RURAL DEMOGRAPHIC CHANGE OVER SPACE AND TIME – THE CASE OF VILHELMINA MUNICIPALITY

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1 Abstract

Since the 1960s the literature on demography of rural northern Sweden has focussed on ‘decline’ – noting loss of population, population ageing, youth outmigration and other ‘negative’ demographic developments (Friedlander, 1969; Hjort, 2009; Stone, 1971); recent studies suggest that such generalizations may overlook the diversity of experiences of rural areas (D. Carson and Koch, 2013; Cernic-Maly, Koch, and Koch, 2014; Hedlund, 2014; Hoggart and Paniagua, 2001; Koch and Carson, 2012). The purpose of this thesis is to explore aspects of the diversity of experiences of demographic change in one part of rural northern Sweden, focusing on differences between villages and towns within a single municipality.

Theoretically, the large body of scientific studies of ‘rural’ tend to be at macro-scale and from the ‘urban’ perspective, which might provide generalized and biased assumptions of ‘rural’; this study may contribute to the understanding of ‘rural’ by describing it ‘how it really is’ and by looking into demographic diversity and change at the micro-scale. Practically, the thesis might assist local planners to take ‘place-based’ decisions when planning for the future of rural areas when deciding where to place schools, health centres, youth activities centres, playgrounds, or invest in economic opportunities, etc. Moreover, this thesis should answer the following research questions:

Q1: Is there diversity in demographic characteristics when comparing proximate locations in the Swedish rural setting?

Q2: If there is, is it something that has recently emerged, or something that has been present for a long period of history?

The thesis studied the case of Vilhelmina municipality, in this case defined by local government boundaries, in three stages: first, looked at how settlement patterns within the area have changed over time – where has there been population growth? Decline? Both? Neither? – using data from 1890, 1970 and 2015. Second, selected five individual locations (defined by ‘village’ borders) within the area that have featured at those points in time, and compared them in terms of age, sex, age dependency ratios, and child-woman rates. Third, accessed secondary historical data and interviewed key informants with knowledge of these places to check which events could have influenced shaping them over the time.

The findings of the thesis were: ‘fragmented’ development over time, differences between individual places at different time; differences between different places at the same time; local, regional, national and international events and trends are likely to have played a role in these results. According to the findings, I can conclude that even since the 1960s, not all locations in rural northern Sweden have had the same experience of ‘decline’. Furthermore, not all places share the presumed characteristics of rural areas – i.e. some are younger and some are older, etc. Hence, even the same events influence proximate places in different ways depending on their specific location (e.g. near geographical feature that become more or less valued), their connections with other places (through economic activities, communications, family ties, etc), rules and regulations especially regarding land use, and availability of infrastructure.

This thesis describes the demographics of a case in rural northern Sweden in the micro perspective related to temporal and spatial scales. This study provides empirical evidence and might support arguments about the importance of scale and diversity of rural conditions. Moreover, it emphasises, as Koch and Carson (2012) did, the need to understand the spatial scale at which assessments of rural demographic change are being made. Lastly, more academics should perform this genre of research, so that we move past incomplete messages and concepts about rural development that have dominated in northern Sweden since the 1960s.

Key words: rural, population assessment, demographic change, diversity, settlement, micro-scale, municipality, village, time and space, evolution, and historical events, and fragmented development.
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3 Introduction

3.1 Background

Demographic and population change studies set grounds to a number of theories that affected policies all over the world, such as the ‘life table’ of John Graunt that was used by mathematicians to develop insurance mathematics. Another example is Thomas Malthus’ exponential growth that had a great effect on food production. In the last decades, politicians have strived to find solutions to complex challenges in rural areas with help of demographic studies such as efficiency of land use (World Bank, 2009:15), labour market (World Bank, 2009:5), agriculture (Tocco, Davidova, and Bailey, 2012), population migration (Barkley, 1990), business economics (Zheng and Ejermo, 2015), ecological environments (Tsolakis and Anthopoulos, 2015), and rural challenges (Breustedt and Glauben, 2007), among other actual issues.

The Swedish Government and the European Union have started many policy programmes that aim to tackle the ‘decline’ of the rural areas aiming at enhancing the longevity of the rural areas chiefly concerned about the ageing of the population, rural gender issues, and the heavy migration rural-urban trends (Barkley, 1990; Breustedt and Glauben, 2007; Wirth, 1938). As a result of these efforts, programmes such as the European Union’s CAP (Common Agricultural Policy) were put in practice, but were heavily criticized by scholars partly due to its high costs, but mostly because of their limited effectiveness (Tocco et al., 2012). The bottom line was specified by scholars that claim that there is an apparent need to look at rural challenges from different scales but certainly from scales that shed light on the local populations that these policies are meant to assist (D. Carson and Koch, 2013; Cernic-Maly et al., 2014; Koch and Carson, 2012). Kreager (2015:31) in his research on population historical thinking, argues that “human numbers were critical to the state and its constituent groups… populations built not merely via relative accumulation, but, as we would now say, via networks that form and sustain ties that make for effective action”.

The need to understand the spatial scale at which assessments of rural demographic change are being made is hereby reinforced, because despite the fact that the world becomes more and more integrated, the global also contains local variety, and localities are constantly responding to changes (Knox and Marston, 2004).

Although vastly used for policy making and for the planning of urban milieus (Wirth, 1938), detailed demographic distribution and population composition research is seldom found in the rural perspective (D. Carson and Koch, 2013; Koch and Carson, 2012). In the last decades, planning scholars and development practitioners looked forward to framing and theorizing solutions to the rural problems (OECD, 1994, 2006; World Bank, 2009). At the same time that scholars argue that most of the current planning in rural areas are erroneously based on the supposition that the locations within the rural context have high homogeneity (D. Carson and Koch, 2013; D. Carson, Rasmussen, Ensign, Huskey, and Taylor, 2011).

In the last decades, politicians have strived to find solutions to complex challenges in rural areas throughout the developed world (Taylor, 2010). In the Swedish perspective, the Swedish statistical bureau has a rich variety of information in terms of statistics and population, but it does not provide a break down of the data into ‘villages’ (Swedish Statistical Central Bureau, 2015). Rosling (2013), a Swedish researcher, argues against the assumptions that demographic information are common knowledge and proposes that in order to avoid erroneous assumptions about demographics, one has to study and measure demographic variables based on actual facts. But demographic studies has limitations, among others, the truncated view of the history of
places or the lack of the temporal scale (Kreager, 2015). Accentuated by the need of reliable data used for the specific study.

3.2 Aim and research questions

The purpose of this thesis is to describe the demographic change in rural northern Sweden and investigate if changes are present, if they are, further investigate them over time and space.

Since the 1960s the literature on demography or rural northern Sweden has focussed on ‘decline’ – noting loss of population, population ageing, youth outmigration and other ‘negative’ demographic developments (Friedlander, 1969; Hjort, 2009; Stone, 1971); recent studies suggest that such generalizations may overlook the diversity of experiences of rural areas (D. Carson and Koch, 2013; Cernic-Maly et al., 2014; Hedlund, 2014; Hoggart and Paniagua, 2001; Koch and Carson, 2012). Hence, the descriptive nature of demographic study used herein helps to further investigate the demographic change in the Swedish rural setting.

Theoretically, the large body of scientific studies of ‘rural’ tend to be at macro-scale and from the ‘urban’ perspective, it might provide generalized and biased assumptions of ‘rural’; this study may contribute to the understanding of ‘rural’ by describing it ‘how it really is’ and by looking into demographic diversity and change at the micro-scale. Practically, the thesis might assist local planners to take ‘place-based’ decisions when planning for the future of rural areas when deciding where to place schools, health centres, youth activities centres, playgrounds, or invest in economic opportunities, etc. Moreover, this thesis should answer the following research questions:

Q1: Is there diversity in demographic characteristics when comparing proximate locations in the Swedish rural setting?

Q2: If there is, is it something that has recently emerged, or something that has been present for a long period of history?

Hence, this thesis describes the demographics of a case in rural northern Sweden at the micro perspective and related to temporal and spatial scales. This study is performed from the human geography’s perspective and seeks to describe the phenomena related to changes in demographic characteristics and combine a historical background to better understand why the changes occurred.

4 Literature Review

In this section I will introduce theories and studies that are relevant to this thesis therefore it is necessarily selective.

4.1 Demography

Demography is the science of human populations. It utilizes basic materials such as censuses, vital statistics, and population information from sample surveys (Kirk, 1968). Kirk (Ibid.) stated that the word ‘demography’ had gained wider usage from the 1960s to describe the scientific aspect of population study. He explained that there was a distinction between the ‘formal’ or ‘pure’ demography and the broader population studies. In Kirk’s (Ibid.) definition, ‘formal demography’ was well-defined and studied a technical subject; which concerned primarily with measurement and analysis of the components of population change, especially births, deaths and migration, at the same time as it was concerned with population structure – age, sex, and marital
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composition – as it contributed to the understanding of population change. The fruits of population change analysis could provide trends and projections that was in great demand for purposes of economic development, market research, city planning, educational planning, estimating future labour supply and various other approaches (Ibid). Research in this field seeks to understand population dynamics by investigating human populations in regard to their size, structure and distribution. Its concerns were the measurement and examination of uniformities in processes of human birth, death, population mobility, and population growth (Ibid.).

According to Kirk (Ibid), broader usage of ‘demography’ included studies of demographic variables in other social and biological contexts. It meant that population analysis was used to solve empirical problems; usually in addition to the components of population change, commonly found in population censuses, such as the size and distribution of the population (included the specification rural-urban), and its biological composition by age and sex, and certain measurable socioeconomic characteristics (race, language, religion, education, occupation, and income) (Ibid.).

Demography had its origins in vital statistics and had been influenced by Malthusian theory, the economic approach to demography inspired by the work of Thomas Malthus – Essay on the Principle of Population published in 1798; in its sociological context, population studies emerged in the academy in 1920s and reinforced ideas of birth, deaths, population distribution in the social context; thereafter, the ‘theory of demographic transition’ appeared after the war when the population experienced the first effects of modernization as decrease of death rate due to higher levels of living standards, introduction of epidemic controls, introduction of elementary public health measures added to a later stage of socioeconomic development, with the achievement of general literacy, urbanization, and industrialization (developed countries) the size of family reduced by birth control and the decrease of birth rate, which can be understood with the ‘baby boom’ from the after war and the ageing of the population thereafter - this only applied to the developed countries where governments were trying to increase the birth rate implementing tax incentives (Kirk, 1968).

Demographic change is considered interdisciplinary and has strong roots in sociology, but has important connections with economics, statistics, geography, ecology, biology, medicine, evolution, and genetics (Ibid.). In the broader usage, demographic change has gained space in the international political rhetoric due to eminent factors of contemporary society such as population growth, population ageing, increase of life expectancy, the increase of human mobility, and decrease in child mortality. The political debates in developed countries are chiefly focused on issues related to the birth rates below replacement level of 2.1 children per woman and the ageing society due to the rising of life expectancy. Demographic change studies seek to describe the population distribution and the phenomena related to eventual changes, and also look into their causes (Ibid.).

Kreager (2015) argued that demographic studies usually overlooked the aggregate relation within and between human societies which constitutes ‘population’, he claimed that “Demographers are ambivalent about admitting that their subject is based in a general theory in which population is a fundamental basis also of our concepts of species and of government. That ambivalence arises largely from the absence of a historically informed narrative, or ‘long view’, of the evolution of population thought” (Ibid:30). Furthermore, Kreager (Ibid.) stated that from Graunt to Price and Condorcet, the efforts of these authors were often overtaken by events. Hence, Kreager (Ibid.:33) argued that ‘demography in service of the state (DSS)’ achieved advances, for providing descriptive evidence on which policies i.e. to reduce mortality could be based; nonetheless, for showing progress not only on the top-down state
intervention, but also on the bottom-up approach where civil society are heard to get local and national authorities to act.

4.1.1 Demographic measures and methodologies

Demographic studies were usually based on cross-sectional data, such as Census statistics, which enables results from the association of age and gender by dividing them into age/gender groups which allow the description of the structure and distribution of the population (Akkerman, 2005). Such descriptions were supported by a variety of ‘rates’ (relating to reproduction, migration, mortality and so on), and the use of illustrative tools such as population pyramids.

The development of ‘forecasts’ in the broad perspective, discussed that demographic data were very important for local level planning, demographic analysis for small populations was usually difficult and had been better supported by the development of computational power, and long term monitoring of demographic change was needed to contribute to debates on vital issues to the contemporary societies such as population decline, population ageing, child-woman rates, changing of family structure and living standards (Wilson and Rees, 2005). Therefore, they suggested “a key competence of successful countries is the ability to plan flexibly for the short and long term. Planning must be based on good information about the present situation […]”. One significant variable that enters national and local planning is population” (Ibid.:337).

