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On the road

Social aspects of commuting long distances to work

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Contents

1	Introduction	1
1.1	Aim	5
1.2	Outline	6
1.3	Definitions	6
1.4	The extent and development of commuting in Sweden	8
2	The daily commuting puzzle - a theoretical framework	11
2.1	Long-distance commuting – a mobility strategy	11
2.2	Perceived advantages and disadvantages of commuting	12
2.2.1	<i>Economic incentives and outcomes</i>	12
2.2.2	<i>Life-course phases and place attachment</i>	13
2.2.3	<i>The geographical context of infrastructure and employment opportunities</i>	13
2.3	Commuting and everyday life	14
2.3.1	<i>A time-geographic perspective</i>	14
2.3.2	<i>Quality of life</i>	15
2.3.3	<i>Balancing work life with family life</i>	16
2.3.4	<i>Female long-distance commuters</i>	18
2.3.5	<i>Division of household labour</i>	19
2.4	How to cope with challenges related to long-distance commuting?	20
3	Methods and data	22
3.1	Methodological considerations	22
3.2	Sources of data	27
4	Paper summaries	30
4.1	Paper I: The persevering commuter – Duration of long-distance commuting	30
4.2	Paper II: Till work do us part - The social fallacy of long-distance commuting	31
4.3	Paper III: Commuting behaviour in sparsely populated areas: Evidence from northern Sweden.	32
4.4	Paper IV: Preferences for commuting in sparsely populated areas. The case of Sweden	33
5	Discussion	35
6	Sammanfattning (Summary in Swedish)	41
	References	45

Appendices

Paper I: Sandow, E. and K. Westin (2010): The persevering commuter – Duration of long-distance commuting. *Transportation Research Part A*, 44, pp. 433-445.

Paper II: Sandow, E. Till work do us part. The social fallacy of long-distance commuting. *Submitted manuscript, under review.*

Paper III: Sandow, E. (2008): Commuting behaviour in sparsely populated areas: Evidence from northern Sweden. *Journal of Transport Geography*, 16 (1), pp. 14-27.

Paper IV: Sandow, E. and K. Westin (2010): Preferences for commuting in sparsely populated areas. The case of Sweden. *Journal of Transport and Land Use*. 2(3/4), pp. 87-107.

Appendix

Survey questionnaire

1 Introduction

Traveling is like gambling: it is always connected with winning and losing, and generally where it is least expected we receive, more or less than what we hoped for.

Johann Wolfgang von Goethe

This thesis is about daily commuting between the home and place of work. Individuals' prerequisites to conduct daily commuting over longer distances are particularly in focus, as well as the various social consequences such commutes might cause the commuter and his or her household. Against the background of the social and economic changes that have been brought about by the transformation from an industrial society to a service/knowledge society and the general improvements to transport systems, commuting has become increasingly important in Western societies, not least Sweden. Statistics show increasing numbers of long-distance commuters across Europe, a trend which is expected to continue (Hofmeister and Schneider, 2010; Swedish Government Official Report, 2007). According to the 2005 Eurobarometer mobility survey (Vandenbrande et al., 2006), 15 percent of EU citizens have daily commute distances of at least 60 minutes one way to work.

Commuting has become a valuable alternative to migration when households try to match work and family commitments within their time-space constraints (Green et al., 1999, Lück and Ruppenthal, 2010; van Ham, 2002). Commuting can often provide access to employment opportunities on a wider geographical labour market without forcing people to leave a familiar neighbourhood and family ties. On the other hand, commuting can also facilitate migration, such as when a person keeps his or her old job after moving to a new residential area.

Commuting has been eased by developments in transportation and in information and communication techniques (ICT), as well as the flexibilisation of working times (Green et al., 1999). If a person's daily travel distance becomes too long, weekly commuting can be an alternative strategy for matching work and social commitments. Such a mobility strategy, however, is not as frequent as daily commuting; in Sweden, only approximately one percent of the workforce commute on a weekly basis (Swedish Government Official Report, 2005) while 32 percent commute daily to another municipality than their residential municipality (Statistics Sweden, 2011a). The increased access to and use of ICT has also meant

greater opportunities for some groups to work at home, thus decreasing the need to travel to and from work on a daily basis. However, thus far teleworking has had only a marginal effect on reducing commuting and has only replaced daily commuting in smaller numbers (Helminen and Ristimäki, 2007) – in Sweden this figure is 11 percent, according to the latest National travel survey (Swedish Institute for Transport and Communications Analysis, 2007). Thus, daily commuting stands for a central part of the daily life of many workers.

Commuting has been the subject of a range of studies in several disciplines. However, it is usually discussed in terms of its implications on the economic performance of labour markets, urban space, land use and the environment, and less in terms of its social consequences on individuals and their families. To a great extent, the interest in commuting is held by economists and is related to macro-economic issues of the labour and housing markets (see for example Crampton, 1999; Renkow and Hower, 2000; van Ommeren, 2000). This strand of research is generally based on how differences in housing prices, wages and unemployment cause commuting, which acts as an equilibrating mechanism on the labour and housing markets. With their rapidly changing economies and the ongoing flexibilisation and adaptability of labour markets, many European countries are also developing policies to facilitate for and promote a mobile labour force, both occupationally and geographically. The idea is that workers can adapt to new conditions and even accept a job relatively far from their current residence, to improve the matching between vacancies and job searches and thus promote productivity and contribute to sustainable economic growth (for example the Europe 2020 strategy (EU Commission, 2011) and the Swedish national strategy for regional competitiveness, entrepreneurship and employment (Swedish Government, 2007)). Substantial efforts in research also concern how to facilitate commuting through policy measures and infrastructure investments as well the effects of such investments on economic growth and regional development (for example Forslund and Johansson, 1995; Pilegaard and Fosgerau, 2008; Venables, 2007). The individual's economical benefits and costs of commuting have also been frequently examined (So et al., 2001; van Ommeren and Rietveld, 2007).

At the same time as commuting is highlighted as an important ingredient of a well functioning and economically sustainable labour market, it remains a central aspect of the controversies regarding increases in transportation and the ambition to promote a more environmentally sustainable development (European Environment Agency, 2008; Kamal-Chaoui and Robert, 2009; OECD, 2007; Swedish Government, 2008). With the present increase in travelling, the environmental consequences of commuting are receiving increasing interest and have been the subject of

research concerning greenhouse gas emissions from private cars contributing to air pollution, high energy consumption, high costs of infrastructure and traffic congestion (Muniz and Galindo, 2005; Traversi et al., 2010; Åkerman and Höjer, 2006; Banister and Gallent, 1998). Partly for such reasons, research has also been occupied with the issue of how to reduce the dependence on commuting by car, for instance by stimulating the use of public transportation (Thøgersen, 2009) and alternative vehicle technique modes (Brady and O'Mahony, 2010). Moreover, scholars have analysed how a spatial imbalance between housing and jobs (Sultana, 2002) or policies introducing a road tax (De Borger and van Dender, 2003; Parry and Bento, 2001) influence commuting and associated congestion.

The major consequences of commuting are thus mainly explored in relation to the economic and environmental consequences on society and, to some extent, individuals. These studies pay less attention to how the people commuting have to make their everyday life function. For the individual, the commute is an activity that has to be thoroughly planned and coordinated with other daily activities. In the case of commuter households with children, one parent usually has to be on hand to take care of practicalities concerning childcare and the home (Hofmeister, 2003). It is therefore essential to know whether longer commutes fit into a household's daily activity schedule.

Like all types of spatial mobility, commuting demands time and incurs costs, both monetary and social, which are borne not only by the commuter but also by other family members. For example, in couples, the spouse with the shorter commute often does more household chores (Hjorthol, 2000). Obviously, couples' mobility strategy of commuting might not always benefit both partners equally. The way they decide on how to divide their labour, both paid and unpaid, could be expected to be gendered, but does not necessarily have to be. Historically, commuting patterns have been gendered and men have had the longest commutes (Hanson, 2010). This raises the issue of who will benefit from long-distance commuting in a dual-earner household and whether future commuting patterns will cause changes in existing gender inequalities on the labour market.

Another important social aspect of the daily lives of commuters and their household centres on relationships within the household. Commuting requires physical and mental energy, which may generate stress and reduced quality of health (Fulst, 2010; Gatersleben and Uzzel, 2007; Stutzer and Frey, 2008; Roberts et al., 2009), which in turn can spill over into family life and overall subjective well-being. However, there are studies showing that consequences of commuting do not necessarily have to be completely negative for the commuter and his or her household. Commuting can be a means to improve one's career and consequently increase earnings (So et al., 2001), and also the best option for an unemployed person who cannot or does not want to move to get a job. If commuting is an alternative to moving,

it offers the household social benefits associated with maintaining social networks and other local insider advantages that would otherwise be lost (Fisher and Malmberg, 2001). Commuting can also be the outcome of a move that satisfies the household's residential preferences (Plaut, 2006). Moreover, in dual-earner households, a lengthening of commuting distances can imply both spouses being able to have a career without one having to sacrifice theirs for the other's sake (the 'tied stayer') (Green, 1997, 2004; Haskey, 2005).

While it is reasonable to expect that the commuting experience can affect commuters' social relationships, this has rarely been explored. Most studies examine how commuting as a mobility strategy for households causes the rise of so-called commuter partnerships, in which one partner lives closer to work during the week when the daily distance becomes too long to travel on a daily basis (see for example van der Klis, 2009; van der Klis and Karsten, 2009 and van der Klis and Mulder, 2008). This raises questions concerning how relationships are affected by various social consequences of daily long-distance commuting and whether this mobility strategy can provide a more long-term solution.

Most analyses of commuting are performed within a metropolitan context (see for example Gulliano and Small, 1993; Sohn, 2005; Watts, 2009), as is research focusing on social aspects of transportation (see for example Boschmann and Kwan's literature review from 2007). Consequently, less is known about long-distance commuting in non-metropolitan and rural areas, and about the extent to which long-distance commuting is of importance for the future development of those regions. Today, many peripheral and small labour markets are facing challenges due to the structural transformation of the economy. De-population and long distances also make them unattractive to many modern service industries in need of functioning local markets (Rauhut and Edvardsson, 2009). Consequently, job-matching problems exist and, at least for some workers residing in rural areas, deficiencies in local job opportunities make long-distance commuting one of few alternatives – or sometimes the only one – to migration. Addressing the geographical context and regional differences can offer a profound understanding of the nature of commuting behaviour, which is of importance when discussing future commuting behaviour and consequences.

1.1 Aim

In times of increasing commuting, it is important to highlight that there are different prerequisites and needs for long-distance commuting among groups of women and men and in various geographical contexts. In order to understand and mitigate potential negative social effects of commuting, the conditions for being a commuter are therefore equally important to analyse as the consequences. With access to unique longitudinal data for different geographical contexts, this thesis examines the dynamics of individuals' commuting behaviour over time.

