (e.g. bar, bowling, pool, disco, etc.)</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

4. For each of these statements, please indicate how many of these people still live in Kirovsk or have left in the last 20 years. Cross (1) if none of them, (2) if a few, (3) if a consistent part, or (4) if the most.

|   | 1                        | 2                        | 3                        | 4                        |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| <i>How many of your friends currently live in Kirovsk?</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>How many of your relatives currently live in your Kirovsk?</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>How many of your friends who lived in Kirovsk has moved to another city it in the last 20 years?</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>How many of your relatives who lived in Kirovsk has moved to another city it in the last 20 years?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

5. For each of these statements, please cross (1) if you strongly do not agree, (2) if you do not agree, (3) if you are indifferent, (4) if you agree, (5) if you strongly agree.

|   | 1                        | 2                        | 3                        | 4                        | 5                        |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <i>I care about maintain good relationships with my neighbours</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I can recognize most of my neighbours</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>If I leave home for some time, I can leave the keys to my neighbours to control and take care of my dwelling, e.g. feeding plants and dogs, and vice-versa</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I feel responsible for the quality and cleanliness of the neighbourhood in which I live in</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I am willing to cooperate with my neighbours to enhance the quality of my neighbourhood</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I am happy to live in Kirovsk</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I am proud of being a Kirovskian</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Kirovsk is a nice place where to live</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>In Kirovsk it is possible to enjoy a pleasant panorama</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I like to spend time in the nature around Kirovsk</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>In Kirovsk buildings have a pleasant look</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>In Kirovsk the streets and the squares have a pleasant look</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Kirovsk is a clean and tidy city</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>In Kirovsk there are enough green areas and parks</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Kirovsk reminds me of the place in which I was born or grown up</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I like the people living in Kirovsk</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I have many things in common with the other people living in Kirovsk</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>People in Kirovsk are kind and friendly</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I always know what is going on in Kirovsk</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I think that in Kirovsk people care only for themselves</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I feel involved in local decisions</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I agree with the way that the administration of Kirovsk treats local affairs</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

6. Please, indicate with which frequency you usually participate to these activities. Cross (1) if never, (2) at least once a year, (3) at least once a month, (4) if once or more times per week.

|  | 1                        | 2                        | 3                        | 4                        |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| <i>Religious ceremonies (e.g. masses, group preying, etc.)</i>                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Meetings and activities organized by religious associations</i>                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Meetings and activities organized by civic groups and laic voluntary associations</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Meetings and activities organized by political parties</i>                            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Meetings and activities organized by trade unions</i>                                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Meetings and activities organized by clubs (e.g. of veterans, miners, etc.)</i>       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Meetings and activities organized by the municipality</i>                             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

7. Please, indicate if you would have any problem to deal with your neighbour in the case that:

|   | Yes                      | No                       |
|---|--------------------------|--------------------------|
| <i>He or she is of a different religious orientation?</i> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>He or she is of a different nationality?</i>           | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>He or she is of a different political orientation?</i> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>He or she is a homosexual?</i>                         | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>He or she is much richer than you?</i>                 | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>He or she is much poorer than you?</i>                 | <input type="checkbox"/> | <input type="checkbox"/> |

8. For each of these statements, please indicate with which frequency you perform these activities. Cross (1) if never, (2) if few times, (3) if sometimes, (4) if often, or (5) if very often.

|   | 1                        | 2                        | 3                        | 4                        | 5                        |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <i>Have short chats with your neighbours</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Quarrel with your neighbours</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Exchange visits with your neighbours in your or their homes</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Be annoyed by the behaviour of your neighbours</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Help or be helped by your neighbours for small practicalities (e.g. borrowing tools, ingredients, small loans, etc.)</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Go to places of aggregations (e.g. bars, bowlings, pools, discos, etc.)</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Go to cultural centers (e.g. library, theater, dom culture), or participate in cultural events</i>                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Participate in sport activities with other people</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Have or picnics in the nature with other people during summertime</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Go shopping with other people</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Go to hair-dresser or beauty salons</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Have walks or trips in the nature around Kirovsk</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Practice sport activities in the nature around Kirovsk</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Fishing or hunting around Kirovsk</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

9. For each of these statements, please indicate to what extent to you trust these people. Cross (1) if not at all, (2) if a little, (3) if somehow, (4) if a lot, (5) if completely.

|  | 1                        | 2                        | 3                        | 4                        | 5                        |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <i>Your neighbours</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Your job colleagues</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Your friends</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Local policemen</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Local public personnel (e.g. teachers, doctors, office personnel, etc.)</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Local politicians</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