4.1.2 Population pyramids

Population pyramids describe the ‘age’ distribution per biological ‘sex’ and could tell the story of the population (Samir, 2014). Samir’s (Ibid.) research was based on the population pyramid of Nepal from the census of 2011 where each bar represented the total population for each age group. Due to the fact that in Nepal the census relied on the estimation of the population on their age, and were not registered at birth by the State, he had to correct the ‘age heaping’ before starting the analysis to create a smoothed age distribution (Ibid.). In contrast to the census from most European countries, especially Sweden, where this correction of the data is not necessary because the ages are automatically generated linking the person to the personal registry number. Samir (Ibid.) found evidence that Nepal has a very young population and is ageing due to the fact that the size of subsequent cohorts reduce, the research also evidenced the decline in the child-woman rate which could be explained by external events related to male migration and consequently postponement of marriage. These are some of the findings that a population pyramid can provide.

Population pyramids illustrate the changes in population with population composition pyramids constructed by age and sex (Flores, Jeffrey, and Miller, 2009). The shape of the pyramid visually represented the trend in mortality, fertility, and internal or international migration (Ibid.). Population pyramid shapes are described in a variety of ways such as pinched, triangular, inverted triangular, and rectangular. Population pyramids also represent population growth and stability of that growth, particularly as it relates to age and sex. Pyramids with broad bases that smoothly lead to narrow tops (triangular) signal large cohorts of infants and children, smaller cohorts of employment-aged adults, and even smaller elderly cohorts […] pyramids that appear squeezed in the middle (pinched) have large infant and children cohorts along with large elderly cohorts, and are likely to have high cancer rates and strained resources for elder care. Pyramids with rectangular shapes represent populations with low child-woman rates (replacement levels), increasing longevity, and little net change in migration patterns […] A skewed distribution with larger cohorts of employment-age males compared with corresponding female cohorts is typical of international migration” (Ibid.:349).

The composition of a population could be examined using population pyramids, which categorize the population of a place into biological age and sex. “Population pyramids are useful for
understanding the future age and sex distribution in societies, as well as the societies’ potential for growth or decline. Pyramids are generally read with males on the left, and females on the right side of the pyramid. Each horizontal bar in the pyramid represents people in the population grouped by their age, with young people at the bottom of the pyramid and old people at the top. The length of the horizontal bar in each age and sex category represents the absolute number of people, or the proportion of people in the population, that are in that age and sex category” (University of Michigan, 2015).

The types of population pyramids are illustrated on the following figure:

![Population Pyramids](https://example.com/population-pyramids.png)

**Figure 1: Types of Population Pyramid Distributions**

*Source: University of Michigan*

A Population’s growth rate and its age distribution are closely related (University of Michigan, 2015). Rapid growth, or young societies have a pyramid with a wide base and narrow peak (Figure 1). Slow growth pyramids are typical of countries such as the United States that have low child-woman and mortality rates due to the wide-scale use of birth control and the availability of adequate health care. In the United States, migration continues to slowly increase population growth (Figure 1). Zero population growth, or even negative population growth relates to population distributions with long life expectancy, and birth rates that are at, or below, replacement level (Ibid.). The negative growth type of population distribution reflects the many developed societies, which depend on the wealth of younger generations to support older generations (Ibid.). As societies age, added pressure is put on fewer younger people to support the greater numbers of older people. An ageing population also puts demands on health care infrastructure (Ibid.). Societies with zero growth or negative growth population distributions also face problems with under-employment, wherein there may raise question on whether there will be enough workers to keep the society functioning without bringing in migrant workers (Ibid.).

### 4.1.3 Demographic analysis’ applications

Demographic characteristics are widely used in diverse fields of the academia such as medicine, economics, sociology, psychology, planning, ecology and tourism. Some of these applications were found in the following academic studies using demographic analysis: tracking the incidence of cancer in certain population (Flores et al., 2009); for neighbourhood and market analysis on types of housing demands (Golicz, 1989); projections on workforce and labour market development (Lerman and Schimidt, 2015); analysing trends in underemployment in the United States regarding compositional change between 1970 and 1980 (Clogg and Shockey, 1985); how to achieve market equilibrium and which changes have to be incentivised in the demographic composition of Colleges and Universities (Epple, Romano, and Sieg, 2002); private consumption changes depending on the change of population pyramids (Eguia and Echevarria, 2004); population-based study on atrial fibrillation and stroke risk (Björck, Palaszewski, Friberg, and Bergfeldt, 2013); the influence of demographic composition and organizational culture on work environments (Chatman, Polzer, Barsade, and Neale, 1998); the Chinese study on demographic change and economic growth (S. Liu and Hu, 2013); the relationships between land use change and demographic dynamics in Jilin (Li et al., 2015); and demographic change related to tourism.
expenditure and life cycle behaviour (Bernini and Cracolici, 2015); among others. These applications are important in both urban and rural spaces.

4.2 The rural spaces

In order to understand the dynamics of rural spaces, there is a need to define what is “rural”. The term has no conventional definition that provides a universal description, the “rural” is most commonly defined by what is “not rural”, in contrast to what is “urban”. Often the urban is characterized by the advantageous access to financial, physical, human and social capital, in detriment to the lower access of these essential resources in the rural areas. There is an imbalance between these two dimensions that scholars have scrutinized in many ways. Wiggins and Proctor (2001:427-428) connected the term “rural” to things of the countryside: “rural areas constitute the space where human settlement and infrastructure occupy only small patches of the landscape, most of which is dominated by fields and pastures, woods and forests, water, mountain, and desert”.

According to Michael Woods (2011:5) the idea of rural versus urban was one of the oldest ideas in Geography and is deeply rooted in cultural aspects. He continued his analysis discussing that throughout history, the rural has been having many attached values such as: place to produce food and energy, the space of wilderness, the stage of a bucolic idyll, a playground, a destination for escape, a place where natural is present and fragile. Ultimately Woods (2011) added to the list of rural meanings the idea of primitive space that needs to be modernized. He questioned these meanings by asking if the idea of rural was still relevant. Cloke (2004:20-21), however, argued that the idea of countryside versus urban may be a myth and that rural areas are not homogeneous.

The sociologist Marc Mormont (1990), suggested that the use of the concept “rural” in academia has been developed during the 1920s and 1930s when the countryside areas were going through a huge social and economic transformation established as a response to the emergence of urbanization and industrialization. Woods (2005) claimed that academic scholars have worked in removing the dichotomy between the “rural” and the “urban”, although the distinction remains as a useful tool for the researchers for two main reasons: primarily, because many governments maintained an official distinction of institutions and policies constructed to function separately and independently; secondly, because the inhabitants of the rural areas identified themselves as “rural people” and to the “rural way of life” very strongly, to the point that the common societal problems such as unemployment, decline of industries such as agriculture, loss of local services were often seen as very rural locality problems caused by the urban threat.

Another way of describing rural areas was proposed by Tocco et al. (2012:5) whom divided the description into three levels: “(i) relative abundance of land and other natural resources, which are immobile; hence, rural areas are usually the location for farming; (ii) distance between rural settlements and cities, which implies high costs of movement; (iii) relative poverty of many of the inhabitants, as average incomes are lower in rural areas than in towns and cities, with the exception of some rural areas in North-West of Europe.”

4.2.1 Rural decline and challenges

Friedlander (1969) highlighted that Sweden was experiencing a demographic transition, shifting from a high to low birth and death rates, that accelerated growth as a result of decrease in mortality and child-woman rates. He also argued that the ‘rural-to-urban’ transition was also an important factor for the declining of the rural spaces triggered by modernization and industrialization of the urban areas; these factors contributed to the process of population change from “high balance” (high birth and death rates) to “low balance” (low birth and death rates). In
Europe, the majority of rural areas were densely populated due to the long period of population growth and it resulted in the successive subdivision of the land increasing the amount of smaller farms; these factors in conjunction to the end of the ‘common field’ resulted in limited conditions to the further growth of population (Ibid.). In Sweden, the urban success in the modernization and industrialization processes have contributed to the out-migration of the population from the rural to urban areas; contributing substantially to the decline of the population (Ibid.). Furthermore, his finding regarding Sweden implied that rural population experiencing mortality decline and not industrialization would decrease its child-woman rate if out-migration were not an option. This result was contested by Mosher (1980) who concluded the opposite when applying more accurate information than the one used by Friedlander from the same period (1750-1930). This highlights the limitation of the demographic research that is extremely dependent on high quality data for the reliability of its results.

The out-migration in northern Sweden had, according to Stone (1971:41) at least four causes which were: 1. change in governmental support such as local isolation due to lack of public facilities (schools, hospitals, and churches); 2. young population migrating from the farms predominantly in more remote areas to find job opportunities; 3. equipment development and change in the work reduced the need of the labour; and 4. development in farming technologies and the extended use of machines causing shrinkage in the farming employment.

More recent studies still highlight the declining of rural population especially due to the out-migration of young people and even the studies of rural gentrification which is a new trend in Britain, showed “marginal importance in the sparsely populated countryside of Sweden” (Hjort, 2009:91). Other European studies in this field shed light on a contemporary challenge of the rural areas: ageing, which was considered by the World Bank (2009) as a process where the proportion of older individuals represented a larger share of the total population. A recent comparative analysis of the demographic indicator for the European Union’s 28 member states argued that ageing population was a concern for almost all members and the research suggests that the low child-woman rates might be “consequence of the longer schooling, the change in the role of women in households together with the downturn of the socio-economic environment” (Diaconu, 2015:57). Her study showed that according to the age dependency ratio, Germany and Italy were clearly the countries facing major ageing process followed by Portugal and Sweden.

In Germany, researchers responded to the ageing trend with alternative solutions such as postretirement career planning which proposed to tackle the challenges of demographic change by “keeping employees in the workforce beyond retirement age could counter these challenges” (Wöhrmann, Deller, and Wang, 2014:363). In Scotland, scholars had questioned if school closures could be drivers of rural decline by arguing on their effect on discouraging in-migration of young families and also by pushing young families to out-migrate; the study showed that qualitative data indicated negative reactions from the rural communities that thought that it could bring negative impacts to the communities (Slee and Miller, 2015). The researchers argued that the chief factor for closing schools was the ageing of the population followed by the cut of central governmental funding to local governments, although they pursued that rationalisation of school provision was an understandable measure of the local authorities to cut costs, as the ageing population had other needs for the wellbeing in rural communities (Ibid.).

In China, scholars have found out that the population dynamics in terms of settlements, have had two distinguished phenomena: first, the movement of rural to urban in areas considered more remote, and second, the rapid expansion of rural areas adjacent to the urban areas (Tan and Li, 2013). These factors required a response from the governments at the provincial level to solve conflicts raised by the dichotomy between the expansion of urban areas and the protection of
cropland (Ibid.). The researchers described that experts and policy-makers in China were starting to pay attention to the eminent changes in the populations in rural areas and were beginning to think that the concentration of settlements in rural areas would be a good option to solve the conflicts, at the same time, the scholars argued that these new policies should take in consideration the 'fragmented' development of population settlements even in the rural settings i.e. 'rural closer to urban' and the 'remote rural' because policies should be based on the diversity of the 'rural', therefore, not suitable for the application of generalized land use policies (Ibid.).

The land use in terms of urban and rural perspectives were also studied using maps and data from the two National Land Investigations in China in the research carried in Wuhan by Y. Liu, Luo, Kong, Li, and Tan (2015). Looking at demographic change in relation to economic growth, studies showed that increasing "the share of working age population has a positive impact on economic growth, whereas the population growth rate has a negative impact" (S. Liu and Hu, 2013:76). Liu and Hu (Ibid.) also claimed that education level had a positive impact in economic growth and they argued that if the government often overlooks human capital when it comes to planning strategies by not considering 'fragmented' development.

In Malaysia, scholars studied the need of rural health care using population pyramids because demographic information was important to project preventive, promotive, curative and rehabilitative health care services as well as the allocation of resources that met the needs of the many sectors of the population; they tried to fill a gap in the literature, where the concentration of the studies are chiefly focused on the effects of urban growth and the implications for health system and health care, they identified that academic literature was limited on how well health systems should adjust to the provision of services in the rural areas (Jahan et al., 2014). The study supported that more studies should be performed in rural settings to see if patterns could be recognized and they advised that the Ministries of Health that there was a need to monitor and consider demographic data to respond adequately to the needs of the population (Ibid.).