With a point of departure in contemporary growth in commuting, both in numbers and distance, *the aim of this thesis is to reveal prerequisites for and consequences of long-distance commuting in Sweden for the individual and his or her partner*. Special attention has been given to prerequisites for long-distance commuting in sparsely populated areas, and to the above-mentioned of social consequences related to long-distance commuting, in terms of gender differences in commuting patterns, earnings, and separations. Therefore, the analyses done here will not only be individually based but will also look at the consequences of commuting on couples as well as whether the consequences differ between women and men. Of course there are other types of households besides commuting couples, such as single long-distance commuters. However, the research focusing on households is delimited to commuters with partners.

In relation to this aim, the issues studied are:

- i. Factors influencing the duration of long-distance commuting; Who puts up with long-distance commuting? (Paper I)*
- ii. Social implications of long-distance commuting on households; What are the effects of long-distance commuting on family relationships in terms of divorce/separation? (Paper II)*
- iii. Commuting behaviour in a peripheral and sparsely populated context; Who commutes and how has this developed over time, and what factors influence individuals' propensity to commute longer distances? (Paper III)*
- iv. The potential for increased commuting in sparsely populated areas; What are the preferences and possibilities for commuting regarding transport modes and commuting times? (Paper IV)*

1.2 Outline

This thesis is based on four papers concerning different aspects of long-distance commuting behaviour. Together, the research outcomes from these four papers provide the basis for addressing the main research aim. This introduction section (*Chapter 1*) starts by setting the scene for the point of departure of the thesis: the extent and development of commuting in Sweden. The theoretical framework presented in *Chapter 2* frames the four articles, which are referred to as *Papers I* to *IV* in the text. In the theoretical framework, aspects of commuters' daily puzzle of coordinating and fitting long-distance commuting into their everyday life is outlined, as are various social outcomes for the individual commuter and his or her household due to long-distance commuting. *Chapter 3* presents methodological considerations about the studies and the data sources. Thereafter, the four papers are summarised in *Chapter 4*, and the major findings of these studies are discussed and some policy implications are outlined (*Chapter 5*). Finally, there is a Swedish summary of the thesis.

1.3 Definitions

Defining who is commuting and who is not, and who is short-distance or long-distance commuting, is not clear-cut. It is generally known that commuting is a common form of geographical mobility. In spite of this, no single definition of commuting exists, and it can be defined in various ways. For example, in Sweden, Finland and some other countries, the official definition of a commuter is someone who crosses an administrative border to get to work (Nivalainen, 2010; Statistics Sweden, 2010). Usually, such a definition is based on small geographical units such as municipalities, and commuting thus means working outside one's home municipality. In many mobility studies using statistics from national censuses and/or national travel surveys, a commuter is referred to as someone regularly travelling back and forth to work, thus including all journeys to work (e.g. Lyons and Chatterjee, 2008; Schwanen et al., 2004; Weber and Sultana, 2008).

When it comes to long-distance commuting, the minimum for what constitutes a long distance varies in national surveys as well as research based on these surveys; for example, 15 kilometres for Scotland (Scottish Household Survey, 2006), 45 kilometres in the Netherlands (van Ham et al., 2001), 50 kilometres in Germany and Spain (Scheiner, 2006; Garmendia et al., 2011), 50 miles (i.e. approximately 80 kilometres) in the UK (Department for Transport, 2009) and the US (Bureau of Transportation Statistics, 2001) and 100 kilometres in Sweden (Swedish Institute for Transport and Communications Analysis, 2007).

As there is no consensus on how to define commuting or how to distinguish a commute as short- or long-distance, I have made some operationalisations to be able to conduct my studies: a *commuter* is defined as a gainfully employed person commuting between work and home on a daily basis. Thus, here all journeys to work are accounted for as commutes. In *Papers I* and *II*, a person travelling a distance of at least 30 kilometres one way is said to be *long-distance commuting*. This distance is used as a proxy for commuting time and is set to be equivalent to approximately 45 minutes on average in Sweden¹. This time-distance is based on several studies (Wachs et al., 1993; van Ham, 2001; van Ommeren, 1996) showing that most people have a threshold of around 45 minutes concerning what constitutes an acceptable daily commuting time, one-way. In the research based on register data (*Papers I, II* and *III*), the commuting distance is calculated as the one-way Euclidean distance between the coordinates of home and work. Thus, it does not measure the actual distance, which is about 30 percent longer², or the commuting time.

The available register data do not permit a distinction between daily and weekly commuting (Swedish Agency For Growth Policy Analysis, 2010). The Swedish Government (2005) has estimated that 1.3 percent of all journeys to work in Sweden are non-daily commutes. This estimation is based on the assumption that journeys to work that are longer than 300 kilometres are not likely to be conducted on a daily basis. In this study, however, all commuters are regarded as daily commuters. Even though some are probably weekly commuters and/or telework from home, the number is assumed to be negligible for the general conclusions.

Nevertheless, what constitutes a long commuting distance or time varies depending on context, such as the infrastructure of the road network or the accessibility to fast and flexible modes of transport. A one-way distance of 30 kilometres between home and work may be an acceptable distance for some people in certain contexts, while the same distance is beyond what is feasible for others. For people in metropolitan areas commuting 30 kilometres is likely to take at least 45 minutes, taking into account traffic jams when travelling by car or using public transportation, and perhaps also changing modes of transport. Meanwhile, commuters outside urban areas commuting by car, along roads with less traffic, can probably travel up to 50 kilometres in 45 minutes. Therefore, the definition

¹ According to the Swedish National Travel Survey (Swedish Institute for Transport and Communications Analysis, 2007) the average travel time for a journey (work, business, school or leisure trip) was 42 minutes for 27 kilometres. Therefore, 30 Euclidean kilometres is assumed to take at least 45 minutes on average.

² The Euclidean distance is about 30 percent longer than the actual distance on the ground (Reneland, 1998). Of course, the actual distance for each commuter varies depending on context (physical infrastructure, transport mode, traffic conditions etc.). The Euclidean distance of 30 kilometres cannot be absolutely converted to actual distance, but is likely to correspond to about 35-50 kilometres on the ground.

of what constitutes a long commuting distance in sparsely populated areas is defined as 50 kilometres in *Paper IV*.

When analysing different social aspects of long-distance commuting for individuals and their households, it is of important to note that the aspects will differ depending on whether the commute is conducted daily or involves staying overnight once or several times a week (often referred to as weekly commuting). The latter case entails aspects such as extra expenditures on a second residence, longer absences from home etc., which not are discussed in this study.

1.4 The extent and development of commuting in Sweden

In Sweden the extent of commuting has increased over a long period of time. Since 1970 commuting over a municipality border has doubled (see Figure 1), and today about every third worker (32 percent) crosses a municipality border. Men commute to a higher degree than women do: 56 percent of the commuters crossing a municipality border were men. These figures correspond to 35 percent of the male workforce and 30 percent of the female workforce (Statistics Sweden, 2011a).

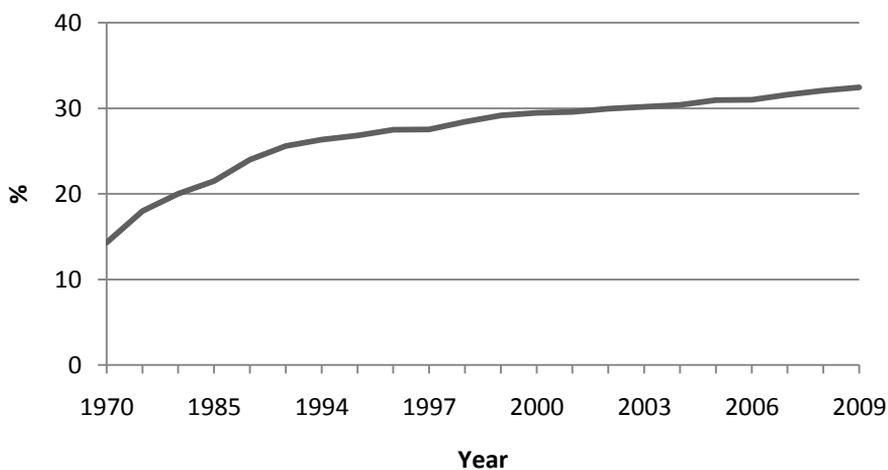


Figure 1. Share of workforce crossing a municipality border, 1970-2009; percent of number of employed persons. Source: Adapted from Statistics Sweden, 2010, and Statistics Sweden, 2011a.

The average commuting distance to work in Sweden is 16.6 kilometres, but half of the commutes are no longer than eight kilometres (Gil Solá, 2009). In general the distance between home and work, in both kilometres and time, has steadily increased over the past decades (Swedish Government Official Report, 2007). Statistics from the national travel survey show that between 1994/1995 and 2005/2006 both women and men increased their commuting distances and times (see Table 1). In fact, women and men have equal travel times (27 minutes), but men travel longer distances (19.1 kilometres, compared to 13.7 kilometres for women) due to the use of faster means of transportation. Women’s commutes are thus shorter, and their associated labour market areas smaller, than men’s (Gil Solá, 2009).

Table 1: Average commuting distances and times.

	1994/1995		2005/2006	
	Kilometres	Minutes	Kilometres	Minutes
Total	14.0	23	16.6	27
Women	11.3	23	13.7	27
Men	16.2	24	19.1	27

Source: Statistics adapted from Gil Solá, 2009, p. 69 and 72.

Women have travelled shorter distances than men for a long time. However, as the number of women in the workforce has increased, women’s overall travel patterns have begun to look more like men’s. Compared to many other countries, Sweden has a large proportion of women in the workforce, 81 percent, compared to a figure of 87 percent for men (Scholten and Jönsson, 2010). Yet, the detailed travel patterns of women still differ significantly from those of men because women have continued to be the primary caretakers of household and family obligations. For example, women make several stops and run errands on their way to work more often than men do (Friberg et al., 2009). Men commute by driving a car more often than women do, while women use public transportation more often. Moreover, women are still mainly employed in low-income occupations, which make long-distance commuting less economically worthwhile and attractive than it is for men with their normally higher-income occupations’ (Gil Solá, 2009). Moreover, many women are employed in the public-service sector, in which workplace location can allow a short commuting distance.

Women who do commute longer distances, however, are employed in the private sector to a higher extent (Statistics Sweden, 2008) and have a higher income, compared to other gainfully employed women. Long-distance commuting women and men are also often highly educated; they have

completed a university education more than the rest of the workforce has. There are fewer socio-economic gender differences among long-distance commuters compared to women and men commuting short distances. Still, it is mainly men who are long-distance commuters and who also benefit the most from it economically (*Paper I*).