10. For each of these statements, please cross (1) if you strongly do not agree, (2) if you do not agree, (3) if you are indifferent, (4) if you agree, (5) if you strongly agree; (N.A.) if it is not applicable to your case or if you do not know.

|   | 1                        | 2                        | 3                        | 4                        | 5                        | N.A.                     |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <i>For me it is easy and comfortable to live in Kirovsk</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I am satisfied with the education offered in Kirovsk</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I feel safe to walk around in the streets at night</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I am satisfied with the medical and health care offered in Kirovsk</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I am satisfied with the public transportation offered in Kirovsk</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>In Kirovsk there are enough job and career opportunities</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I am satisfied with the retail services offered in Kirovsk</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>In Kirovsk I can find all the goods and products I need</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>In Kirovsk life is too expensive for my income</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>The cold and the long hours of darkness during the winter have a negative impact on my psycho-physical well-being</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>The long hours of light during the summer have a negative impact on my psycho-physical well-being</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>In Kirovsk pollution is a problem</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>I am satisfied with the quantity and quality of cultural facilities and events offered in Kirovsk (e.g. libraries, house of culture, theaters, concerts, etc.)</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>In Kirovsk there are enough occasions for recreation (e.g. bars, bowling, cinemas, etc...)</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>In Kirovsk there are enough sport centers (e.g. swimming pools, football pitches, etc.)</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>In Kirovsk I feel cut off from the rest of the world</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

11. Please, indicate with which frequency you usually participate to these public events. Cross (1) if never, (2) if few or some times, (3) if almost or every time. Also, indicate if you take an active part in their organization.

|                               | 1                        | 2                        | 3                        | Participating in organization |                          |
|-------------------------------|--------------------------|--------------------------|--------------------------|-------------------------------|--------------------------|
|                               |                          |                          |                          | Yes                           | No                       |
| <i>Novyi God celebrations</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>      | <input type="checkbox"/> |
| <i>Den' Shakhtjor</i>         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>      | <input type="checkbox"/> |
| <i>Local elections</i>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |                               |                          |

12. Please cross the proper alternative and fill in the blanks when required.

• IF YOU HAVE THE CHANCE, WOULD YOU LEAVE THE HOME WHERE YOU LIVE?  Yes  No

•• IF YOU WOULD LEAVE YOUR HOME, PLEASE STATE TWO MAIN REASONS FOR WHICH YOU WOULD LEAVE YOUR HOME.

3. \_\_\_\_\_

4. \_\_\_\_\_

•• IF YOU WOULD LEAVE YOUR HOME, PLEASE STATE TWO MAIN REASONS FOR WHICH YOU DID NOT LEAVE YOUR HOME YET.

3. \_\_\_\_\_

4. \_\_\_\_\_

• IF YOU HAVE THE CHANCE, WOULD YOU LEAVE KIROVSK?  Yes  No

•• IF YOU WOULD LEAVE KIROVSK, PLEASE STATE TWO MAIN REASONS FOR WHICH YOU WOULD LEAVE KIROVSK.

3. \_\_\_\_\_

4. \_\_\_\_\_

•• IF YOU WOULD LEAVE KIROVSK, PLEASE STATE TWO MAIN REASONS FOR WHICH YOU DID NOT LEAVE KIROVSK YET.

3. \_\_\_\_\_

4. \_\_\_\_\_

• PLEASE INDICATE MAX. THREE PLACES IN OR AROUND KIROVSK THAT YOU LIKE THE MOST, IF ARE THERE ANY.

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

13. Please cross the proper alternative.

• HOW MANY HOURS PER DAY DO YOU AVERAGELY WATCH TV?

I do not own or watch TV  less than 1  between 1 and 3  More than 3

• HOW MANY HOURS PER DAY DO YOU AVERAGELY USE INTERNET?

I do not have or use internet  less than 1  between 1 and 3  More than 3

• IF YOU USE INTERNET, FOR WHICH OF THESE PURPOSES? (Multiple answers possible)

Chat or internet phone (e.g. MSN, ICQ, Skype, etc.)  Social networking (e.g. Facebook, vKontakte, etc.)

Information (news, culture, blogs, etc.)  Recreational (gambling, gaming, adult sites, etc.)

Work or study purposes  eMail

**THE END**  
THANK YOU VERY MUCH FOR YOUR PATIENCE AND COOPERATION!