In Canada, researchers argued that rural decline in northern Canada was a product of the implementation of a policy program that approached remote areas as a 'resource bank' that aimed to support the urban infrastructures and services, without adequate means to regulate and canalize rural reinvestments (Markey, Halseth, and Manson, 2008). The comparative study took into account the examination of policies and development approaches in two different eras in time and showed that the post-war era worked for the vision of 'state building' supported by the natural resources of the peripheral areas at the same time it provided reinvestments in the infrastructure of these areas; and the post-1980s era showed a continuation of the same 'resource bank' approach but with the withdrawal of reinvestments that led to an expected rural decline (Ibid.). The researchers highlighted that the renewal of rural development in peripheral areas required contribution of scholars who might further develop place-based literature (Ibid.).

In Australia, researchers studied partnership systems and responses to rural decline examining how formalised partnerships between stakeholders were, and also looked into population, demographic and economic indicators (McDonald, Kirk-Brown, Frost, Van Dijk, and Rainnie, 2013). The research showed that partnerships developed collective efficacy, but the relations were carried in the micro-perspective, meaning that the personal traits of the members of the partnership were decisive to the development and local-based decision-making (Ibid.).

4.2.2 Governance and its implications in rural areas

"Governance consists of the traditions and institutions by which authority in a country is exercised. This includes the process by which governments are selected, monitored and replaced; the capacity of the government to effectively formulate and implement sound policies; and the respect of citizens and the state for the institutions that govern economic and social interactions among them". (World Bank, 2015)
The researches related to governance and its implications in rural areas were developed from the need of restructuring the way rural areas were perceived (Hoggart and Paniagua, 2001), which meant in part, the need of ‘real’ interest of governments in effective governance of the rural areas (Pemberton and Shaw, 2012). Currently, focus of governance matters shed light at arrangements of urban areas, leaving the rural scenario in the shadow (Ibid.). Researchers in planning, rural studies, geography, sociology, and environmental studies are starting to raise the rural into the academic agenda due to the need of regional sustainability solutions that can combine land-use and socioeconomic growth in the peripheral areas; considering solution in diverse scales such as regional, sub-regional and local governance systems (Graymore, Sipe, and Rickson, 2008; Hedlund, 2014; Magliocca, Brown, and Ellis, 2014; Pemberton and Shaw, 2012).

Hoggart and Paniagua (2001) heavily criticised the literature on the concept ‘rural restructuring’ arguing that it was usually built on systems and approaches that lacked novelty. Furthermore their study verified that the concept of the restructure process of the ‘rural’ were less widespread than it was often implied, which limited the effective contribution to driving the necessary new social dynamics in the English countryside (Ibid.).

In Sweden, Hedlund (2014:4) has confirmed the assumptions of the OECD (2006) regarding the demographic differences of the rural areas by using a cluster analysis that was based on register data from the georeferenced micro-database called ASTRID in the rural Sweden. Hedlund’s work utilized the national scale in the contemporary data and clustered the ‘rural’ into five categories: 1. Middle-class countryside within the urban shadow; 2. Working-class countryside within the urban shadow; 3. Countryside outside the urban shadow; 4. Manufacturing periphery; and 5. Resource periphery. Furthermore, Hedlund (Ibid.:10) claimed that “the Swedish countryside is not dominated by depopulation and ageing”, and he identified ‘hotspot’ like places in the resource periphery related to assets (e.g. natural resources, nature sceneries, universities, industrial clusters, etc.), evidencing ‘fragmented’ development. Moreover, the research argued for the necessity for “place-based (rural) policies”, and highlighted the need of more studies in rural areas investigating temporal dynamics at finer levels of the rural contexts.

*“Governments may not be good at picking places that will prosper. But how well they institute regulations, build infrastructure, and intervene to make land use efficient will decide the pace of prosperity for the entire neighborhood (World Bank, 2009:15).”*

4.2.3 Demographic change studies in peripheral areas

Carson (2011:240) argued that there was “a relationship between economic and demographic development” of two natures, one that he denominated “tight” and the other as “loose”. The “tight relationship” was related i.e. to industries that required a certain labour and influenced the demographic conditions of a place, and the “loose relationship” was related to the demographic conditions that remain in the area despite the change in labour demand from the a specific (usually resource) industry. Carson also claimed that understanding demographic structures was the first step to explain what are the meanings and the conditions allowing promoting a more balanced population by supporting a diversified economy. Furthermore, Carson (2011:239) argued: “the lack of balance (between male and female, old and young…) is likely to retard both population and economic growth”. Research on sparsely populated areas exposed the need of not only spatial considerations, but even temporal and social contextual studies to better understand diversity (Koch and Carson, 2012). Moreover, Carson and Kock (2013) continued their work claiming that a local economy had different characteristics depending on the spatial scales used to analyse it. Hence, they argued that for economic planning to be effective, one should recognise the importance of considering multiple scales in order to increase its assertiveness. Moreover, the
researchers inferred from their results of the study performed at the Alpine villages of Austria and the remote Indigenous communities of Australia, that social groups and the individuals within these groups had diverse experiences of the local, based on their own network, they shed light on the need of measurements of diversity in the local level and the importance of ‘local-based’ policy making and planning due to ‘fragmented’ development (Ibid.). These findings reinforce Robertson’s (2006) argumentation that all spatial and inhabited places included cultural and emotional signifiers that were results of the human interaction with the landscape. Therefore, he argued that places usually represented an attachment of the inhabitants to the “environments in which they live, those intangible qualities, built up over time, that make landscapes ‘special and worth defending’” Robertson (2006:7).

Cernic-Maly, Koch, and Koch (2014:4), in recent study, claimed that an important tool to examine demographic change was the measurement of variables such as life expectancy, child-woman rate, child dependency rate, age dependency rate and overall dependency rate, which were usually correlated to time and space. These variables “indicate a demographic fact which in turn points to social, economic, political, and cultural effects” (Cernic-Maly et al., 2014:4). They also argued that these diverse realities were likely to affect demographic change, therefore, they were (re-) generated by the society they were included in. Furthermore, Cernic-Maly et al. (2014) argued that individual needs must be negotiated and balanced according to proper foundations on relevant scales and should embrace the complexity of the questions in order to produce assertive answers to the specific problems they aim to tackle.

### 4.3 Relation between historical events and settlements

Historical events were often analysed in the social sciences to explain particular events over the life of individuals. Settlements also presented dynamics that, like individuals, had a lifespan that could be related to important events that had impacted settlements to grow or to decay (Jones and Woods, 2012). Jones and Woods (2012) used historical events’ analysis in the archaeological context to explore the causes of settlement abandonment and to better understand its ecological implications by analysing quantitative and qualitative data.

Another study on Gotland made findings relating historical events and the settlements between AD 200-1700 (Svedjemo, 2014), historical events had influenced settlements on Gotland. Furthermore, the study showed that external changes in the political and demographic aspects also played their part in how settlements have expanded and contracted over time (Ibid.).

Hence, D. A. Carson and Carson (2014) used the idea of path dependence in explaining population dynamics, demographic change and settlement development paths over time in a small remote mining town. Their research stressed that historical events were connected to political change, economic policy directions, major industrial developments, transport infrastructure development, and embedded population mobility cultures (Ibid.).

The study on rural poverty and vulnerability in the 19th century’s northern Sweden took place on three medieval villages in the rural Skellefteå, a rural parish near the coast in the Västerbotten County (Engberg, 2006). The curiosity about this micro-scaled study was that the villages had responded diversely to common historical events, partly due to the social dynamics of the local society, and the demographic diversity, presenting ‘fragmented’ development (Ibid.).

The contemporary trend of settlements in Sweden is related to the international migration, it has drawn attention of a number of scholars. Although most of the literature is, as in other fields of research, focused on the urban settings, fortunately it is not the case for all scholars. Hedberg and
Haandrikman (2014) researched the idea of the repopulation of the Swedish countryside as a trend for new settlements that could reverse the population decline of rural areas. They used PLACE database that provided the research information on socio-economic status, demographic characteristics and residential location for the individuals in the database (Ibid.). Furthermore, results showed that in certain countryside areas international migrants had significantly contributed to the balancing of population number of societies facing population decline; hence, one of the conclusions of the research was that “rural areas are becoming globalized and diversified” (Ibid.:137).

5 Methodology

In this section I will discuss the research methodology and the factors that can affect the research such as philosophy and approach, strategy and design. Thereafter, I will discuss the data collection and sample selection followed by methodological limitations and ethical considerations.

5.1 Research Philosophy and Approach

The understanding of the philosophical debates underpinning the field of social research is essential because it raises issues of how to study the social world and therefore evokes a great number of philosophical questions. Philosophical questionings are thoughts that society embraces from knowledge and from understanding the social world (Saunders, Lewis, and Thornhill, 2009).

The ontological assumption, how to pursue the nature of reality and what is there to understand about the world, adopted in this thesis is based on the subtle realism approach explained by Blaikie (2007), where an external world exists, but is only known/discovered through the thoughts of the human mind and through socially constructed meanings. The epistemological position of the thesis, which is concerned with the ways of knowing and learning about the world, embraces an abductive approach suggested by Saunders et al. (2009). This approach is a combination of use of both the inductive approach to developing a theory or highlighting theoretical implications derivate from the relevant data, and the deductive approach where the data can be interpreted with the assistance of supplementary information containing local experiences and beliefs (Saunders et al., 2009).

The purpose of this study is to assess and get a better understanding of the population characteristics and demographic change at the micro-scale of the villages within a rural municipality through time and to identify settlement patterns. I found that the abductive approach explained by Saunders et al. (2009) is the most appropriate to achieve the results needed and therefore, the best suited for this study.

5.2 Research Design

The study has a research strategy that combines both qualitative and quantitative research methods. The research makes use of demographic (quantitative) and historical (qualitative) data in this thesis.

The research design has followed a line of thinking that started by reasoning over the proposed research questions for this thesis. Furthermore, the overarching purpose of the study is to explore aspects of the diversity of experiences of demographic change in one part of rural
northern Sweden. Hence, I decided that the best fitted research design for the study would be descriptive.

The study is predominantly based on a deskwork aiming to investigate the literature available to develop the thesis’ methodology and theoretical background. The research also included a study visit to Vilhelmina and its villages to assess the secondary data available in the literature (library, museum and municipality) and to meet key informants relevant to the research.

5.3 Data collection

First, I collected the quantitative secondary data for the demographic characteristics. The aim was to generate a descriptive population data through measuring sizes, distribution and ratios, also allowing the utilization of descriptive diagrams and tabulations to illustrate the data. The study gives demographic ‘snapshots’ from three different points in time: 1890 (The Swedish National Archives and Minnesota Population Center, 2011), 1970 (Riksskatteverket [National Tax Authority], 2012), and 2015 (Vilhelmina Kommun [Vilhlemina Municipality], 2015). The data was renamed and concorded through the time points to create a dataset that reflected the same type of information for all three periods. The dataset from 1890 was encoded following the old parish systems from Sweden; therefore, I had to access the meaning of the codes used then to more modern terms. The dataset from 1970 had be manually complete with the variables ‘gender’ and ‘village names’ by crossreferencing addresses and postal codes, the same was done for the dataset from 2015 that I accessed through Vilhelmina municipality. The study adopted the main population diversity variables as a framework (age, gender and place of residence) due to the limited time for the thesis. After normalizing the quantitative data, I created the population pyramids to describe the population composition and demographic change. The data also provided the inhabitants’ place of residence and the information was crossreferenced with the village names at www.kso2.lantmateriet.se allowing the creation of maps on the demographic settlements by using GIS (Geographic Information System). The cross-referencing showed shortcomings such as the fact that several villages had the same name, but were located in diverse locations through the municipality and the fact that there was a considerable amount of “people without residency” (i.e.: Sami, ‘lösa pigor’ and ‘lösa drängar’), especially in the dataset of 1890 but also present in the 1970 and 2015 datasets. Therefore, not all the residents are represented on the maps. This represents a limitation on the completeness of the maps. Moreover, the maps are supposed to be used as general reference in order to assist in understanding the main settlement dynamics.

Second, I collected secondary data of historical events of the population of the municipality and its villages through books, scientific articles, documents from the municipal archive, local newspaper archive, thesis work, etc. As a supplement to the secondary data, primary qualitative data was collected through semi-structured face-to-face interviews with open end were performed with key informants of Vilhelmina municipality during my study visit. The municipality recommended the informants as they were considered to have deep knowledge of the region and its population. The interviews were recorded with the participants’ consent and the answers supplemented the secondary data of the case study. A summary of the findings, not full transcripts, of the interviews is available under ‘Appendix 2’ and the interview guide including 12 questions under ‘Appendix 1’. The data collection was carried during a study visit to the area of the study. Hence, research has incorporated elements of historical research analysis crossreferencing the findings from the quantitative data with the qualitative data.

Third, in addition to the data collection described above, articles, books, book chapters, scientific journal articles, governmental documents, official reports, PhD thesis, Master thesis and other information sources have been used as secondary data collection pertaining the case study area.
The databases from the Umeå University’s library, ARCUM, Swedish Statistic Central Bureau, Lantmäteriet, Google scholar, Scopus, Vilhelmina library and Vilhelmina museum were used in this thesis.