The geographical structure of settlements and the localisation of employment result in different prerequisites for peoples' spatial mobility. Sweden has a low population density, except in its metropolitan areas. The average population density is 23 inhabitants per square kilometre, but there are municipalities in the North where the density is less than two inhabitants per square kilometre (Statistics Sweden, 2011b). Overall, in these sparsely populated areas the majority of the population is concentrated to a few main centres and smaller towns (*Paper III*). The number of commuters crossing a municipality border is also the least extensive in these areas. Consequently, and perhaps contradictorily, commuters in sparsely populated areas have the shortest commuting times. Most commuting in Sweden occurs around the metropolitan areas, and this is also where the commuting times are the longest (Swedish Institute for Transport and Communications Analysis, 2007).

A car is the predominant mode of transport for all commutes. In total, 61 percent of commuters travel to work by car and 14 percent by public transportation. The lowest number of car commuters can be found in the metropolitan areas, where public transportation is the most common (Swedish Institute for Transport and Communications Analysis, 2007).

Although commuting distances are increasing in Sweden, long-distance commuters, who are the focus of this study, still add up to only a minor part of all commuters; a total of 11 percent of the Swedish workforce long-distance commutes 30 kilometres or more (see Section 1.3 for a definition and *Paper I* for descriptive statistics). Nevertheless, since the beginning of the 21st century the political rhetoric and public debate have emphasised increased spatial job mobility over geographically larger labour markets. In general, long-distance commuting is considered an essential and positive ingredient for physically connecting the supply of and demand for human competence to increase Sweden's economic growth and thus strengthen the country's competitiveness in the global economy. Increased long-distance commuting is also seen as positive in the sense that it increases individuals' freedom to choose where to live and work; people do not have to move to get a job, or can choose more preferable residential areas while keeping their old job (Statistics Sweden 2010; Swedish Government Official Report, 2004, 2007). Consequently, there are expectations from society that individuals should be prepared to commute longer distances to work. These mobility expectations originate from growth-oriented political thoughts, whereby commuting is seldom seen from an individual perspective.

2 The daily commuting puzzle – a theoretical framework

2.1 Long-distance commuting – a mobility strategy

Households' choice of long-distance commuting can be understood as a job-mobility strategy to match the commitments of work and residence of all members of the household within their separate time-space constraints. As with other mobility strategies, such as commuter partnerships (dual-location households) and migration, the decision of where to live and work is influenced by commitments stemming from the individuals' geographical and social context such as residential situation, potential or actual commuting distance for each spouse, career position and the ambitions and needs of children (Hofmeister, 2005; Green, 1997, van der Klis, 2009).

Combining work, family and residence is a complicated puzzle for many households today (van der Klis, 2009). This complexity relates to societal changes such as changes in the perception of partnerships and the role of women, as well as the associated increase in dual-career households and the number of working mothers and more 'non-traditional' fathers. Working mothers are still trying to handle the multi-tasks of numerous responsibilities at home with responsibilities at work. 'Non-traditional' fathers are increasingly reprioritising work responsibilities and taking on more family responsibilities (e.g. childcare) in their daily activities (Saginak and Saginak, 2005). In addition, the geographical upscaling of the economy increases this complexity for households (Green, 1997; Meil, 2009).

As the socio-spatial organisation of modern society has adapted to developments in the means and infrastructure of transportation and communication technology, the daily network of connections and activities is stretched out geographically (Ellegård and Vilhelmsson, 2004, Urry; 2002, Vilhelmsson, 2007). The accessibility to geographically dispersed activities such as employment, service and leisure, has therefore increased and made people less constrained as regards what is nearby (Frändberg et al., 2005). These structural changes have in turn increased individuals' desires and needs to be mobile and flexible in many domains of life, especially employment (Meil, 2009). As a result, dual-earner couples are increasingly choosing long-distance commuting over migration as a mobility strategy when deciding where to live and work (Hofmeister, 2005; Green et al., 1999; Lück and Ruppenthal, 2010).

2.2 Perceived advantages and disadvantages of commuting

The process of becoming a long-distance commuter is, for the majority, structured by a set of constraints to which individuals and close social networks will have to react to. Overall, the particular circumstances under which a person becomes a long-distance commuter (free or restrained decision, support from close networks etc.) will have an influence on how the consequences will be perceived by the commuter and other household members, as well as on how/whether they can adjust to these consequences.

2.2.1 Economic incentives and outcomes

For the individual commuter, a long journey between home and work can be a means to maintain his or her professional identity, climb the career ladder and, not least, attain economic provision (Pazy et al., 1996; Vandenbrande et al., 2006). The incentives to accept longer commutes are also often greater with higher wages (Plaut, 2006; *Paper III*; So et al., 2001). Even when there are career incentives for long-distance commuting, the commuting cost may not always be compensated for by higher wages or lower house prices (Arena för tillväxt and Svenska kommunförbundet, 2003; Manning, 2003; van Ommeren and Rietveld, 2007). For example, a study of long-distance commuters in Sweden (Boverket, 2005) has shown that a large income increase is required in order to compensate for the economic costs of long-distance commuting. For dual-earner households with children in which one parent long-distance commutes and the other parent reduces his or her working hours by an equivalent amount of time, this requires the commuter's salary to be raised by more than what other spouse's income is decreased by, and even more so if tax become higher with higher income as in the Swedish progressive tax system. What is more, for the most part in Sweden, travel expenses are not carried by the employer (see for example Sandow and Westin, 2010), which also has to be taken into account when considering whether or not the economic costs of long-distance commuting are compensated for.

Commuting does not always arise due to a specific job or a promotion; it may also be due to the need to move to a cheaper residential area or a desire to move to a more attractive neighbourhood. For example, conditions on the housing market such as high housing prices or a low supply of housing can force people to re-settle from an urban context to more peripheral areas or on the outskirts of an urban one (Amcoff, 2009). Then, the decision to start commuting is perceived more negatively compared to when people willingly decide to move to a preferable neighbourhood outside an urban area (Kaufmann et al., 2001 in Widmer et al., 2010).

2.2.2 Life-course phases and place attachment

Perceived advantages and disadvantages of long-distance commuting are connected to life-course phases (e.g. the presence of young children, having a working partner, or being in a certain career phase). Understandably, long-distance commuting is less complicated when one is not in a stage of parenthood but rather in a phase in which one's commitment to family life is not as central as when managing the care of pre-schoolers or school-aged children. The time during which a parent can be on hand for the children most likely diminishes when he or she works at a long distance from home. This distance in time is not only about a physical distance but also a mental one, the importance of which cannot be disregarded. If there is an emergency at school or a child becomes ill, it is important for him or her to know that at least one parent can get there quickly (Friberg et al., 2004).

Even though family commitments increase and often become more complicated with the arrival of children, it is more common among long-distance commuting couples in Sweden to have pre-school-aged children compared to non-commuting couples (*Paper II*). In Finland, households with pre-school-aged children are also more likely to commute than to migrate (Nivalainen, 2010). Place attachment can be of great importance for these families as long-distance commuting allows local ties to be kept, which can be especially important when one has children and does not want to move them from a socially secure and familiar home environment where their friends are. Ties to the current neighbourhood (contacts with friends and relatives, home ownership, children in school etc.) are also often stronger in households with several members – in which both spouses work or there are children in the household. When both spouses work, migrating can mean that both of them have to find new jobs, which can be difficult to find in the same area. Dual-earner households are also more prone to commute than to migrate compared to single-earner households (*ibid.*). Overall, when households choose commuting over migration this can allow them to maintain social relationships while avoiding the social costs of cutting local ties by moving.

2.2.3 The geographical context of infrastructure and employment opportunities

Access to transport services as well as employment opportunities can also be very important for how the consequences of the commute are perceived. If there is good access to fast, comfortable and flexible means of transportation, people are more willing to accept a longer commuting distance (*Paper IV*). As access to public transportation is relatively poor in many rural areas, a car is the main mode of transport when commuting. But

if one does not have access to a car and has to commute by public transportation this for many means taking the bus (see for example *Paper IV*) which is perceived more negatively than car commuting. In general, commuting in an urban context often offers more options: more means of transportation to choose among and also a wider set of employment opportunities.

Besides different geographical contexts providing different prerequisites for long-distance commuting through the physical infrastructure of road networks and public transportation systems, employment opportunities also vary. For those living in economically low performing areas who have to start commuting to a larger city due to unemployment, the long-distance commute can bring about both increased employment and cultural opportunities (Nuvolati, 2007). But those in the same unemployment situation and whose nearest neighbouring labour market is as undiversified or low performing might not have the same opportunities. A study from Finland (Nivalainen, 2010) also showed that people living in more sparsely populated areas are less likely to commute over longer distances than are those living in densely populated areas. Contemporary commuting patterns in the sparsely populated northern areas of Sweden show small flows of long-distance commuting (*Paper III*). This may reflect that distances to the larger centres offering a wider set of employment opportunities for the majority are too long for a commute to be worthwhile. The benefits of achieving a job one is better qualified for and/or higher earnings might then not be experienced as worth the costs of high travel expenses and long commuting times. Daily commuting in Sweden is also the most extensive around metropolitan areas, where the variety of employment opportunities in addition are less distant and more specialised than in sparsely populated areas (Swedish Institute for Transport and Communications Analysis, 2007).

2.3 Commuting and everyday life

2.3.1 A time-geographic perspective

An essential task of everyday life is to plan and coordinate our own and our families' activities. In everyday life, most of us depend on activities performed not only by us ourselves but also by other household members, as we have projects in common (Ellegård and Cooper, 2004). From the commuter's point of view, the other members of one's household are of particular importance for the possibility to conduct a daily long-distance commute. Each day has a time budget in which to coordinate employment and domestic responsibilities and related journeys. All other activities in

daily life also have to fit into this time budget. The long-distance commute therefore becomes a defined project which frames and structures one's daily schedule for how to coordinate other projects that also require time and space. Some projects will be possible to negotiate and others will not, depending on their hierarchical level in the daily organisation. A commuter leaving home in the morning to make the train on time can hand over the morning rush to other household members. Since getting to work is restricted by departure times, it has a higher hierarchical level in the daily organisation than getting children ready for school or cleaning off the breakfast table (Scholten and Jönsson, 2010).