5.4 Choice of Research Topic

The broad range of study fields that opens up with the Master Program does not make the choice of study subject an easy task. As human geography is of personal interest for me, I chose to study the topic: Population diversity and Demographic change over time and space.

5.5 Case selection

The case selection of Vilhelmina municipality as the work field was chosen because it draw my attention as it was considered the last frontier of Sweden to be colonized (Enequist, 1960).

Population analysis can consider a variety of variables such as economic figures, mortality rate, immigration/outmigration, infrastructure, etc. This study will focus on variables connected to gender, age and residency. The selected respondents to the interview, were refered by the municipality.

The thesis focuses on Vilhelmina municipality and five of its villages: Bäksjö, Kittelfjäll andHenriksfjäll (herein considered as one village), Latikberg, Nåstansjö and Vilhelmina town. These villages are especially interesting because they are located in the north of Vilhelmina town in an area where there hardship were many compared with the southern part (i.e. Malgomaj had a quality land for agriculture). Although they did not have the same pre-conditions, they have somehow succeeded to settle. The map below illustrates the study area of this thesis.

Figure 2 The study area - Vilhelmina municipality and villages
Source: Google Maps
5.6 Sample selection

The research design and methodology for this paper was based on the collection of quantitative and qualitative data; the quantitative data used random sampling of population using data available through public census and population information of 1890, 1970 and 2015; and the qualitative secondary data used specific literature and non-probability purposive sampling of informants (where respondents have specialized knowledge, rather than general information from the whole community).

5.7 Methodological limitations

This section highlights some of the methodological limitations present in the thesis:

(i) **IN RELATION TO THE TEMPORAL SCALE:** THE DATASETS AVAILABLE WERE THE ONES USED IN THE STUDY, THEREFORE THE STUDY EXAMINES POINTS IN TIME AND IS UNABLE TO ANSWER INQUIRES OUTSIDE OF THE SCOPE OF THE DATA AVAILABLE.

(ii) **IN RELATION TO THE CASE STUDY:** THE STUDY HAS A LIMITATION COMMON TO CASE STUDIES, ITS RESULTS ARE RELATED TO THE CASE STUDIED AND ARE HARD TO BE GENERALIZED.

(iii) **IN RELATION TO THE DATA:** DEMOGRAPHIC RESEARCHES ARE VERY DEPENDENT ON THE QUALITY OF THE DATA, THE DATASETS 1970 AND 2015 NEEDED TO BE COMPLETED MANUALLY, WHICH COULD INCUR IN HUMAN ERROR AND SUBSEQUENT ALTERING OF THE RESULTS, THEREFORE THE INFORMATION WENT THROUGH A QUALITY CONTROL OF THE THESIS SUPERVISOR.

(iv) **IN RELATION TO THE TIMEFRAME:** THE TIME AVAILABLE FOR THE THESIS MIGHT HAVE LIMITED THE METHODOLOGY IN TERMS OF DATA COLLECTION AND DEPTH OF THE ANALYSIS.

(v) **IN RELATION TO THE INTERVIEWS:** FIRST, THE SMALL SAMPLE (THREE INTERVIEWS) AND SECOND, THE INFORMANTS WHOM MAY HOLD A BIASED PERCEPTION OF THEMSELVES AND THE REGION IN WHICH THEY FUNCTION. THEREFORE THE FINDINGS WERE USED AS SUPPLEMENTARY TO THE SECONDARY DATA.

5.8 Ethical considerations

Dealing with matters of demographic diversity can raise sensitive matters such as distinction of groups or the mapping of socio-economic problems in the area. Especially when dealing with these questions in a micro dimension of the villages within a sparsely populated location such as Vilhelmina maintaining basic ethical considerations, i.e. anonymity of the interviewees, can be a challenge. Therefore, the purpose of the study was explained to the respondents, an oral informed consent from them was agreed upon, allowing the use of the information in the thesis despite the risk of being identified. The focus of the thesis represents no personal risks for the participants and I will try to present their information in a way that won’t harm them or place them in an uncomfortable position.

An ethical research is achieved by actively reflecting about the interests of all involved in the research. Hence, I will feed back the results to local stakeholders at a seminar in August, which addresses the important aspect of ‘reciprocity’ in community based research, where the researcher takes information from the community and also when the research can be useful for participants and science.

Both quantitative and qualitative research depends on the researcher building up effective relationships to gather high-quality data. This fact also challenges the researcher to act professionally. Furthermore, “the researcher also influences the research as being an active part in the research
process” (Webster et al., 2014:84-85). Being aware of these implications has assisted the thesis by laying the foundation of the study and making use of the best-fitted approach in which the study was conducted.

In order to manage ethical issues, constant reflection upon ethical implications, and discussion with colleagues, research supervisors and research participants from the communities in an open and reciprocal approach were praxis through the study. The following section will present the reader the empirical findings of the study.

6 Empirical Findings

This section will present the empirical findings from the secondary data of the population datasets dated 1890, 1970 and 2015, and the secondary data case literature.

The secondary data was assessed according to the variables:

1. TOTAL POPULATION (N),
2. FEMALE POPULATION (FEMALE N),
3. MALE POPULATION (MALE N),
4. POPULATION YOUNGER THAN 18 YEARS OF AGE,
5. POPULATION ABOVE AND EQUAL TO 18 YEARS OF AGE,
6. MEDIAN AGE FOR FEMALE POPULATION,
7. MEDIAN AGE FOR MALE POPULATION,
8. MEDIAN AGE FOR OVERALL POPULATION,
9. MEAN AGE FOR FEMALE POPULATION,
10. MEAN AGE FOR MALE POPULATION,
11. MEAN AGE FOR OVERALL POPULATION,
12. CHILD DEPENDENCY RATIO, CALCULATED BY TAKING THE POPULATION BETWEEN AGES 0-14 DIVIDED BY THE POPULATION BETWEEN AGES 15-64,
13. AGE DEPENDENCY RATIO, CALCULATED BY TAKING THE POPULATION AGE 65 AND ABOVE DIVIDED BY THE POPULATION BETWEEN AGES 15-64,
14. TOTAL DEPENDENCY RATIO, CALCULATED BY TAKING THE POPULATION AGES 0-14 PLUS THE POPULATION AGE 65 AND ABOVE DIVIDED BY POPULATION BETWEEN AGES 15-64,
15. CHILD-WOMAN RATE, CALCULATED BY TAKING THE TOTAL NUMBER OF CHILDREN UNDER THE AGE OF FIVE YEARS AND DIVIDING THAT BY THE NUMBER OF WOMEN BETWEEN AND INCLUDING THE AGES 15-44, AND
16. OVERALL SEX RATIO, CALCULATED BY DIVIDING THE NUMBER OF MALES BY THE NUMBER OF FEMALES AND MULTIPLYING BY 100.

The 16 variables will describe the population diversity in two spatial scales, first Vilhelmina municipality and second the five villages of Bäksjö, Kittelfjäll-Henriksfjäll, Latikberg, Näransjö, and Vilhelmina town in a table per dataset. Thus, aiming to facilitate the understanding of the findings, I describe the data in detail and complement the assessment with a population pyramid at the scale of the municipality per dataset. Furthermore, I present the compiled population information in a table at the scale of the villages through three time points 1890, 1970 and 2015, followed by a discussion of the data.

The same structure is used across each dataset with the objective of easing the reading process to the reader. Maps were produced using GIS and are also used to illustrate settlements and demographic change over time and space.

The findings from primary data collected through the semi-structured interviews were limited. Therefore, they were used as supplementary to the secondary data, a summary of the results is available under Appendix 2.
6.1 Demographic characteristics: Vilhelmina 1890

6.1.1 Vilhelmina municipality 1890

The population data from 1890 (The Swedish National Archives and Minnesota Population Center, 2011) had a total count of 5431 inhabitants in Vilhelmina municipality residing in over 140 different villages. The data accounted for 2737 females and 2694 males of which 3008 younger than 18 years and 2423 older or equal to 18 years. The median age for the female population was 20 years and for the male population the median age was also 20 years, resulting in an overall median age of 20. The mean age for the female population was 24.7 and for the male population the mean age was 26.1, resulting in an overall mean age of 25.4. The child dependency ratio was 0.69; the age dependency ratio was 0.09, which resulted in a total dependency ratio 0.79. The child-woman rate showed a result of 0.75. And the overall sex ratio was 98.43 men/100 women.

In order to illustrate the population diversity of Vilhelmina municipality, I created a population pyramid from the dataset 1890.

![Population Pyramid Vilhelmina Municipality 1890](image)

The population pyramid (Figure 3) is composed by 2737 females and 2697 males; divided by age groups with the respective percentages. The pyramid shows ‘rapid growth’ or ‘typical pyramid’ with wide base and narrow peak, which signal large number of infants and children, smaller number of employment-age adults, and even smaller number of elderly. The tabulation below clarifies the illustrative information in the pyramid.

The information in pyramid is clarified in the tabulation below:

<table>
<thead>
<tr>
<th>Age group</th>
<th>Number of Population by gender 1890</th>
<th>Percentage of the Population by gender 1890</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female (n)</td>
<td>Male (n)</td>
</tr>
<tr>
<td>0-4</td>
<td>431</td>
<td>410</td>
</tr>
<tr>
<td>5-9</td>
<td>356</td>
<td>335</td>
</tr>
<tr>
<td>10-14</td>
<td>291</td>
<td>282</td>
</tr>
</tbody>
</table>
The population tabulation (Table 1) is related to Vilhelmina municipality in 1890 and shows that the overall population was balanced in terms of gender, with 49.6% male and 50.4% female. However, the population is strongly dominated by the population between ages 0 and 19 meaning at this period Vilhelmina presented population growth. The significant decrease in the population share age 70 and above may illustrate the shorter life expectancy of the period compared to the contemporary reality.

### 6.1.2 Villages within Vilhelmina municipality 1890

The following table illustrates the relevant findings of the dataset 1890 regarding population diversity according to the population measurements. The variables are detailed per village in the table below:

<table>
<thead>
<tr>
<th>Variables</th>
<th>Bäskjö</th>
<th>Kitellfjäll + Henriksfjäll</th>
<th>Latikberg</th>
<th>Nästansjö</th>
<th>Vilhelmina</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population Total N</td>
<td>216</td>
<td>37</td>
<td>196</td>
<td>179</td>
<td>107</td>
</tr>
<tr>
<td>Population female n</td>
<td>108</td>
<td>23</td>
<td>91</td>
<td>76</td>
<td>54</td>
</tr>
<tr>
<td>Population male n</td>
<td>108</td>
<td>14</td>
<td>105</td>
<td>103</td>
<td>53</td>
</tr>
<tr>
<td>Population &gt;18</td>
<td>100</td>
<td>12</td>
<td>85</td>
<td>84</td>
<td>44</td>
</tr>
<tr>
<td>Population ≤18</td>
<td>116</td>
<td>25</td>
<td>111</td>
<td>95</td>
<td>63</td>
</tr>
<tr>
<td>Median age female</td>
<td>18</td>
<td>18</td>
<td>24</td>
<td>16</td>
<td>25</td>
</tr>
<tr>
<td>Median age male</td>
<td>20</td>
<td>27</td>
<td>18</td>
<td>20</td>
<td>14</td>
</tr>
<tr>
<td>Median age overall</td>
<td>19</td>
<td>20.5</td>
<td>21</td>
<td>19</td>
<td>25</td>
</tr>
<tr>
<td>Mean age female</td>
<td>25.7</td>
<td>22.7</td>
<td>23</td>
<td>23.2</td>
<td>29.9</td>
</tr>
<tr>
<td>Mean age male</td>
<td>24.7</td>
<td>28</td>
<td>29</td>
<td>25.7</td>
<td>20.5</td>
</tr>
<tr>
<td>Mean age overall</td>
<td>25.2</td>
<td>24.7</td>
<td>25.8</td>
<td>24.3</td>
<td>25.2</td>
</tr>
<tr>
<td>Child dependency ratio</td>
<td>0.78</td>
<td>0.42</td>
<td>0.63</td>
<td>0.86</td>
<td>0.71</td>
</tr>
<tr>
<td>Age dependency ratio</td>
<td>0.09</td>
<td>0.11</td>
<td>0.15</td>
<td>0.14</td>
<td></td>
</tr>
<tr>
<td>Dependency ratio overall</td>
<td>0.88</td>
<td>0.42</td>
<td>0.75</td>
<td>1.01</td>
<td>0.84</td>
</tr>
<tr>
<td>Child/woman ratio (fertility rate)</td>
<td>0.8</td>
<td>0.5</td>
<td>0.61</td>
<td>0.8</td>
<td>0.96</td>
</tr>
<tr>
<td>Sex ratio overall</td>
<td>68.18</td>
<td>40.00</td>
<td>115.38</td>
<td>73.76</td>
<td>33.33</td>
</tr>
</tbody>
</table>

**Table 2: Population Information from Dataset 1890**

**Source:** Author

Tabulation 2 shows the villages’ demographic diversity measurements, the results per village are not quite the same as the result shown in the population pyramid at the municipality level in
1890. The villages of Bäksjö, Kittelfjäll-Henriksfjäll, Nästansjö and Vilhelmina town have an over-representation of females while Latikberg presents the opposite. The overall dependency ratio also presents a large variation of the results among the villages, Kittelfjäll-Henriksfjäll showing the lowest measurement 0,42 and Nästansjö showing the highest measurements 1,01 while the results for the municipality were showing the overall dependency ratio 0,79. Another variable that shows large diversity among the villages is the child-woman rate, where Kittelfjäll-Henriksfjäll presents the lowest results 0,5 and Vilhelmina town the highest results 0,96, while the municipality showed result 0,75. Kittelfjäll-Henriksfjäll was the smallest population of all villages, with the lowest overall sex ratio and the lowest child-woman ratio amongst the five villages.