To be able to carry out each of the daily projects, such as a long-distance commute, there are certain prerequisites. From a time-geographic perspective, a central point is to, through a focus on resources and restrictions in a limited time-space, identify and visualise how these prerequisites are created within time-space (Friberg, 1990). Identifying the time-geographical principles under which women and men organise their daily life is of importance for understanding how long-distance commuting is perceived (Scholten and Jönsson, 2010). Friberg et al. (2009) have used time-geography diaries combined with in-depth interviews to reveal dimensions of power in everyday life. They found that long-distance commuters developed strategies to be able to combine and deal with their parental and professional roles and at the same time ensure that they had their own private time. For example, long-distance commuting women utilised their travel time to either recover and relax from work or home, or perform work-related tasks such as reading or e-mailing. Moreover, in order for these women to be able to commute, others in their household had to take on more household-related work. A time-geographic perspective can also help identify non-activities which due to the state of the time-space cannot take place and the contexts in which they occur, as well as possible situations of conflict. For example, early departure in the morning and late return home can mean not being able to take the children to school in the morning or to an activity in the afternoon (Scholten and Jönsson, 2010). Even though time-geographical analyses have not been conducted in this study, insights into how constraints in time-space set the framework for individuals' commuting behaviour and its social consequences have nevertheless been a guiding principle throughout the research.

2.3.2 Quality of life

Commuting is both physically and mentally demanding, which may generate stress and tiredness, particularly when the commuter him- or herself is doing the driving (e.g. Evans et al., 2002; Kluger, 1998). It is known that as commuting time increases the commuting burden also increases, and has an

overall negative influence on subjective life satisfaction (Fults, 2010; Stutzer and Frey, 2007). In a survey conducted in six European countries³, some of these burdens were found to be experienced more frequently among long-distance commuters; they more often experience time pressure (63 percent) and feelings of exhaustion (57 percent), and complain about too little leisure time (49 percent) compared to commuters with shorter travel times (Rüger and Ruppenthal, 2010). A Swedish study (Hansson et al., 2010) shows similar results: commuters with a commuting time of more than an hour have more trouble sleeping and experience more negative stress, mental health and well-being than do commuters with shorter commuting times.

While commuters report being more stressed than non-commuters, there are also gender differences (Olsson and Gottfridsson, 2008). Female long-distance commuters have been found to experience more stress induced by commuting than men have. This stress is also found to be a consequence of too many duties to fulfil, of which concerns for children are the most stressful (Collet and Dabuer, 2010; Roberts et al., 2009; Olsson and Gottfridsson, 2008).

Not all studies emphasise the negative aspects of long-distance commuting. Nuvolati (2007), for instance, argues that commuters in general do not have lower life satisfaction than others. Mainly, the argument is based on commuters' ability to maintain everyday social ties with their families and local communities, and exploit work-related and cultural opportunities in larger centres. In Nuvolati's study (2007) on workers in Italy commuting from medium-sized cities to larger cities it has been found that, even though commuting implies costs, the workers were socially and economically compensated with access to employment and cultural opportunities in the larger cities and maintaining their social ties. The perception of economic conditions even improves for long-distance commuters (>60 minutes one way) when different commuting times and modes are compared, and without decreasing satisfaction with social relationships. Satisfaction with leisure and health were slightly lower. Still, commuters, with both shorter and longer travel times, show as high perceptions of quality of life as do non-commuters.

2.3.3 Balancing work life with family life

Daily long-distance commuters can return home every night and be at home for the evenings and weekends, and also live as close as possible to a 'normal' family rhythm as possible (Rüger and Ruppenthal, 2010). Nevertheless, the absence of one spouse from home can make a noticeable difference in the households' everyday life. Commuting takes time, which is a scarce and finite

³ The survey was conducted in Germany, Spain, France, Poland, Switzerland and Belgium in 2007.

resource, and a major dimension of commuting. When discussing commuting behaviour one can therefore not disregard the fact that the time it takes to travel between home and work will be reflected in the everyday life of both the commuter and his or her household.

When it comes to the consequences of commuting for family life, it is essential to acknowledge women's and men's different constraints in time and space (Bergström, 2010; Hanson, 2010; Hanson and Pratt, 1995). With the increase of women in the labour force, the male breadwinner model has changed towards more equalitarian work-family arrangements (see Magnusson, 2006 for the Nordic context). Men today are expected to take on more responsibility regarding parenthood and household duties, an ideal which in modern society has become well established and for the most part also possible to implement, especially in Sweden where, for example, both parents now have equal rights to take parental leave (Bergström, 2010). However, gender expectations and structural constraints about breadwinning and parenthood still prevail. Women therefore face the double burden of retaining the main responsibility for childcare and organisation in domestic life more often than men, while also being expected to be employed (William, 2000; Bergström, 2010).

In line with these reasonings, there are studies on work-related travel (commuting and business trips) showing that it is more unproblematic for fathers to travel a great deal in work than for mothers, both practically and emotionally (Bergström 2010; Hofmeister, 2003). One explanation for this is that the norms of good parenthood differ between women and men, making it easier for fathers than mothers to combine a career and family life. It has been suggested that even equalitarian couples (with clear gender equality ambitions) make decisions that mean unexpectedly following neotraditional gender paths (Bergström, 2010; Hofmeister, 2003; van der Klis, 2009). Couples may arrange their commuting patterns to match the household's best interests, for example so they can live in a desirable neighbourhood or as a tradeoff so that one spouse can have his or her ideal job. Equalitarian couples may then arrange their commuting patterns so that when they have children the woman reduces her working hours based on the comparative advantages of the man's better career opportunities, regarding for instance earnings and occupational status (Hofmeister, 2003). Such trades-offs for having long commutes can be seen as rational breadwinning and worthwhile, but still show how couples make decisions under a set of constraints.

A recent study based on a survey in six European countries⁴ shows that when women reduce their working hours this is when there are children in the household, regardless of whether or not the male partner is a long-distance commuter. However, while women continue to work while their

⁴ The survey was conducted in Germany, Spain, France, Poland, Switzerland and Belgium in 2007.

male partner long-distance commutes, they take on an additional share of housework, mainly childcare. Among dual-earner couples without children, in which the man is also long-distance commuting, there is a more equal sharing of household-related work (Meil, 2009). While couples can seem to have an (ungendered) strategy for balancing family and work – in which the woman's career is not to be hindered by her partner's long-distance commute – gender inequalities are still reinforced if there are children in the household. The traditionalising effect of long-distance commuting on gender roles in the division of household labour thus largely seems to depend on the life stage of dual-earner couples.

2.3.4 *Female long-distance commuters*

Given the persistent structure of gender roles in society causing women to have the main responsibility for home and family as well as a lower occupational status on the labour market, the question arises as to whether such roles might change when the woman is the one with the longer commuting distance. In a study on commuters in the United States, Hofmeister (2005) argues that couples manage their commutes much like they manage other household labour. For traditional commuting couples, traditional gender roles still apply and the woman works closer to home. As the man's career is prioritised she seeks employment close to home, earns less and has a less prestigious job. For non-traditional commuting couples it depends on job status, so that either both partners have long commutes or the woman has a long commute. When the woman long-distance commutes, she also earns more than her husband and other women. In this thesis, it is found that although long-distance commuting women have a higher income development than non-commuting women, they still do not earn as much long-distance commuting men (*Paper I*).

Some Swedish studies show that women with pre-school children try to minimise their travel (Bergström, 2010; Gustafsson, 2006). They are also those who commute the least in both distance and number (*Papers III, IV*). While the majority of mothers of small children still have the traditional gendered commuting behaviour, some are long-distance commuters. According to Hofmeister (2003), this may reflect that long-distance commuting women with pre-school children have not yet adjusted their career to their family situation. On the other hand, it may reflect women living in relationships with non-traditional views on gender roles, in which the woman's long-distance commute is a strategic decision made by both partners.

2.3.5 Division of household labour

The lack of time due to long commutes causes deficiencies at home, which can lead to conflicts regarding the daily coordination and negotiation of the household's daily activities. For example, the division of household labour can be a source of conflict when one partner is long-distance commuting. Commuters, both women and men, report domestic work as a burden to a greater extent than non-commuters do (Olsson and Gottfridsson, 2008). When women long-distance commute, men are more involved in childcare and domestic duties compared to when the women do not (Olsson and Gottfridsson, 2008; Meil, 2010). In spite of this support, however, several studies have shown that the possibilities to receive support from one's partner in balancing family and work life are greater among long-distance commuting men. As a consequence, the majority of long-distance commuting women do not feel they have enough support and therefore experience lower family satisfaction and less success in their work role than do short-distance commuting women (Hofmeister, 2005; Meil, 2010; Olsson and Gottfridsson, 2008).

From an interview study with Swedish long-distance commuters living in a dual-earner relationship and having children, Jönsson and Scholten (2010) found that long-distance commuting women did not experience any constraints in being geographically away from home. They used the commute as a 'free zone', utilising commuting time for recreation and recovery time for social contacts and work. This positive attitude towards long-distance commuting was mainly due to their having support in household-related duties at home. The male long-distance commuters, on the other hand, showed more concern for how to balance their family life with their work and career, even though their female partner worked closer to home and took on more household-related work. All the female long-distance commuters stated that strategic choices were the reasons they commuted.

If couples develop a more equal strategy for dealing with sharing housework and/or childcare tasks and responsibilities, such negative consequences can supposedly be avoided. The degree of success in balancing work and family is also found to affect marital satisfaction and stability (see Saginak and Saginak, 2005 for a literature review on this topic).

2.4 How to cope with challenges related to long-distance commuting?

All forms of spatial mobility, such as long-distance commuting, require that people adjust in many ways. As all individuals are subject to varying degrees of time-space constraints in relation to mobility (Hanson and Pratt, 1995), it is more easy for some than for others to adapt their lives so that long-distance commuting, with its advantages and disadvantages, is perceived as socially sustainable.

People who are able to handle challenges caused by long-distance commuting are found to continue for longer periods of time (Rüger and Ruppenthal, 2010). According to Lück et al. (2006), there is a consensus in psychological research that people with a large set of active coping strategies find it easier to cope with challenges related to mobility. They refer to studies on commuting behaviour that have shown that commuters with active, problem-focused strategies can handle commuting challenges efficiently. One example of a coping strategy is consciously utilising commuting time for reading or listening to music, or simply for relaxation and mentally shifting between one's work and home roles. Managing to work while commuting as well as social networking through mobile information and communication technologies have also been found to derive positive utility for the commuter (Mokhtarian and Salomon, 2001; Mokhtarian et al., 2001; Ory and Mokhtarian, 2005). Several studies have found that commuters who report that they actively manage to make use of their travel time while commuting also experience the commute as less stressful, feel healthier and experience less disutility of commuting compared to those not reporting that they make use of travel time (Gottholmseder et al., 2009; Lyons and Urry; 2005; Ory and Mokhtarian, 2005). Again, not all long-distance commuters have this alternative when commuting. For example, for most long-distance commuters in sparsely populated areas (*Paper IV*) a car is more or less the only option, and opportunities to utilise commuting time to work on your laptop, sleep or read are therefore not available.

According to Lück and Schneider (2010) the duration, predictability and regularity of mobility are also relevant for its consequences on family life. This means that the more regular and foreseeable the mobility activity is, the better it can be integrated into the family and into private life. A household with children often plan their daily activities ahead, at least the same morning, so that both parents know who will take the child to after-school activities, for instance. If households have experiences of what long-distance commuting means for their organisation of family life, it is probably easier to cope with and integrate the consequences in the daily life and thereby reduce stress induced by the commute (Kluger, 1998). While there is clearly a time pressure, the disadvantages of long-distance commuting are

found to not be experienced as severe over time. When long-distance commuting has been part of everyday life for a longer period of time, long-distance commuters themselves do not experience lower subjective life satisfaction due to time pressure (Rüger and Ruppenthal, 2010). Separation rates are also lower among couples in which long-distance commuting has been part of their life for a longer period of time (*Paper II*).

3 Methods and data

3.1 Methodological considerations

When analysing commuting behaviour one cannot disregard the power relations embedded in mobility (Hanson, 2010). Some individuals are very mobile and can choose where to live and work, whereas others may not have the same freedom of choice and are therefore more constrained. The possibilities to take advantage of increased opportunities as well as the consequences of commuting longer distances are embedded in various contexts. Prerequisites for long-distance commuting are enabled or constrained in the physical geographical context through the spatial arrangement of activities and the design, efficiency and availability of transportation infrastructure, and in the social contexts through the social networks and relationships people are a part of (Hanson, 1998).

With access to detailed empirical material from register and survey data, it has been possible in this thesis to take into account and analyse some aspects of how the geographical context creates prerequisites for long-distance commuting in Sweden. Through a scrutiny of descriptive data and statistical analyses based on these data, a broad knowledge regarding commuting behaviour has been obtained. Taken as a whole, the four studies aim to add to our knowledge of how different socio-economic factors such as income and education level, age, family situation and employment sector affect women's and men's conditions to have and pursue long-distance commuting as a daily mobility strategy in contemporary Sweden. Moreover, it has also been possible to shed light on some social consequences of this mobility strategy.

Various methods for different data sets

In this thesis, various quantitative methods have been applied to different data sets. Table 2 provides a brief methodological overview of the four studies further presented in the text of this chapter. In *Paper I* the extent of long-distance commuting in Sweden as well as the long-distance commuters' characteristics were outlined using descriptive statistics. Multiple linear regression models were used to identify the effects of these different socio-economic characteristics on the duration of long-distance commuting. The effect of living in an urban area was also tested. Moreover, using a multinomial logistic regression model allowed the identification of the extent to which these socio-economic factors had an impact on women and men with different durations of long-distance commuting.

Table 2. Key methodological information regarding the papers.

Paper	I	II	III	IV
Research aim	Identify characteristics among long-distance commuters and the economic outcome for both partners in the household	Analyse how long-distance commuting affects the risk of separation among Swedish couples	Analyse commuting behaviour over time and factors influencing individuals' propensities to commute longer distances	Analyse people's willingness to commute in terms of travel time and modal choice
Statistical method(s)	Multiple linear regression models; Multinomial logistic regression model	Event history analysis with discrete-time logistic regression	Binary logistic regression models; GIS to estimate employment opportunities and residential density	Survey, descriptive statistics
Study area	Sweden	Sweden	Three sparsely populated local labour market areas consisting of several municipalities: Umeå (7), Örnsköldsvik (1) and Lycksele (1). See map in Figure 4.	
Time period of study	1995-2005	1995-2005	1991, 1996, 2001, 2003	2004
Population	All long-distance commuters living with a partner in 2000	All gainfully employed in 2000, living with a partner	All gainfully employed persons each study year	Sample of gainfully employed persons
Number of observations	~ 180,000	2.1 million	~ 66,000-81,000 depending on year	~ 1,160

When one's purpose is analysing the social consequences of long-distance commuting it must be kept in mind that there is no specific way to carry out the analysis. Which social consequences to analyse and how to perform the analysis are examples of questions one has to address. Based on the available data, this thesis focused on gender differences in commuting behaviour as well as earnings and separation/divorce. The economic outcome of long-distance commuting (increased or decreased earnings) for both the long-distance commuter and his or her partner is also a measurable effect (see *Paper I*), as is separation/divorce among couples. Event history analyses with discrete-time logistic regression were suitable for identifying when long-distance commuters were most likely (i.e. at risk) to separate, and for identifying personal and contextual characteristics that influenced the probability of separation (*Paper II*). A great advantage here was that the time-varying covariates gave precise information at different time points which could be used to predict the occurrence of a separation. This method also allows for the adequate handling of censored data, i.e. those persons not experiencing separation during the period studied, which standard econometric models like logistic regression cannot do (Mills, 2010).

With longitudinal data on an individual level, the dynamics of commuting behaviour in Sweden could be analysed. The high resolution of the data made it possible to shed light on the effect of the geographical context in sparsely populated areas on commuting. How women's and men's commuting behaviour evolved between 1991 and 2003 was analysed in *Paper III* for a sparsely populated area in northern Sweden using descriptive statistics (see map of study area in Figure 2). Through the application of binary logistic regression models on the data set it was possible to assess the effects of different socio-economic and geographical factors on women's and men's possibilities to have a long (longer than 50 kilometres) or short (shorter than 50 kilometres) commute to work. Compared to ordinary linear regression models, this method thus allows for the estimation of these factors' effects on a binary response variable, not only the assessment of the effect on having a longer distance. However, the individuals' or households' motives for long-distance commuting are not observable in register data. What we instead see in the data is the outcome of actual decisions. Therefore, to obtain information on commuters' preferences and perceptions regarding travel time and modes of transport a survey was conducted (*Paper IV*). *Papers III* and *IV* complemented each other by showing existing patterns of commuting and offering insight into factors that are important for accepting longer commuting distances and times.

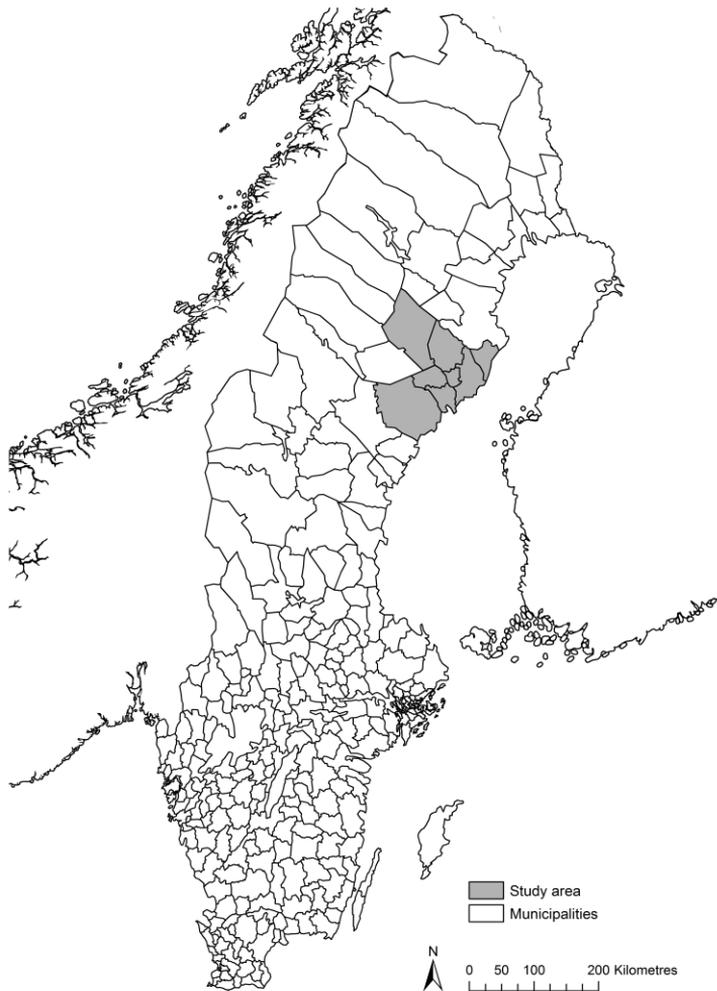


Figure 2. Study area in Papers III and IV.

The value of geo-referenced data

The data used in *Papers I, II* and *III* are both geo-referenced on a fine resolution (accurate to 100 x 100 metre) and longitudinal. This has several advantages. The geo-referenced data made it possible to calculate the Euclidean commuting distance between home and work for every individual in the data set. Moreover, the longitudinal scopes of the data allowed for the analysis of how commuting distances have changed over time for women and men in different socio-economic groups as well as the analysis of the event history described above.

As the data are geo-referenced, this also allowed actual commuting patterns (in a sparsely populated, rural area) to be visualised using a geographical information system (GIS) (*Paper III*). Using maps is an illustrative way to visualise the importance of geography (see map in Figure 3). GIS was also used to create variables representing geographical characteristics of employment opportunities in an individual's residential neighbourhood (within a five kilometres radius) as well as residential density within five and 25 kilometres. Thanks to the fine geographical resolution, detailed spatial variations could be revealed. Compared to aggregated data based on an administrative unit such as a parish or municipality, a GIS analysis takes into account employment opportunities across administrative borders within a given distance. It was also possible to consider the interaction of several factors when constructing the index of employment opportunities (gender, education level and number of others employed in same sector) without having to rely on data on administrative units.

Methodological delimitation

Individuals and households engage in geographical mobility for a range of different reasons, but this thesis concentrates on actual commuting behaviour and those who are in fact long-distance commuting. Although it is relevant to understand individuals' and couples' decision-making processes, the reason(s) why people start and/or stop long-distance commuting are excluded here. As shown by, e.g., Friberg et al. (2009) and Scholten and Jönsson (2010), interview studies with long-distance commuters can be a useful method for gaining deeper insight into subjects like the complexity behind mobility decisions, how these decisions fit into the daily life puzzle, and whether/how adjustment processes differ between socio-economic groups in society. Against the background of the results obtained in this thesis, an interview study with long-distance commuters in a sparsely populated area could provide further insight into the differences between commuting behaviour in this context compared to densely populated areas.