6.2 Demographic characteristics: Vilhelmina 1970

6.2.1 Vilhelmina municipality 1970

The population data from 1970 (Riksskatteverket [National Tax Authority], 2012) had a total count of 8722 inhabitants in Vilhelmina municipality residing in over 190 different villages. The data accounted for 4051 females and 4671 males of which 2249 younger than 18 years and 6473 older or equal to 18 years. The median age for the female population was 37 years and for the male population the median age was 39 years, resulting in an overall median age of 38. The mean age for the female population was 37,72 and for the male population the mean age was 38,52, resulting in an overall mean age of 38,15. The child dependency ratio was 0,32; the age dependency ration was 0,24, which resulted in a total dependency ratio 0,73. The child-woman rate or child woman ratio showed a result of 0,30. And the overall sex ratio was 115,3 men/100 women.

The population pyramid illustrates the data from 1970:

The population pyramid (Figure 4) shows the population constitution of 4051 females and 4671 males; divided by age groups and percentages. The pyramid is narrow in the very bottom which means that child-woman rate is decreasing, but this is a new trend because the cohort ages 5-25
for male and ages 5-20 for the female population might explain that the municipality has a large number of young population. The pyramid has a ‘pinch’ in the middle which might indicate outmigration of males ages 25-44 and of females ages 20-39. It is wider on the top up to age 80 and decreases thereafter which might indicate the increase of mortality rate after 80. Overall the pyramid is skewed in terms of gender, with apparent dominance in number of males over females.

The information in pyramid is clarified in the tabulation below:

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Female (n)</th>
<th>Male (n)</th>
<th>Female (%)</th>
<th>Male (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>214</td>
<td>238</td>
<td>2.45</td>
<td>2.75</td>
</tr>
<tr>
<td>5-9</td>
<td>322</td>
<td>311</td>
<td>3.69</td>
<td>3.57</td>
</tr>
<tr>
<td>10-14</td>
<td>331</td>
<td>375</td>
<td>3.80</td>
<td>4.30</td>
</tr>
<tr>
<td>15-19</td>
<td>340</td>
<td>382</td>
<td>3.90</td>
<td>4.38</td>
</tr>
<tr>
<td>20-24</td>
<td>221</td>
<td>326</td>
<td>2.53</td>
<td>3.74</td>
</tr>
<tr>
<td>25-29</td>
<td>229</td>
<td>231</td>
<td>2.63</td>
<td>2.65</td>
</tr>
<tr>
<td>30-34</td>
<td>223</td>
<td>225</td>
<td>2.56</td>
<td>2.58</td>
</tr>
<tr>
<td>35-39</td>
<td>248</td>
<td>256</td>
<td>2.84</td>
<td>2.94</td>
</tr>
<tr>
<td>40-44</td>
<td>263</td>
<td>282</td>
<td>3.02</td>
<td>3.23</td>
</tr>
<tr>
<td>45-49</td>
<td>273</td>
<td>344</td>
<td>3.13</td>
<td>3.94</td>
</tr>
<tr>
<td>50-54</td>
<td>267</td>
<td>346</td>
<td>3.06</td>
<td>3.97</td>
</tr>
<tr>
<td>55-59</td>
<td>266</td>
<td>334</td>
<td>3.05</td>
<td>3.83</td>
</tr>
<tr>
<td>60-64</td>
<td>222</td>
<td>302</td>
<td>2.53</td>
<td>3.46</td>
</tr>
<tr>
<td>65-69</td>
<td>219</td>
<td>265</td>
<td>2.51</td>
<td>3.04</td>
</tr>
<tr>
<td>70-74</td>
<td>181</td>
<td>207</td>
<td>2.08</td>
<td>2.37</td>
</tr>
<tr>
<td>75-79</td>
<td>120</td>
<td>141</td>
<td>1.38</td>
<td>1.62</td>
</tr>
<tr>
<td>80-84</td>
<td>72</td>
<td>72</td>
<td>0.83</td>
<td>0.83</td>
</tr>
<tr>
<td>85-89</td>
<td>25</td>
<td>28</td>
<td>0.29</td>
<td>0.32</td>
</tr>
<tr>
<td>90-99</td>
<td>15</td>
<td>6</td>
<td>0.17</td>
<td>0.07</td>
</tr>
</tbody>
</table>

TABLE 3: Vilhelmina’s Demographic Characteristics in 1970

SOURCE: AUTHOR

The population tabulation (Table 3) shows gender imbalance in percentage with male dominance in almost all age cohorts. More accentuated male dominance is evident in the age gaps 20-24 and 45-69. The population in 1970 constituted of 53.55% male and 46.44% female. The municipal data shows that the child-woman is very low (0.30) and that reflects on the low number of children in contrast to the increasing number of the population age 65 and above.

6.2.2 Villages within Vilhelmina municipality 1970

The following table illustrates the relevant findings of the dataset 1970 regarding population diversity according to the measured variables:
The demographic characteristics tabulation (Table 4) shows that Kittelfjäll-Henriksfjäll is still accounted as the smallest village within the five villages in this study with 119 inhabitants. Although in this dataset Latikberg is the village that presents the lowest overall dependency ratio 0,38 and child-woman ratio 0,17. The highest overall dependency rate is identified in Nästansjö's 0,73 and the highest child-woman rate is in Kittelfjäll-Henriksfjäll's 0,53. The municipality's variable measurements for the same ratios were 0,73 respective 0,30. The diversity measurements are different for each variable when comparing the results among the five villages like the sex ratio that ranged from the lowest found in Vilhelmina (102,84) to the highest in Latikberg (140,26). Hence, the overall median ages also demonstrated considerable differences showing the lowest results of 32 years in Vilhelmina in comparison to the highest results of 48 years in Latikberg.

6.3 Demographic characteristics: Vilhelmina 2015

6.3.1 Vilhelmina municipality 2015

The population data from 2015 (Vilhelmina Kommun [Vilhelmina Municipality], 2015) had a total count of 6494 inhabitants in Vilhelmina municipality residing in over 90 different villages. The data accounted for 3171 females and 3323 males of which 1169 younger than 18 years and 5325 older or equal to 18 years. The median age for the female population was 49 years and for the male population the median age was also 47 years, resulting in an overall median age of 48. The mean age for the female population was 45,97 and for the male population was 44,56, resulting in an overall mean age of 45,25. The child dependency ratio was 0,38; the age dependency ration was 0,45, which resulted in a total dependency ratio 0,70. The child-woman rate showed a result of 0,23. And the overall sex ratio was 104,79 men/100 women.
The following population pyramid reflects the dataset 2015:

The population pyramid (Figure 5) illustrates the population composition of 3171 females and 3323 males divided per age group and in percentages. The pyramid indicates diverse demographic dynamics between females and males. It illustrates a narrow bottom, meaning that a small amount of children ages 0-5 are present in the population compared to other age groups. The pyramid indicates low child-woman rate, at the same time that it might indicate longer life expectation compared to 1970. It is slightly skewed between cohorts indicating the dominance of male or female are dependent on the age group and the ‘pinch’ in the middle might indicate out-migration or the effects of low birth rates in the past.

The tabulation below clarifies the information in the pyramid:

<table>
<thead>
<tr>
<th>Age group</th>
<th>Number of Population by gender 2015</th>
<th>Percentage of the population 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female (n)</td>
<td>Male (n)</td>
</tr>
<tr>
<td>0-4</td>
<td>121</td>
<td>101</td>
</tr>
<tr>
<td>5-9</td>
<td>167</td>
<td>187</td>
</tr>
<tr>
<td>10-14</td>
<td>192</td>
<td>190</td>
</tr>
<tr>
<td>15-19</td>
<td>188</td>
<td>196</td>
</tr>
<tr>
<td>20-24</td>
<td>188</td>
<td>221</td>
</tr>
<tr>
<td>25-29</td>
<td>157</td>
<td>217</td>
</tr>
<tr>
<td>30-34</td>
<td>127</td>
<td>148</td>
</tr>
<tr>
<td>35-39</td>
<td>135</td>
<td>148</td>
</tr>
<tr>
<td>40-44</td>
<td>158</td>
<td>156</td>
</tr>
<tr>
<td>45-49</td>
<td>173</td>
<td>191</td>
</tr>
<tr>
<td>50-54</td>
<td>226</td>
<td>203</td>
</tr>
<tr>
<td>55-59</td>
<td>219</td>
<td>270</td>
</tr>
<tr>
<td>60-64</td>
<td>236</td>
<td>268</td>
</tr>
<tr>
<td>65-69</td>
<td>189</td>
<td>347</td>
</tr>
<tr>
<td>70-74</td>
<td>218</td>
<td>205</td>
</tr>
<tr>
<td>75-79</td>
<td>169</td>
<td>167</td>
</tr>
</tbody>
</table>
The population tabulation (Table 5) describes a great number of the population over age 65 relating to age dependency rate of 0.45. In the gender perspective the pyramid is a slightly unbalanced with an overall population constituted of 51.2% male and 48.8% female. The gender gap is greater between ages 20-39. The pyramid shows a “lack” of female population ages 25-44 and male population ages 30-44. It might be explained by out-migration of the young population seeking for opportunities elsewhere.

6.3.2 Villages within Vilhelmina municipality 2015

The following table illustrates the relevant findings of the dataset 2015 regarding population diversity according to the measured variables:

<table>
<thead>
<tr>
<th>Variables</th>
<th>Bäskjö</th>
<th>Kittelfjäll + Henriksfjäll</th>
<th>Latikberg</th>
<th>Nästansjö</th>
<th>Vilhelmina</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population Total N</td>
<td>30</td>
<td>73</td>
<td>97</td>
<td>156</td>
<td>3487</td>
</tr>
<tr>
<td>Population femanle n</td>
<td>18</td>
<td>36</td>
<td>38</td>
<td>85</td>
<td>1789</td>
</tr>
<tr>
<td>Population male n</td>
<td>12</td>
<td>37</td>
<td>59</td>
<td>71</td>
<td>1698</td>
</tr>
<tr>
<td>Population &gt;18</td>
<td>2</td>
<td>14</td>
<td>15</td>
<td>32</td>
<td>662</td>
</tr>
<tr>
<td>Population ≤18</td>
<td>28</td>
<td>59</td>
<td>82</td>
<td>124</td>
<td>2825</td>
</tr>
<tr>
<td>Median age female</td>
<td>55,0</td>
<td>49,5</td>
<td>45,0</td>
<td>40,0</td>
<td>48,0</td>
</tr>
<tr>
<td>Median age male</td>
<td>55,0</td>
<td>57,0</td>
<td>56,0</td>
<td>48,0</td>
<td>42,0</td>
</tr>
<tr>
<td>Median age overall</td>
<td>55,83</td>
<td>44,14</td>
<td>48,92</td>
<td>41,11</td>
<td>46,27</td>
</tr>
<tr>
<td>Mean age female</td>
<td>43,25</td>
<td>51,86</td>
<td>49,17</td>
<td>45,48</td>
<td>42,09</td>
</tr>
<tr>
<td>Mean age male</td>
<td>53,20</td>
<td>48,05</td>
<td>49,07</td>
<td>43,10</td>
<td>44,23</td>
</tr>
<tr>
<td>Child dependency ratio</td>
<td>0.05</td>
<td>0.37</td>
<td>0.25</td>
<td>0.33</td>
<td>0.27</td>
</tr>
<tr>
<td>Age dependency ratio</td>
<td>0.38</td>
<td>0.71</td>
<td>0.65</td>
<td>0.49</td>
<td>0.44</td>
</tr>
<tr>
<td>Dependency ratio overall</td>
<td>0.43</td>
<td>1.09</td>
<td>0.90</td>
<td>0.81</td>
<td>0.71</td>
</tr>
<tr>
<td>Child/woman ratio (fertility rate)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.09</td>
<td>0.29</td>
<td>0.22</td>
</tr>
<tr>
<td>Sex ratio overall</td>
<td>66,67</td>
<td>102,78</td>
<td>155,26</td>
<td>83,53</td>
<td>94,91</td>
</tr>
</tbody>
</table>

According to the results above (Table 6), the village of Bäskjö presents the smallest population in 2015. Bäskjö also shows the lowest overall dependency ratio 0.43 and the lowest child-woman rate of zero together with Kittelfjäll-Henriksfjäll. The highest overall dependency ratio is presented in Kittelfjäll-Henriksfjäll and the highest child-woman rate is accounted in Nästansjö. The overall dependency ratio of the municipality is 0.70 and the child-woman rate is 0.23. The sex ratio results are diverse among the villages with the highest of 155,26 in Latikberg and the lowest of 66,67 in Bäskjö. Population diversity is present in the micro-scale of villages within a municipality.

6.4 Historical background

This section of the thesis will highlight the historic background relevant to the case study area drawn from secondary literature and supplemented impressions from the interviews performed during the study visit to Vilhelmina (Appendix 2).
6.4.1 Secondary data from literature

6.4.1.1 Vilhelmina Municipality

Vilhelmina municipality has an extension of 8 120 km\(^2\) (Vilhelmina municipality, 2015) and is the largest municipality in Västerbotten county (Eriksson, 1946). Erikson (1946) claims that Vilhelmina’s extension is 183 km from the northwest corner to the southwest corner and comprehends 85 km in its broadest point from North to South; the municipality is part of the region denominated (Vilhelmina municipality, 2015). The population density is about 0,86 inhabitants per square kilometre (Ibid.).

Bylund (1956) and Enequist (1960) claim that Vilhelmina was the last frontier for the Swedish colonization. The municipality of Vilhelmina consists of the Marsfället on the northwest which is also the highest point of the municipality and the mountains that create a ‘V’ shaped tributaries forming two long and narrow lakes denominated Malgomaj and Vojmsjön (Lundberg, 1997). Lundberg (Ibid.) describes the municipality as dominated by the mountains on the west and lakes, hills and wetlands towards the eastern part of the municipality. She also mentions that both lakes are water level regulated because of the hydropower plats built in the 1950s. The lower point of the municipality is located close to Råsele and is situated 317 meters above the sea level (Eriksson, 1946).

The colonization of the Vilhelmina, then called parish not municipality, started in the 1700s by the Swedish settlers at the same time as the parishes of Fredrika to the southeast and Tärna to the north (Bylund, 1956). The delay of the settlements are explained by the difficulties to access these areas chiefly due to geological and hydrological characteristics that postponed the construction of access roads (Lassila, 1972). In order to promote settlements, the Swedish crown granted settlers willing to colonize the area between 1750 and 1890 certain incentives such as: 15 to 30 years tax exemption, the right of use of the forest wood, the right to hunt and fish within 5 kilometres from their residence, the right to use the land for agriculture, and so on (Vilhelmina Museum, 2015).

The settlers lived mainly from what nature could provide in terms of land, forest and water. As time passed by, agriculture and animal herding became important activities increasing the level of self-sufficiency of the families to basic activities such as hunting and fishing. According to (Berg, Gustafson, Karlsson, and Rittvall, 2000) the population of Vilhelmina accounted for 791 inhabitants in 1804 and 6578 inhabitants in 1900. Forestry flourished in the area and became an essential part of the local economy, employing many people (Berg et al., 2000) along with agriculture. In about 1872 the road between Åsele and Fredrika and Åsele-Vilhelmina-Dorotea was ready. Between the years 1897 and 1915, the municipality of Vilhelmina accounted for 1500 inhabitants that emigrated to Southern Sweden and to North America. Ironically enough, the literature says that they emigrated not only because of the "famine" years but also due to the lack of land (Berg et al., 2000; Vilhelmina Museum, 2015).

In an attempt to break the outmigration, decrease unemployment, and attenuate the revolutionary demonstrations in the area, the Crown decided to incentivise a new era of colonization settlement by allowing the cultivation of wilderness land, a movement that started in 1918. As part of the ‘new times’ all kinds of church penalties where dropped 1918. A great development period of modernization had initiated with the 1917 railroad (inlandsbanan) bringing people, ideas and influences from outside the area. Nevertheless, the area attracted also the first tourists because of the ‘exotic’ mountains and nature (Berg et al., 2000). But with the municipalisation of Vilhelmina in 1936, the church town centralized services and initiated a new era of urbanization instead (Ibid.).
Optimism and development marked the history of the region with the establishment of hydropower plants between 1950 and 1960 (Berg et al., 2000). 1959 was the peak of Vilhelmina’s population reaching 11425 inhabitants, followed by a negative trend due to the mechanization of forestry industry and the restructure of agriculture which led to the emigration of the population to the industrialized centres in the south of Sweden (Ibid.). During the period between 1950 and 1999 Vilhelmina decreased its population by fifty per cent (Ibid.). Boliden AB started an ore extraction in Stekenjokk mine in 1976, but it had a sudden closing down in 1988. Thereafter tourism started spreading its swings in the mountain side of the municipality most specifically in the villages of Borgafjäll, Saxnäs, Klimpfjäll and Kittelfjäll(Ibid.).

Vilhelmina municipality’s background describes in short the journey that the area has gone through. This rural municipality has many assets at the same time it faces contemporary challenges chiefly regarded to social services administration, ageing, urbanization, unemployment and accessibility.

6.4.1.2 Bäsksjö Village

Bäsksjö village is situated in the eastern part of Vilhelmina municipality and is 30 kilometres away from Vilhelmina town. The first settlers of the village were the Sami Jan Jansson and Sjul Arvidsson in 1780 (Vilhelmina municipality, 1986). The area was utilized for cultivating crops and by the first decades of the 1900s the village had complemented its economy with the forestry industry counting with mill, sawmill, school, a carpentry organisation (established in 1918) and an electricity organisation (established in 1921). The village was able to produce power to the mill, sawmill, carpentry and the power plant (Vilhelmina municipality, 1986). In 1949 Bäsksjö had 500 inhabitants, a decline of this number was evident after 1950 (Vilhelmina municipality, 1986).

6.4.1.3 Kittelfjäll and Henriksfjäll Villages

Kittelfjäll and Henriksfjäll villages are located in the northwest of Vilhelmina municipality. Kittelfjäll was founded when Lars Larsson from Dalarna and Anna Gustafsdotter from Röbäck moved in with the grant of the Crown in 1815 (Ewald and Thomasson, 2012). In 1824, Lars Larsson’s son Henrik moved to a placed named Little Kittelfjäll [Lilla Kittelfjället], later named Henriksfjäll; the division of the villages into Kittelfjäll and Henriksfjäll happened between 1918 and 1919 (Ewald and Thomasson, 2012).

I decided to consider Kittelfjäll and Henriksfjäll villages together in this thesis, because of two factors: proximity and common history. The villages were totally isolated and a trip to Vilhelmina town would take many days in the beginning of the 1900s. The connection of the area to other parts of the municipality and beyond was initiated in 1924 with the road between Kittelfjäll and Dikanäs and in 1930 with the road between Dikanäs and Dajkanvik, given the area connection to places like Vilhelmina; same year the first telephones were installed (Ewald and Thomasson, 2012). The inhabitants grew crops for subsistence and the natural appeal of the mountains attracted the establishment of a hotel in Kittelfjäll in 1956 owned by the Swedish Tourist Association [Svenska Turistföreningen]; this was followed by the installation of the first ski lift close to the hotel in 1960 initiating the tourism activity in the area (Ewald and Thomasson, 2012). Kittelfjäll has its main activity based on alpine tourism and it is also the case for Henriksfjäll, as the tourists have to pass by the village to reach Kittelfjäll. Nowadays the area is trying to diversify the tourism and also create products that can be commercialized during the summer season such as angling, hiking, cycling, etc.
6.4.1.4 Latikberg Village
Latikberg, also called Latikbäck or Latikselet, was founded at the end of the 1700s and is situated in the eastern part of Vilhelmina municipality, about 20 kilometres from Vilhelmina town. The first document with the name Latikberg is dated from 1782 (Gustafson and Gustafson, 2003). According to Gustafson and Gustafson (2003:10), the first settler that was granted permission from the Crown to settle in Latikberg was Johan Larsson in 1779. Thus, the main activity in the area was based in the crops cultivation for subsistence and the extraction of what nature gave in terms of the forest, fishing and hunting. With time, animal herding also became a part of the activities of the village. Many people worked in the forest industry and the village lived a phase of development and growth in the first half of 1900s. The number of inhabitants constantly increased between the late 1700s and early 1900s (15 in 1780, 91 in 1828, 146 in 1868, 190 in 1892, 311 in 1920) but declined to and 150 by 1990 (Gustafson and Gustafson, 2003). The road between Vilhelmina and Latikberg was completed in 1918 and between Latikberg and Järvsjö in 1922 (Gustafson and Gustafson, 2003). In 1885, a school opened in the village and in 1924 the village got electricity. Currently the village still has the school, but there is an investigation going on at the moment speculating if the village can keep the school open or if it will be closed.

6.4.1.5 Nästansjö Village
Nästansjö village was founded in the 1700s and is situated 18 kilometres north on Vilhelmina town. It is part of Ångermanälvens water system that forms lake Nästansjö. The first settler of the village was Nils Nilsson who moved in with his family in 1760s. Agriculture was the most successful activity in the area, complemented by animal herding. The village was known for its craftsmanship within weaving, carpentry and blacksmith. In 1907 the inhabitants of the village built a trading association. Although the road was done in the 1930s, Nästansjö was a distribution centre mainly because of the easy access by water to other important ports. In that period, the village had post office, school, dairy, chapel, café and bakery (Vilhelmina municipality, 1986). Lately, Nästansjö is characterized by the retired population and most inhabitants commute to Vilhelmina town and other locations for work (Vilhelmina municipality, 1986).

6.4.1.6 Vilhelmina Village
Founded with the name Volgsjö in the 1700s, the town changed the name to Vilhelmina in 1804 borrowing the name from king Gustav IV Adolfs’ wife (Berg et al., 2000). A chapel was built in 1781 and was a place for gathering. In 1840 the Volgsjö Chapel was replaced by the Vilhelmina Church close to the church town that allowed people to comply with the compulsory church attendance established by the Crown and was a place where people connected to ”get together” (Vilhelmina municipality, 2015). After the municipal reform in 1862 the services to the population started becoming more centralized towards Vilhelmina town, after the municipal reform of 1974 the trend became even more accentuated. Suddenly, Vilhelmina town was not only a ”gathering place”, but also a place with political power. The village increased by over 3000% from 107 in 1890 to 3487 in 2015.

6.5 Demographic change maps
On the following maps, Vilhelmina town is identified with a “yellow star” which does not refer to the size of the population. Otherwise, the circle over Vilhelmina in 1970 and 2015 would hide the circles of the surrounding villages. The circles are related to the location of the closest village where the residents were registered in the datasets and become larger or smaller corresponding to the amount of inhabitants in that particular area. The 1890 map includes about 70% of the actual population from the dataset 1890, the 1970 map includes about 85% of the actual population from the dataset 1970 and the 2015 map includes about 93% of the actual population from the dataset 2015.
6.5.1 Spatial demographic settlement maps

The demographic settlement map from 1890 shows concentration of settlements in the southeast portion of the municipality with small villages towards northwest. The empty areas are mostly characterized by the mountain ranges, where the infrastructure was sparse at the time and settlements difficult to establish. The settlements are mostly concentrated along the two long and narrow lakes of Malgomaj and Vojmsjön. The settlements in the northwest were not large nor many due to the difficulties to access these areas chiefly driven by geological and hydrological characteristics. The small settlements noticed on the mountain ranges such as Kittelfjäll were a result of the governmental incentives such as 15 to 30 years tax exemptions to people willing to settle in these areas. But these areas were totally isolated and trips to Vilhelmina town could take days by that time. Bäksjö, Latikberg and Nästansjö, each had double the population of Vilhelmina town in 1890. These three villages were successful in agriculture and many people also had jobs related to the forestry industry.
The demographic settlement map of 1970 shows that certain villages became larger and some disappeared. There are evidences that these are signs of some sort of micro-urbanization. It also shows a predominance of settlements in the southeast area many large villages such as Nästansjö and the appearance of larger villages even in the northwest like Kittelfjäll that developed tourism. Båsksjö has decreased its population by 50% compared to 1890; Latikberg shows almost the same number, Kittelfjäll-Henriksfjäll and Nästansjö have both doubled the population while Vilhelmina town increased its population from 107 in 1890 to 3495 in 1970. The empty spots on the map reflect the “cultivation limit” and can be easily seen if you draw a north to south line crossing south on Stalon.
The demographic settlement map of 2015 shows the disappearance of many villages and the enlargement of some others. The polarization of the settlements between northwest and southeast is accentuated. Four villages of this study have reduced in size, but are more evident in Bäksjö, Kittelfjäll-Henriksfjäll and Latikberg. Nästansjö has also decreased its population, but it is harder to see the change in the map. The “cultivation limit” still marks a “line” that divides the municipality in two. Furthermore, the non-populated areas have increased, reflecting the increase in preserved areas and areas for forestry exploration. Vilhelmina town has maintained almost the same number of inhabitants as it presented 3495 in 1970 and 3487 in 2015.
1.1.1 Spatial demographic change maps sequence 1890-1970-2015

Maps, when used in a sequence, help us visualize the dynamics of spatial demographic change. I decided to display the demographic settlement maps in sequence 1890, 1970 and 2015.