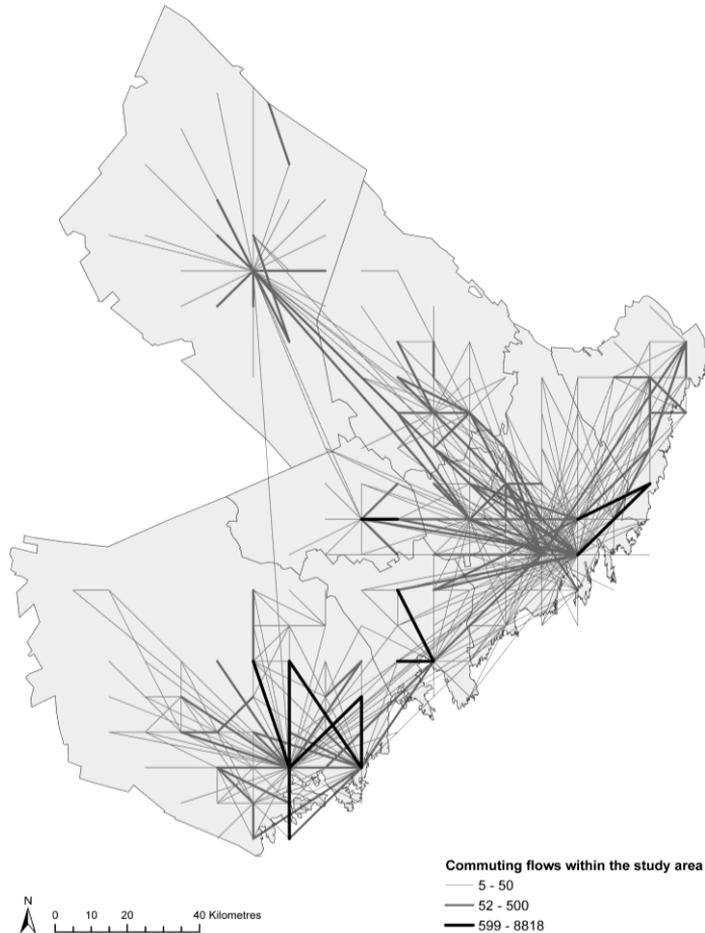


Figure 3. Commuting patterns for all individuals commuting within the study area of *Papers III* and *IV*. Figure from *Papers III* and *IV*.

3.2 Sources of data

Papers I, II and *III* are based on register data on individuals, derived from the comprehensive longitudinal database ASTRID. The data are collected by Statistics Sweden and hold annually updated information on the entire population of Sweden. The register data provide information on all Swedes' place of residence and work, income and education level, age, occupation, family status, presence of children in the household, number and age of children, and much more.

It was of utmost importance for the purpose of this thesis that the register data be geo-referenced. Geographical information in the form of coordinates on workplace and place of residence, accurate to 100 x 100 metre, is attributed to the individuals. This made it possible to get detailed information on commuting behaviour over time, with regard not only to the commuter him or herself but also to his or her partner. This was useful when analysing the economic outcome for a commuter's partner (*Paper I*) and when following couples over time (*Paper II*). However, this also meant that those lacking coordinates for place of work could not be included in the analyses. As this number was relatively small, however, this was considered negligible for the interpretation of the results. The main quality of the register data is nonetheless that they are based on all individuals rather than a sample, and hold extensive information regarding socio-economic, demographic and geographic factors.

The register data do not provide information on mode of transport or actual route to and from work. The actual Euclidean distance between work and home has therefore been chosen to distinguish people with a long commuting distance from those with a relatively short distance between home and work, as it is not the commuting distance or time *per se* that is in focus here.

Paper I was based on all Swedish long-distance commuters (travelling at least 30 kilometres to work one-way) in 2000 living with a partner. Information on these long-distance commuters was extracted from the ASTRID database for the additional years 1995 to 2005. In *Paper II* the analyses were based on all gainfully employed in 2000 living with a partner, which gave a population of about 2.1 million people. Information on these people was extracted from the database back to 1995 and up to 2005. For *Paper III* four cross-section years were used (1991, 1996, 2001 and 2003) for all commuters in a specified sparsely populated area in northern Sweden. The analyses were based on the population of workers each year ranging from about 66,000 to 81,000 people, depending on employment rate each year. There are more people at the end of the study period as this population increased over time, and the correctness of workplace coordinates in the data has become better.

The survey in *Paper IV* was conducted in northern Sweden in 2004, the same study area as in *Paper III*. A random sample of 2,500 people aged 18-65 in this area gave a response rate of 59.4 percent. The analyses are based on the 1,159 gainfully employed respondents who are also representative of the population in the study area. The survey data contribute insight into people's options and inclination in the geographical context of a more sparsely populated area. The main contribution of the survey analysis was that it provided information on acceptable commuting

times for different modes of transport and preferable modes of transport if longer commuting distances were to be accepted.

4 Paper summaries

4.1 Paper I: The persevering commuter – Duration of long-distance commuting

The trend of increasing numbers of long-distance commuters is expected to continue across Europe. While this geographical mobility is of importance for the functioning of local labour markets, its effects on the commuting individuals and their households can be both positive and negative. For example, career opportunities and higher wages are often associated with long-distance commuting. But as longer commutes reduce the time left for other daily activities, this often results in altered divisions of labour between paid and unpaid work whereby the non-commuting partner (often the woman) reduces his or her working hours and instead shoulders more household-related work. The non-commuting partner thus experiences an economic loss.

This paper's focus is on the effects of long-distance commuting on individuals and the characteristics of people who put up with long-distance commuting compared to those who do not. The paper also analyses the economic outcome of long-distance commuting for both partners in a commuter household. This was possible through the use of unique individual-level data on all Swedish long-distance commuters (30 kilometres or longer one way) living with a partner in 2000, which held information regarding commuting behaviour, demographic and socio-economic characteristics, as well as corresponding information on their spouse for the years 1995-2005.

A total of 11 percent of the Swedish workforce long-distance commutes, and about half of them live in a relationship. In this paper the socio-economic characteristics of these long-distance commuters living with their partner are outlined. Multivariate regression analyses were performed to identify effects of gender, children in the household, age, education level, income level, employment sector, residential region, previous experience of mobility and partners' commuting behaviour for the duration of the long-distance commuting.

The economic costs of long-distance commuting can be partly compensated for by a higher income. Higher income is also found to be correlated with a long duration of long-distance commuting. Men have largely been the ones who have gained the most from long-distance commuting, regarding both career opportunities and wage increase, while women's employment opportunities and income development have become more restricted. These results also indicate that this is still the situation on

the Swedish labour market and that long-distance commuting to some extent reinforces this gender imbalance on the labour market.

Today, more women and men than ever before have experience of long-distance commuting, and these people are also found to be the most likely to continue long-distance commuting for many years. Overall, the results indicate that long-distance commuting in Sweden is becoming a mobility choice for many households rather than a short-term solution. This development of increased long-distance commuting will lead to social consequences that cannot be ignored when developing policies aiming to create a sustainable transportation system for both women and men.

4.2 Paper II: Till work do us part - The social fallacy of long-distance commuting

With the increasing numbers of long-distance commuters in Sweden as well as in greater Europe, more people will face the pros and cons of long-distance commuting in their daily life. Today, a relatively high proportion of the Swedish workforce (11 percent) are long-distance commuting and the majority of these commuters continue to do so for a long period of time, five years or more (*Paper I*). But little is known about the social consequences of long-distance commuting. In a relationship in which one or both partners are long-distance commuting, there are costs that affect their daily lives. Having a lengthy commute decreases the time for other daily activities such as household-related work, socialising with family and friends, and leisure activities. Moreover, a long commute may cause stress and health problems and can also affect the commuter's subjective life satisfaction. Couples have to handle these and other social consequences of long-distance commuting in one way or another, temporarily or on a more long-term basis.

Therefore, in this article the focus goes beyond the individual commuter him- or herself and includes the commuter's partner as well. In an attempt to measure the social implications of long-distance commuting, the risk of divorcing or separating due to long-distance commuting (30 kilometres or longer one way) was analysed, using a unique longitudinal data set. In total, about 2.1 million people living in a relationship in 2000 were analysed over a ten-year period (1995 to 2005). Through the application of an event history method using discrete-time logistic regressions, it was possible to examine underlying mechanisms behind event occurrence (i.e. separation) as well as the impact of time-varying covariates on separation. Included in the analysis were variables on income and education level, residential region, age, family situation (children of different ages living at home) and employment for each year.

The results show a clear impact of long-distance commuting on relationships. Annual separation rates were higher among commuting couples than non-commuting couples. In total, separation rates were 14 percent for long-distance commuting couples, compared to 10 percent for non-commuting couples. Long-distance commuting men, however, run a higher risk of separating if the commuting is on a temporary basis. Women who long-distance commute for a period of five years or more, on the other hand, separate to a lower extent. Previous experience of commuting before moving in together, as well as a situation in which both spouses are long-distance commuting, decrease separation rates. Moreover, there are geographical differences in the long-distance commuting effect on relationships. For example, for those long-distance commuting and living in a rural area there is a high risk for both women and men that the relationship will end within five years.

How couples manage to balance work and family life when long-distance commuting thus seems to vary depending on whether it is the woman, the man or both partners doing the long-distance commuting. Furthermore, the results indicate that couples managing to handle the social consequences of long-distance commuting live a more modern lifestyle in which traditional gender roles are abandoned, and thus have other ways of balancing work and family life. Thus, these significant social consequences of long-distance commuting are important to discuss when developing policies for future transportation systems.

4.3 Paper III: Commuting behaviour in sparsely populated areas: Evidence from northern Sweden

Ensuring well functioning labour markets has become a critical issue in national policies for many European countries. In Sweden there is a political quest for stimulating labour mobility, in terms of increased commuting, between regions and between jobs, as an essential part of equalising the economic distribution between regions and increasing national economic growth. One of the prerequisites for such a development is that a greater share of the workforce than today is able to commute longer distances. However, possibilities to commute over longer distances vary in time and space, and little is known about the commuting behaviour in sparsely populated areas.

This paper outlines how the geographical structure of labour markets in sparsely populated areas as well as social-economic and demographic factors influence commuting behaviour to better understand the prerequisites for increasing long-distance commuting. With access to longitudinal register data on an individual level it has been possible to

analyse commuting behaviour over time in a sparsely populated area in Sweden. The area in focus consists of three local labour markets in northern Sweden. The study is based on all commuting trips in the area during the years 1991, 1996, 2001 and 2003, and scrutinises the commuting behaviour of all employed people of working age. As the data are geo-referenced, actual commuting distance (Euclidean distance) is used as an approximation of commuting behaviour.

It is known that women and men daily face different time-space constraints which are reflected in, for instance, their commuting behaviour. Also, in a sparsely populated context women's daily mobility is more limited than men's. The results clearly reflect a gendered labour market in which women work closer to home, mainly in the public service sector, earn less and are less likely than men to accept long-distance commuting. The family situation also impacts on the propensity to commute longer distances. Particularly small children restrict women's mobility more than men's. Those who are most prone to accept longer commuting distances are men, highly educated, with high earnings and employed in the private service sector.

Furthermore, the results clearly demonstrate the importance of the labour market's geographical structure for commuting behaviour. With long distances between the larger centres offering various employment opportunities, the majority of people work close to their residence. These small flows of long-distance commuting have also remained remarkably stable over time.