The spatial demographic change maps sequence helps us visualize the settlement’s dynamics through time. The polarization of the municipality is accentuated between northwest and southeast. The northwest of the municipality has flourished because of tourism as the new driving force of the area. And the southeast surrounding Vilhelmina town has grown because of centralized public services and facilities. These findings are relevant to answer the questions of the thesis as it shows that there is a relation between historical events and how the settlements look like. Vilhelmina is not isolated from the outside world, as the economical changes and political decisions influence i.e. where and when they are settled in the spatial perspective. The number of populated villages has varied in the three points in time from 140 in 1890 through 190 in 1970 to 90 in 2015.
7 Discussion

The literature on demography of rural northern Sweden has focussed on ‘decline’ (Friedlander, 1969; Stone, 1971). The findings of the thesis show that assumptions of this nature is still valid in certain parts of the rural areas, but is not evident in all locations, therefore I might be able to argue that generalizations in these matters do not tell the ‘whole truth’ of the rural periphery and may ignore the phenomenom of ‘fragmented’ development, which is present in rural areas in Sweden as described through the findings of this study.

Hence, this thesis may have found empirical indicators that may comply with the suggestions of more recent studies of rural development arguing that generalizations when studying the ‘rural periphery’ may overlook the diversity of experiences of rural areas by treating the ‘rural’ as ‘one’ or ‘the same’ (D. Carson and Koch, 2013; Cernie-Maly et al., 2014; Hedlund, 2014; Hoggart and Paniagua, 2001; Koch and Carson, 2012), which the empirical of the study might have demonstrated by illustrating the diversity of the villages between them in the same time and the diversity of the demographics of the same village through time (Table 7).

The compiled results of the demographic characteristics of the villages in this study are illustrated below:

<table>
<thead>
<tr>
<th>Variables</th>
<th>Bäskjö</th>
<th>Kitellfjäll + Henriksfjäll</th>
<th>Latåkberg</th>
<th>Nästansjö</th>
<th>Vilhelmina town</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population Total N</td>
<td>216</td>
<td>123</td>
<td>39</td>
<td>37</td>
<td>119</td>
</tr>
<tr>
<td>Population female n</td>
<td>108</td>
<td>56</td>
<td>18</td>
<td>23</td>
<td>54</td>
</tr>
<tr>
<td>Population male n</td>
<td>108</td>
<td>67</td>
<td>22</td>
<td>14</td>
<td>65</td>
</tr>
<tr>
<td>Population &gt;18</td>
<td>104</td>
<td>34</td>
<td>12</td>
<td>12</td>
<td>32</td>
</tr>
<tr>
<td>Population ≤18</td>
<td>116</td>
<td>89</td>
<td>28</td>
<td>25</td>
<td>87</td>
</tr>
<tr>
<td>Median age female</td>
<td>18</td>
<td>45.0</td>
<td>55.0</td>
<td>18</td>
<td>36.0</td>
</tr>
<tr>
<td>Median age male</td>
<td>20</td>
<td>44.3</td>
<td>55.3</td>
<td>27</td>
<td>36.0</td>
</tr>
<tr>
<td>Median age overall</td>
<td>19</td>
<td>45.0</td>
<td>55.0</td>
<td>20</td>
<td>36.0</td>
</tr>
<tr>
<td>Mean age female</td>
<td>25.7</td>
<td>41.1</td>
<td>55.8</td>
<td>22</td>
<td>38.3</td>
</tr>
<tr>
<td>Mean age male</td>
<td>24.7</td>
<td>41.8</td>
<td>43.2</td>
<td>26</td>
<td>35.5</td>
</tr>
<tr>
<td>Mean age overall</td>
<td>25.2</td>
<td>41.2</td>
<td>53.0</td>
<td>24</td>
<td>36.4</td>
</tr>
<tr>
<td>Child dependency ratio</td>
<td>0.32</td>
<td>0.25</td>
<td>0.28</td>
<td>0.42</td>
<td>0.35</td>
</tr>
<tr>
<td>Age dependency ratio</td>
<td>0.09</td>
<td>0.13</td>
<td>0.38</td>
<td>0.26</td>
<td>0.71</td>
</tr>
<tr>
<td>Dependency ratio overall</td>
<td>0.41</td>
<td>0.66</td>
<td>0.51</td>
<td>0.64</td>
<td>0.61</td>
</tr>
<tr>
<td>Child/woman ratio (fertility ratio)</td>
<td>0.8</td>
<td>0.32</td>
<td>0.08</td>
<td>0.13</td>
<td>0.33</td>
</tr>
<tr>
<td>Sex ratio overall (men/women)</td>
<td>100.00</td>
<td>119.64</td>
<td>66.67</td>
<td>40.00</td>
<td>120.57</td>
</tr>
</tbody>
</table>

TABLE 1 POPULATION DIVERSITY COMPARISON TABLE PER VILLAGE 1890-1970-2015

SOURCE: AUTHOR

The variables (Table 7) show that diversity is present considering both at the micro and at temporal scales. When looking at the mean and median ages variables, the findings show that they increase in the all villages at the temporal scale, but they did not change in the same way in all the villages. Furthermore, it is noticeable that considering the same point in time i.e. 1890 the overall mean ages and overall median ages between the villages are not the same. This finding might agree with D. Carson and Koch (2013) argumentation that there is presence of diversity in rural areas. The thesis’ findings may push the argumentation further, proving that demographic diversity is present even at the micro-scale of villages. I should also shed light on the fact that the villages included in the study presented demographic diversity already in 1890. This last finding might argue against the idea that driving forces for the ‘heterogeneous’ (diverse) countryside were the post-productivism and globalization claimed by D. Carson and Koch (2013), Heley and Jones.
(2012), Marsden et al. (1993), and Woods (2011); because the tabulation (Table 7) shows that the villages were already diverse back in 1890, before post-productivism and globalization.

If we now turn the focus on Vilhelmina town, it is possible to notice that the village has increased in population by over 3000% from 1890 to 2015, empirically illustrating that within the municipality, Vilhelmina town has experienced ‘urbanization’ and did not ‘decline’. If urbanization is present at the micro-scale of the municipalities this finding should argue against the supposed dichotomy between “urban” and “not urban” described by Tocco et al. (2012) and Wiggins and Proctor (2001:427-428). It also could argue against the common notion of “rural decline” because not all localities decline as assumed in the generalized policies such as the European Union’s CAP. The finding leans more towards Woods' (2005) argumentation that the distinction was more useful as a tool to be understood by institutional organizations and governmental practitioners than an existing polarization of the term rural being opposite to urban. The demographic composition of the villages has highlighted sharp differences between the variables and also shed light on noticeable variations at the temporal and spatial scales, confirming Mormont’s (1990) claim that contemporary rural areas could no longer be considered as homogeneous, but instead should be seen as spaces presenting multiplicity.

According to the overall sex ratio (Table 7). It is possible to notice that the demographic characteristics of the villages are diverse in terms of gender and following different evolution patterns that could not be identified by this study. However, the finding shows a relation between the historical finding and the male dominance of 1970 in all the five villages, which might be a result of the large industry specialization within forestry and mining. The historical data and the information from one of the interviewees seem to agree on that economy, jobs and the political decisions have had a strong influence on where and how people moved and might show that Carson (2011:4) should be correct in arguing that there was “a relation between economic and demographic development”. Hence, this finding might support the assumptions from Hedlund (2014) and the OECD (2006) regarding the demographic diversity of the rural areas applied even if we looked at it from the micro-scale of the villages within a municipality in rural areas. It might also stress the fact that the five villages presented differences in terms of gender, except to the dataset of 1970 there the economical influences might have influenced a male dominance in all villages of the study.

The villages are diverse and present ‘fragmented’ development through time as described by the pyramids’ sequence below:

![Population Pyramid Sequence](image)

**Figure 1 Vilhelmina Municipality’s Population Pyramid Sequence 1890-1970-2015**

**Source: Author**

The overview of Vilhelmina municipality’s population pyramids (Figure 10), where the left side of the pyramid represents male population and the right side of the pyramid represents female population. Vilhelmina municipality indicated a ‘rapid growth’ population pyramid in 1890,
indicated a ‘zero growth’ population pyramid in 1970 with probable ‘outmigration’ of population in working age and developed indicators of ‘negative growth’ population pyramid in 2015 with possible indicators of out-migration or very ‘low birth rate’ in the past, which could not be confirmed by the findings. But this overview does not comply with the ‘demographic characteristics’ specifically describing Vilhelmina town. Which may reinforce the idea of ‘fragmented’ development.

In 1890 the ‘rapid growth’ pyramid represented a great number of children and very few people over 65 years of age. This reflected a pattern of the society of that time especially in the rural areas where despite the lack of infrastructure and the hardship of life quality, the population was growing. Maybe, in the study area, it was a result of what was explained in the historic background that described that the Crown had granted incentives such as tax exemption, right to cultivate the land, use the forest wood, fish, and hunt to settlers willing to colonized the rural area (Vilhelmina Museum, 2015). In this period, of family planning and birth control were not yet parts of the social construct.

In 1970, after the wars and the industrialization in the southern part of the country (Vilhelmina municipality, 1986), Vilhelmina municipality presents ‘zero growth’ pyramid with a male dominated population with a decrease of female population in the ages between 20-40 and male population in the ages between 25-35 and also a shrinkage of the percentage of children ages 0-5 and an increase of elderly over 65 compared with 1890. This period was marked by out-migration from rural-to-urban of the young population after they had graduated from high school looking for job opportunities in the larger urban areas. The instable employment situation could also be a contributor to the decrease in child-woman rate through birth control or as families might plan to postpone childbearing due to extended education opportunities. There were also other events that could be connected to the ‘pinch’ in the middle of the population pyramid 1970 such as the end of the construction of the hydropower plant in 1970, which might have had great impact on the population moving out of the municipality combined to the job opportunities in the manufacture industries in the south of Sweden. It also might be explained by a previous ‘low birth rate’ years before, that the study could not explore due to the framework of the research.

In 2015, the ‘negative growth’ pyramid presents a decrease of the female population between 30-50 and of the male population between 35-45; the percentage of children ages 0-4 has decreased and the amount of elderly over 65 has increased compared with 1970. The ageing of the municipality follows the national pattern of population, but the “pinch” in the middle of the pyramid might be explained by the lack of opportunities such as study and/or jobs described in previous studies. This finding may argue partially ‘against’ and partially ‘for’ Hedlund’s (2014:10) argumentation that “the Swedish countryside is not dominated by depopulation and ageing” because in the case of the studied villages in Vilhelmina, the population aged from 1890 to 2015 at the same time that depopulation was not evident in all the villages. The connection between historical events, and the population pyramid and demographic characteristics tabulations is empirical evidence that might confirm Knox and Marston’s (2004) argument that even remote spaces were linked to the global contexts and therefore were constantly responding to change. The pyramid also shed light to a new phenomena, the population is moving from Vilhelmina municipality later in life in 2015 compared to 1970 that might be explained by the informants that they noticed that many young adults are still living with the parents after the age of 18 due to the fact that they debute the job market later in life, meaning that they are also economically active/independent later in life. This finding may support the argument that there was a relationship between economic and demographic development (Carson, 2011).
The informants explained that a recent phenomenon is that a great amount of elderly have moved back to areas such as Kittelfjäll-Henriksfjäll where they grew up after retirement, which challenges the local government to adapt to the needs of the “new population” such as elderly care and other services. This finding might agree with researchers that argued that diverse realities affect demographic change and that the society has to negotiate and re-balance according to the change of the shifting population needs (Cernic-Maly et al., 2014). It also should reiterate the idea that spatial places include cultural and emotional signifiers that might appeal to people that interacted with the landscape (Robertson, 2006). If the study ought to look further, an option to assist the municipality in taking advantage of the human capital moving into these areas would to consider viabilization post retirement work opportunities that could assist counter balancing the demographic ageing effects (Wöhrmann et al., 2014). But it would be important to keep in mind that this finding was specific to Kittelfjäll-Henriksfjäll, therefore I might argue that diversity comes with a price, the need of “place-based (rural) policies” as suggested by Hedlund (2014).