4.4 Paper IV: Preferences for commuting in sparsely populated areas. The case of Sweden

Facilitating increased job-related spatial mobility like commuting is high on the political agenda, in both the EU and Sweden. When discussing future commuting behaviour it is important, however, to consider that variations in regional labour market structures and transportation infrastructure create different time-space constraints on individuals in their daily mobility. Today there is a lack of knowledge about the possibilities and inclinations for long-distance commuting in more sparsely populated and rural areas. This study analyses what factors would encourage people to accept long-distance commuting in sparsely populated and peripheral areas in Sweden. The focus is on the valuation of travel time and transport modes and how travel time and transport modes affect a person's inclination to start commuting. A survey was used to access individuals' perceptions of commuting, valuations of and preferences for travel time, and inclination and valuation of transport

modes. The area in focus consists of three sparsely populated local labour markets in northern Sweden.

One could assume that people living in more sparsely populated areas have to travel further than those living in more densely populated areas to be able to reach work or various amenities. However, the majority of people commute within their locality. Clearly, time sets a limit for when commuting is no longer feasible or tolerable, and people living in a sparsely populated context do not accept longer commuting times than those living in more densely populated areas do. In line with international studies, this study finds that 20 minutes is the desired travel time and 40-45 minutes is the maximum. With longer travel times, the inclination to commute declines rapidly regardless of gender, transport mode and socio-economic factors. However, women's inclination to accept longer travel times was higher if walking or biking while men's inclination was higher for car commuting. Overall, this paper shows that women's and men's commuting behaviour in sparsely populated areas is similar in many aspects compared to those in densely populated areas. While commuting mainly occurs within the desired time and distance limits, women's geographical labour market is still more restricted than men's, even when controlling for a number of socio-economic factors. Those who were most mobile on these sparsely populated labour markets were men with a higher education level. Contrary to what could be expected regarding this 'Swedish commuter elite', they were not more willing to accept longer distances than were those with a lower education level.

Having access to fast and comfortable transport modes can facilitate commuting longer distances. The results also show that if people are to accept longer commuting distances it is important that the trip be fast, flexible and comfortable, and not too expensive. With the existing infrastructure, however, public transportation cannot match these preferences for the majority of commuters. Therefore, a car was the main mode of transportation when commuting and was also the preferred mode of transportation for those starting to long-distance commute. For the individual commuter, the flexibility and speed of the car makes it more socially sustainable than commuting with existing public transportation. A conclusion in this study is therefore that in order for long-distance commuting to increase in these areas it might be more economically and socially sustainable to encourage commuting by car.

5 Discussion

Commuting to work, a part of people's daily working life which cannot be changed without further ado, has to fit into the rest of their daily life. Regardless of whether it concerns parents having to make it in time to daycare or after-school or other activities, a single parent with children or older parents whose children have left home or who live in another relationship, everyday life is often rather complicated when it comes to coordinating various activities over time and space. Realising that long-distance commuting is a growing form of mobility, the issues of who these long-distance commuters are and how their daily life is affected by their choice of mobility are some of the main points that will be discussed here. Furthermore, the geographical context setting different prerequisites for long-distance commuting is discussed. Finally, some policy implications and avenues for future research are outlined.

What characterises long-distance commuters?

Today, long-distance commuting has become part of the daily life of relatively many Swedish workers and their households. What these commuters all have in common is that they have accepted travel times that the majority do not have and do not regard as an acceptable daily travel time to work (see *Paper IV*). Long-distance commuting can offer access to a wider labour market and provides possibilities for personal development in one's professional life, as well as higher incomes. But again, in order to long-distance commute certain prerequisites exist, regarding things like acquired skills or education meeting the demands on the labour market, as well as the physical infrastructure and transportation system along with its accessibility. Moreover, for some, long-distance commuting depends on the immobility of others and vice versa, as some can avoid long-distance commuting because others are willing to meet the labour market's need. For example, in families one parent can long-distance commute because the other works close to home.

The general picture is that long-distance commuters can be found among all socio-economic groups in society, but they are more common in some groups. Those with a high education level are the ones who commute the longest on the Swedish labour market (*Papers I, II*). Highly educated people can, on the one hand, realise the need to become a long-distance commuter to find an aspiring job matching their skills on the increasingly specialised labour market; on the other hand, their specialised skills often bring higher wages. It was also found that long distances to work on average bring higher economic earnings for individual commuters (*Paper I*). Another characteristic of these long-distance commuters is that they are middle-aged,

and many have children (*Papers I, II*). This indicates that long-distance commuting has become a relatively common mobility strategy among families, whose place attachments are often strong (see for example Nivalainen, 2010), allowing them to avoid family migration.

Everyday life

When deciding whether or not to start long-distance commuting, the advantages and disadvantages must be weighed against each other. As time is a scarce and finite resource, couples acting rationally could negotiate with each other with how to make the best use of their time to maximise the benefit for the household. From this perspective a long-distance commuter's overall investments (time, money, personal health and relationships) in work must be worthwhile to the individual as well as the household. In the end, the motives and particular circumstances under which workers choose long-distance commuting as a mobility strategy vary. For some the choice is quite easy while for others it is more complicated, but once they have decided on long-distance commuting they all have to adjust their daily routines.

It was found that the majority of these long-distance commuters living in a relationship pursue their mobility choice for many years, a large share for more than ten years (*Paper I*). It appears that long-distance commuting is often considered a strategic mobility choice rather than a temporary solution for a few years, at least among long-distance commuting couples. Whether long-distance commuters in a single-headed household are as persevering in their mobility decision has not been studied, however. The results in *Paper I* also point to the importance of experience of long-distance commuting, as those once starting to long-distance commute are likely to continue. With experiences of what long-distance commuting means for the organisation of one's daily life, it is probably easier to cope with and integrate the consequences into one's family and private life. This suggests a customisation process (Rüger and Ruppenthal, 2010) whereby those who have long-distance commuted for a longer time manage to adjust their lifestyle and develop coping strategies to handle the time pressure and other burdens. A selection process could then explain those who lack the ability to handle these consequences and therefore back out of long-distance commuting or do not choose this mobility form in the first place.

The findings may also reveal that not all couples can sustain their relationship while being long-distance commuters. Through event history analyses it has been possible to confirm that long-distance commuting does increase the risk that couples will separate compared to those with a short distance to work (*Paper II*). That this risk is lower among the persevering commuters provides further support for the customisation process. On the other hand, the data do not allow causal explanation or reveal why these

people chose long-distance commuting in the first place. The fact that the first years of long-distance commuting seem to be the most challenging for a relationship may reflect a selection process. It might be that the couples separating relatively soon after choosing this mobility strategy would have divorced anyway.

Long-distance commuting and gender relations

The results clearly show that the prerequisites for long-distance commuting are not equal for women and men. Presently, long-distance commuting in Sweden can be described as a male phenomenon. The situation on the Swedish labour market today is that it is mainly men who (can) take advantage of the career possibilities long-distance commuting can bring (*Papers I, III*). Men represent the majority of long-distance commuters and are also those who gain the most from it economically. While the causes of gender differences in commuting behaviour reflect structural features, such as the Swedish gender-segregated labour market offering different positions for women and men (see for example Bergman, 2004) and gender role expectations within family life (see Magnusson, 2006), these differences may remain or be reproduced by long-distance commuting based on these patterns. In this sense, men's long-distance commuting has a traditionalising effect on existing gender differences at home and on the labour market.

Yet, the findings also reflect a development of an increased spatial mobility on the labour market among women. Women's commuting distances have increased over time. Those (few in comparison to the number of men) women who actually long-distance commute, and especially those who continue commuting, have better income development and separate to a lower extent than do other working women (*Papers I, II*). These women have most likely developed good coping strategies for managing their mobile life and get support from their spouse. They can also be said to reflect a more modern lifestyle in which traditional gender roles within the household, with the man as the household breadwinner, are abandoned (indicating a so-called equalitarian couple). In sum these results, together with findings from other studies (Bergström, 2010; Hofmeister, 2005; Meil, 2010), show that greater job mobility among women can foster more equalitarian conditions within households and on the labour market. What still must be emphasised is that this mobility of women comes at a high cost; they still feel more time pressure and experience more stress than men do, and are less successful when long-distance commuting (Hofmeister, 2005; Meil, 2010; Olsson and Gottfridsson, 2008). Moreover, as women still rely on public transportation far more than men do when commuting this probably does not ease this experienced stress or time pressure. Even in sparsely populated areas where the access to a car is higher than elsewhere in Sweden for both women and

men, these gender differences remain (*Papers III, IV*). Thus, these findings indicate that structures in society have not yet begun to accommodate these pathbreaking women.

Geographic conditions

Today, peripheral areas are struggling with low levels of economic growth for different reasons, and the importance of having spatial mobility on the labour market is more important than ever for the business life there and hence for the municipality. Through the longitudinal individual data in this thesis it has been possible to examine commuting behaviour in a sparsely populated area and its dynamics over time, and identify factors of importance for people living in this geographical context to accept longer commutes. It has been found that the extent of long-distance commuting is low in sparsely populated areas. The results clearly show the importance of commuting time and that those living in sparsely populated areas do not accept longer commuting times than those living in densely populated areas do. This reflects the importance of a labour market's geographical structure in shaping commuting behaviour (*Paper III*). Most people work and live within the same locality and the long distances between the local centres representing the locus of employment can mean too-high costs, both economically and socially, in daily life, and the burden of long-distance commuting might then not be compensated for even by a higher salary. In order to increase long-distance commuting in these regions it is therefore important that the labour force have access to a transportation system allowing fast, flexible and comfortable modes of transport. As it is today in many of the more sparsely populated areas, a car is the most likely mode of transport and for many is the only option if they are starting to commute longer distances (*Paper IV*). While a further increase in commuting based on the car as the main mode of transport risks jeopardising environmental goals, we have to consider that what is sustainable for the individual may not be sustainable for society. For the individual, the flexibility of car commuting is probably more socially sustainable than long-distance commuting with existing public transportation. Perhaps society must accept higher car dependency and aim for social sustainability at the price of the environment if dynamic labour markets are to be achieved in all parts of the country.

The general picture has shown that, even in sparsely populated areas, long-distance commuting is clearly not an option for everyone. The labour market for women is geographically smaller than that for men in general as well as in a sparsely populated context; women commute shorter distances than men regardless of employment sector, education and income level, or whether or not children are present in the household (*Papers III and IV*).

This means that gender differences on the labour market will be maintained if future commuting behaviour is based on present behaviour.

Policy implications

Policy-making faces challenges as increased long-distance commuting can undermine efforts to achieve (other) key goals. The risks are especially significant with respect to gender equality and social equity in the transport system. If the importance of enhancing occupational labour mobility is to continue to be prioritised on the political agenda, the social sustainability of such policies must be further analysed. Society's responsibility for providing equal means for increased long-distance commuting should also include a responsibility for not only the benefits but also the costs for commuting individuals and their families.

Various forms of support can facilitate and make it easier to adapt to long-distance commuting. It has been shown that if employers offer flexibility in working conditions, such as allowing travel time to be included in work time, this can contribute to increased job satisfaction (Meil et al., 2010). Politicians can design different measures to minimise the negative effects of long-distance commuting, for example by expanding fast and affordable transportation systems.

In sparsely populated areas, facilitating long-distance commuting through improvements to the physical infrastructure may to some extent help reduce constraints imposed by long commutes and thereby make it more attractive than migration. Due to the higher car dependency in sparsely populated areas, support for commuting longer distances by car may be necessary if society wishes to improve the accessibility of geographically larger labour markets. When developing future regional development policies regarding geographical mobility, it is therefore important to acknowledge how the social as well as geographical contexts enable and constrain long-distance commuting.

The schism between society's desires for a highly mobile workforce and the goal of sustainable development may never be completely compatible. The analysis of commuting has to be done within various contexts, both geographical and social, while bearing in mind that the concept of sustainable commuting does not necessarily have to be a contradiction in terms (Banister and Gallent, 1998). This thesis, however, has contributed through an understanding of the nature of commuting in areas outside an urban context and the preferences of those who commute as well as some social consequences.

Future outlook

The finding that many long-distance commuters are so persevering and continue commuting for many years lends further support to the suggestion in the literature about how most people who are mobile develop some kind of strategy to make the mobility acceptable (see for example Limmer and Rüger, 2008). What coping strategies these couples have developed to handle daily life and the challenges long-distance commuting can present cannot be answered by register data, and is something that an interview study could offer an understanding of.

A focal point in this research has been on commuters living in a relationship and the social and economic implications of long-distance commuting on this relationship. The majority of these couples are families with children. While these families may have chosen this mobility strategy as a way to avoid migration, no matter its advantages the children can be expected to be as affected by long-distance commuting as the spouses of long-distance commuters are. This has still not been studied; thus the social aspects of long-distance commuting on children in commuter households should be addressed in future research.

6 Sammanfattning (Summary in Swedish)

Denna avhandling tar sin utgångspunkt i arbetspendling och den ökande andelen långväga resor till arbetet och *syftar till att analysera förutsättningar för och konsekvenser av långpendling i Sverige för pendlaren och dennes partner*. Särskilt uppmärksammas förutsättningar för långpendling i mer glesbefolkade områden och några sociala konsekvenser av långpendling; könsskillnader i pendlingsmönster, inkomster och skilsmässor/separationer.

Valet att långpendla kan ses som en rörlighetsstrategi för att matcha arbete och boende i det postindustriella samhället. Med arbetsmarknadens specialisering ökar komplexiteten att få arbete på bostadsorten. Med fler hushåll med två förvärsarbetare, där båda ofta har hög utbildning, ökar svårigheterna att båda ska få jobb på bostadsorten. Långpendling för en eller båda i ett hushåll kan då erbjuda karriärmöjligheter utan att behöva flytta. Valet att långpendla kan också vara ett resultat av en flytt från områden med höga bostadspriser till ett billigare mer önskvärt och attraktivt boende. Oavsett orsak till långpendling varierar förutsättningarna för att långpendla och även konsekvenserna och möjligheterna att hantera dessa. För många erbjuder långpendling ekonomiska och karriärmässiga fördelar men innebär också att pendlaren på grund av längre restider får mindre tid för familj och vänner, löper större risk att drabbas av stress och andra hälsorisker, och relationsproblem.

I denna avhandling definieras långpendlare som de som har minst 30 kilometer enkel väg (fågelvägen) mellan bostad och arbetsplats. Det är ett avstånd som för flertalet motsvarar 45 minuters restid men varierar något beroende på geografisk kontext och färdmedel. Genom att analysera registerdata på individnivå har alla gifta/sammanboende långpendlare i Sverige år 2000 och deras partner följs över tid (1995-2005) i två studier (*Paper I, II*). Registerdata har även används för analyserna av pendling i ett glesbefolkat område (*Paper III*). En enkätundersökning i glesbygd har genomförts (*Paper IV*) för att belysa preferenser och uppfattning av olika färdmedel och restider vid pendling.

Avhandlingen visar att förutsättningarna för att långpendla och de sociala konsekvenserna av denna rörlighetsstrategi varierar mellan grupper av kvinnor och män och deras hushåll. År 2000 var det 11 procent av den svenska arbetskraften som långpendlade och mer än hälften av dem hade en partner. Dessa långpendlare med partner återfinns inom olika yrkessektorer på arbetsmarknaden. Långpendlare arbetar oftare inom den privata sektorn jämfört med övriga förvärsarbetanden. De flesta långpendlare med partner är män (69 procent). Högutbildade är överrepresenterade bland

långpendlarna i förhållande till övriga förvärvsarbete. För alla kan pendling erbjuda en möjlighet att hitta ett stimulerande jobb som matchar dennes kompetens, vilket ofta också leder till högre lön, och för högutbildade kan detta vara mer av en nödvändighet för att få ett jobb på den alltmer specialiserade arbetsmarknaden. Resultaten visar att långpendlingen ger en inkomstökning för både kvinnor och män, dessutom har männen de högsta inkomsterna. Den långpendlandes partner får däremot en lägre inkomst, och mest minskar kvinnors inkomst när deras partner långpendlar.

Avhandlingens resultat pekar på att det finns könsskillnader i långpendlingen. Det är främst männen som får tillgång till de geografiskt större arbetsmarknaderna och därmed karriärmässigt och ekonomiskt gynnas av långpendling. Långpendling minskar tiden med familjen och den som inte långpendlar i ett hushåll får därför ofta ta ett ökat ansvar för hem och familj. Detta innebär att när mannen långpendlar tar kvinnan ofta ett ökat ansvar för hem och familj och går ner i arbetstid eller tar ett mer lågavlönat arbete närmare hemmet. Långpendlingen riskerar därmed att bevara eller förstärka könsskillnader i hemmet och på arbetsmarknaden.

Kvinnors ökade rörlighet på arbetsmarknaden kan däremot leda till mer jämställda förhållanden på arbetsmarknaden och i hemmet. För de (få) långpendlande kvinnorna innebär långpendlingen nya karriärvägar och högre lön och de som fortsätter att långpendla har lägre risk att separera än övriga arbetande kvinnor. Denna ökade rörlighet har dock en social kostnad; resultat från andra studier visar att de långpendlande kvinnorna upplever mer stress och tidspress på grund av pendlingen än de långpendlande männen. Detta visar på att rådande strukturer och normer i samhället med vad som förväntas av kvinnor i hemmet och på arbetet ännu inte är anpassade till kvinnors ökade rörlighet på arbetsmarknaden.

En stor andel av långpendlarna är i åldern 34-44 och har barn i skolåldern. Det är till och med en högre andel hushåll med småbarn (0-6 år) bland långpendlarna än bland övriga förvärvsarbetare. Detta kan ses som att platsförankring är viktigt i familjers rörlighetsstrategier, där långpendling kan vara ett alternativ till flyttning. Konsekvenserna av att allt fler barn växer upp med en eller båda föräldrar som dagligen långpendlar är dock ännu outforskade och kräver mer uppmärksamhet i framtiden.

Att pendla tar tid och kostar pengar. Men för de som väl har börjat långpendla är sannolikheten stor att de fortsätter med det. Långpendling förefaller inte alltid vara temporär; mer än hälften har långpendlat i minst 5 år och många i 10 år eller mer. Dessa resultat kan tyda på en anpassningseffekt där de som långpendlat några år fått erfarenheter av vad långpendlingen innebär för hushållets vardag och därmed lättare kan skapa strategier för att hantera långpendlingens konsekvenser i familjelivet. Det kan också spegla en selektionsprocess där långpendling för majoriteten är ett noga genomtänkt strategiskt beslut medan de som inte klarar av de negativa

konsekvenserna av långpendling slutar pendla eller inte börjar långpendla alls.

Det är dock inte för alla hushåll som långpendling förblir en långsiktig rörlighetsstrategi. Risken för skilsmässa är högre för långpendlare än för icke-långpendlare. Det är också de första åren i pendlingen som är de mest kritiska för förhållandets varaktighet. Att bo i glesbygd ökar dessutom denna risk mer jämfört med att bo i en storstad. Å ena sidan kan det vara så att de hushåll som separerar efter några år i långpendling inte klarat av att skapa strategier för att få långpendlingen att fungera i det vardagliga livet och att pendlingens sociala kostnader därmed blir för stora. Det kan å andra sidan också visa på en selektionseffekt, att de redan när pendlingen började inte levde i ett väl fungerande förhållande.

Långpendlingen i mer glesbefolkade områden är mindre omfattande än i och omkring storstadsområden. I likhet med övriga Sverige är det främst männen som långpendlar. Avhandlingen visar att restiden är avgörande för viljan att långpendla och att de boende i glesbygd inte är mer villiga att pendla långt till arbetet jämfört med boende i storstadsområden. En förklaring är att i mer glesbefolkade områden bor de flesta på samma ort där de arbetar och att långa avstånd mellan orter, som erbjuder en större mängd varierande arbetstillfällen, innebär för höga kostnader för att långpendling ska vara lönsam. Även den fysiska infrastrukturen och transportsystemet påverkar möjligheterna till att dagligen pendla längre sträckor. I mer glesbefolkade områden är det inte samhällsekonomiskt möjligt att upprätthålla en kollektivtrafik som motsvarar alla de förväntningar och krav som potentiella långpendlare kräver; att resan ska vara flexibel, snabb och bekväm. För boende i mer glesbefolkade områden finns ofta inget annat alternativ till bil. Bilen dominerar därför som transportmedel vid pendling, också i högre grad jämfört med övriga landet, och är det troligaste färdmedelsvalet vid framtida långpendling. Att underlätta pendling i glesare områden genom t ex vägförbättringar och ökad kollektivtrafik, kan öka möjligheterna att fler väljer att långpendla istället för att flytta och även minska de negativt upplevda konsekvenserna av pendling.

Mot bakgrund av regionförstoringsdebatten i Sverige är det viktigt att inte endast belysa de ekonomiska fördelarna utan även de sociala konsekvenserna av ökad långpendling. Om samhällets ansvar är (som det framgår av den svenska transportpolitikens mål) att erbjuda alla lika möjligheter till att långpendla genom ett tillgängligt transportsystem med god kvalitet och användbarhet bör det finnas ett ansvar för de sociala kostnaderna av denna långväga pendling. Genom att uppmärksamma hur sociala och geografiska förhållanden möjliggör och försvårar långpendling kan potentiella negativa effekter minimeras. För boende i glesbygd kan det t ex vara mer socialt hållbart att pendla med bil än kollektivt så länge kollektivtrafiken inte uppfattas som ett rimligt färdmedelsalternativ. Det

kanske därför är nödvändigt att ibland låta den sociala hållbarheten gå före den miljömässiga och ekonomiska för att få till stånd regional utveckling.

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