The demographic change over time is illustrated in the maps sequence below:

![Maps sequence](image)

**Figure 2 Vilhelmina Municipality’s Spatial Demographic Change Maps Sequence 1890-1970-2015**

*Source: Author*

The demographic change over time is explained by historical events found in secondary data on how the colonization was handled, and how the government managed the forest and land use. The cultivation limit that divided the municipality in northwest and southeast was an important factor that decided how the settlements would be established. In 1890 the population was mostly concentrated in the south-eastern side of the cultivation limit with many small villages; in 1970 the population had moved northwest of the municipality with small villages starting to disappear and some villages becoming bigger, some sort of micro-urbanization. In 2015, it is possible to observe a polarization of the municipality into northwest and southeast; the northwest is where tourism has been developed and the southeast is where the social and public administration services are concentrated. The finding regarding the development of tourism in these areas may take in consideration the adaptation to the new market for tourism from the ageing population worldwide (Bernini and Cracolici, 2015), as the secondary data mostly mentioned activities related to winter active sports such as skiing and snowmobile being the largest products for the local tourism, I should argue that there is room for diversification of the products in order to suit the raise of a ‘new’ ageing global market that might not be interested i.e. winter sports.

The large amount of unpopulated areas are currently, preservation stations such as Marsfjäll mountain ranges that the government took back after the leases had expired explained both in the interviews and also by the historical background of the study case. This finding might support the academic argumentation on the need of place-based policies (Hedlund, 2014) and
sustainability assessments that were easy to understand and useful in directing policy and decision-making (Graymore et al., 2008).

The settlement dynamics of the study area were illustrated by the spatial demographic maps sequence and could be explained by relations to important events that have impacted growth or decay of the five villages. Therefore I might agree with Jones and Woods (2012), and Svedjemo (2014) on their argumentation that historical events have influenced settlement dynamics. Furthermore I could also notice that external changes in the political and demographic aspects played their part in how settlements have expanded and contracted in terms of population demographic over time and space as argued by Svedjemo (2014). Hence, I could notice, through the descriptive findings, that population dynamics, demographic change, and settlement development paths are connected to historical events, political change, economic policy directions, industrial developments, and infrastructure as argued by D.A. Carson and Carson (2014).

The next section will present the conclusion of the thesis with a brief summary of the thesis and recommendations for future studies.

8 Conclusions

The overarching purpose of the thesis has been to study demographic change, by investigating the demographic data of the rural periphery in Sweden, and further investigate if changes were present, and if so, if they were diverse over time and space.

The research showed evidence of ‘fragmented development’ and that demographic diversity already existed in 1890 before the start of post-productivism and the globalization process. It may have found signs that micro-migration and micro-urbanisation might have occurred as illustrated by the growth of Vilhelmina town and the disappearance of many small villages in the municipality. Furthermore, the empirical study supports the argument that not all rural villages are experiencing depopulation or decline. Based on this study, I might agree with Knox and Marston (2004) that the global background of the contemporary days are full of diversity which are in constant flow, and just like in the global context, localities are also constantly responding to change. The thesis presents information about the population composition and change in Vilhelmina, and can assist in increasing the knowledge that might support future decision-making and policies to enhance the living standards of the inhabitants in the various villages of the municipality. Furthermore, by considering the human capital in the municipality for planning strategies, Vilhelmina could apply local-based planning strategies to respond to the population diversity present in villages throughout the municipality as proposed by Hedlund (2014).

The thesis’ limitations include, but are not limited to, the timeframe of the study and to the study of a single case, which does not allow generalizations or broad comparisons. The possibilities to draw any general conclusions from a local study like this can always be discussed. The different demographic change patterns showed across the studied villages within the same municipality may have been influenced different factors such as structural as well as individual, demographic and economical, political and social as well as social and geographical. Based on the results of the thesis, however, it sounds reasonable to assume that the differences between the villages are mainly explained in 1890 by social-economic and geographical factors; in 1970 the changes were chiefly explained by social-economic and political factors; and in 2015 the changes are still mainly explained by the same factors of 1970 added by demographic factors. In all three cases the structural and individual factors seem to have played a more secondary role. In addition to the
limiting issues of the study, it might be relevant to mention that the study has raised questions beyond the scope of this thesis, and therefore it was unable to answer questions concerning mobility, micro-urbanization and the population composition in other points in time i.e. after the wars.

The empirical study provided results that might allow us to answer the research questions:

Q1: Is there diversity in demographic characteristics when comparing proximate locations in the Swedish rural setting? Yes, there is diversity. The empirical study validates that diversity is present through noticeable differences both in terms of age but also in terms of gender. It might also be important to highlight that diversity is noticeable not only through time, but also within villages comparing the results at the same point in time. The demographic tabulations showing the demographic characteristics and also the population pyramids also show that there are differences in the demographic compositions of the datasets of 1890, 1970 and 2015, and therefore diversity is evident through time and space, and between proximate locations in the Swedish rural setting.

Q2: If there is, is it something that has recently emerged, or something that has been present for a long period of history? According to the empirical study, diversity can be considered present for a long period of history as the findings show that the population presented demographic diversity between the villages already in 1890 (see table 8).

Theoretically, this study may contribute to the understanding of ‘rural’ because it describe ‘how it was’ and ‘how it really is’ now in the descriptive demographic approach of a part of rural Sweden. Moreover, the findings of the thesis were: ‘fragmented’ development over time; differences between individual places at different time; differences between different places at the same time; local, regional, national and international events and trends are likely to have played a role in these results. Hence, according to the findings, I may conclude that even since the 1960s, not all places share the presumed experience of rural ‘decline’. Furthermore, even the same events influenced proximate places in different ways depending on their specific location, land use regulations, access to jobs, and availability of infrastructure. Practically, the thesis shall assist local planners to take ‘place-based’ decisions when planning for the future of rural areas when deciding where to place schools, health centres, youth activities centres, playgrounds, or invest in economic opportunities, etc.

Without doubt, the municipality of Vilhelmina, in its entirety, is facing challenges related to demographic change such as ageing, ‘lack’ of the population in working age (maybe due to out-migration), and low birth rate. These challenges wake other problems such as the maintenance of public service delivery to sparsely populated areas. The response to these challenges does not seem to be simple due to its complex implications; therefore a bottom up approach could be better suited to discuss and share responsibilities between the central government, local government, private business partners and the community. Although it is important to understand that the locations within the municipality are diverse and require local-based governance.

Based on this study, I would recommend future studies to develop comparative researches that could be performed in other rural areas to analyse patterns in the demographic change from a micro-perspective. These could assist developing theories to better understand rural demographic change in detail. I would also recommend a further development of the current study adding census data from other points in time i.e. 1920 and 1950, which could add new comparative elements to the findings of this study and increase the understanding of the dynamic nature of demographic change in Vilhelmina. Furthermore, questions concerning micro-mobility and micro-urbanization could also be focus of future researches.
9 References


Territorial Policy. OECD, Paris.


APPENDIX 1: INTERVIEW GUIDE

The interview questions were addressed to the informants of Vilhelmina municipality. An explanation regarding the ethical issues of the interview and the study were provided to the informants, and the consent to record the interviews was given by the informants.

The interview guide included the following questions:

1. **Which were the important historical events that could have affected the population composition of Vilhelmina through time?**

2. **Which were the important historical events that could have affected the settlements over time and space?**

3. **Which were the political decisions that could have influenced the population composition and distribution?**

4. **How was the trajectory of the municipality’s economy?**

5. **Currently, what is the base of the economy in Vilhelmina?**

6. **What are the current challenges faced by the municipality?**

7. **Does Vilhelmina present action plans to current population challenges?**

8. **Is population composition, in terms of age and gender, affect the way the municipality plan services?**

9. **How does land use management policies influence the population? In a direct and an indirect way?**

10. **How does ecological aspects influence settlements?**

11. **How the development of infrastructure influenced the population in the three points in time of the study? 1890, 1970 and 2015?**

12. **How important were and is industries such as forestry and tourism? Can you name and inform why other industries were important? When?**
APPENDIX 2: SUPPLEMENTARY PRIMARY DATA FROM THE INTERVIEWS

The informant one is a practitioner in Social Welfare planning of the municipality, the informant two is a museologist and the third is a researcher of settlements and the people of the region. All three informants were experts in the history of the place, the settlers, the development and struggles, the ups and downs of Vilhelmina and the challenges of the municipality. I will describe the information in a brief way, highlighting the points relevant to the thesis:

The settlers that came to Vilhelmina had basically two characteristics: (1) the ones that took the advantages of the Swedish governments’ incentives such as tax exemption. (2) The peasant population from the densely populated areas looking for new opportunities. The settlements were mainly situated by rivers and lakes because the other areas where difficult to reach due to the geological and hydrological formations of the area and a lack of access infrastructure at the time.

By 1870, the Swedish Crown, in an attempt to protect the natural reserves (forest) decided to control the agricultural areas by imposing the “cultivation limit” (Odlingsgräns) allowing cultivation of the land and the settlements southeast of this boundary. The important step towards the settlements in areas in the northwest were a change in this policy giving some people the permission that facilitated settlers to live northwest of the “cultivation limit” when the government decided to populate the vast forest areas owned by the Crown (kronoparken). Following this decision, large projects were implemented aiming at improving the infra-structure such as mail service, roads, schools, and other services to make it possible for people to live in the mountain ranges of the municipality and also to explore the forest. The industrialization of the southern parts of Sweden initiated vast projects to explore the watercraft and build hydropower plants in the municipality.

When the permissions for the mountain cabins in the forest areas owned by the Crown (kronoparken) expired, the government “bought” back these areas and transformed them into preservation areas, claimed to protect the nature and also the interests of the indigenous people (Sami population). The Sami population concentrates in Klimpfjäll and Saxnäs in the South, Kittelfjäll and Dikanäs in the northwest and in the areas of south and north Vilhelmina town.

Vilhelmina town was a place for gathering because of the church town. It started to grow when the railroad came to town around 1925, and the harbour in Malgomaj attracted many workers to distribute the timber production, the forest industry required a workforce concentrated in the areas of: 1-Latikberg-Bäksjö, 2-Malgomaj, and 3-Marsfjäll.

The current challenges for the municipality are many. Among the most important are: the increased amount of retired people moving back to areas such as Kittelfjäll in combination to the tourist workers that do not appear in the census as permanent residents that impose needs that have to be solved by the municipality related to services such as health care and schools. How to revitalize the area according to the demands of the “new people” moving in? What has to be changed to solve the deficit in the municipality’s economy? These are some of the current key questions that the municipality is struggling with.

Another challenge is the dichotomy between economic interests and ecological interests. And to add to the complexity of the matter, the municipality also has to handle the interests of the Sami population. An example is the snowmobile tourism that has grown by 300% since 2014 and presents an upcoming conflict because the area where tourists are allowed to drive the snowmobiles is located south on Ångermanälven and crosses straight through a Sami’s reindeer
pathway. Another example is the current political and economical interest in re-opening Stekenjokk mine located right in the middle of the Sami land.

Economy, jobs and the political decisions have strong influence on where and how people move. The historical path of Vilhelmina presents: first the people were given land to colonize the area; then the forest became valuable and the Crown wanted to protect the forest by limiting the allowance of land for crops cultivation; this was followed by protests and emigration that made the government change the law so that people were again welcomed to settle and cultivate the land.

The informants continue describing that during the upcoming of the industries after the wars in the south of Sweden, the state provided incentives to the population living in Norrland to move and work in the industries. Such incentives were grants for moving expenses and housing. In order to support the industries in the south, the government bought a lot of productive land from the population and villages such as Tresund disappeared under the dammed waters of the hydropower plant. The informants claim that the governmental decision to explore the natural resources of the North of Sweden illustrates the dynamics of colonization where “the north” was explored by “the south”.

Another important decision that might have influenced the demographic path of the countryside was the one that regulated the price of electricity, making it the same anywhere in the country. The political decision may have taken from the North the opportunity to attract industries and therefore, to keep its people.

Nowadays the hardest situations are related to health care, lack of jobs, emigration of highly educated people and the need for people to commute longer and longer because of jobs. The informants mention that the IT development has moved the services from the municipality, and that the municipality is the bigger employer of the region, but have mostly jobs that suit the female population while the male population have to be away from home when working and coming back maybe every other week.

They believe that the elderly choose to stay in the municipality because of cheap housing and no mortgage situation. Besides that, the municipality provides a rich cultural life and the social organizations are very active.