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Immigration - a way out of the Swedish rural population crisis?

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IMMIGRATION – A WAY OUT OF THE SWEDISH RURAL POPULATION CRISIS?

Abstract. During the past decades immigration to Sweden has increased sharply and this has had an impact on urban as well as rural population development. During the era of labour immigration the immigrants were spread all over the country in line with labour demand but during the past decades the with accentuated refugee immigration the immigrants have instead been concentrated to the large cities and especially then to the metropolitan areas. But there are also opposite forces that have stimulating effects on the rural population development as the immigrants have increased both in relative and absolute terms. Even if the internal migratory movements still are of rural-urban character the huge immigration flows seem to have hampering effects on the rural depopulation tendencies at least in the short term as many of the refugees centres are localized in rural areas and some of the immigrants stay in their new surroundings. The result has been that the negative migration surplus has been substituted by a positive one even for many rural areas in Sweden and the population decrease in the rural areas has been – at least officially - hampered.

The results must, however, be interpreted with some scepticism as it must be borne in mind that the refugees formally are immigrants in the municipalities where they got their residence permit. After that, they are internal migrants in the second round if they move to other places in Sweden – that often is the case – as they are then registered as foreign-born internal migrants but not immigrants. This might mean that the immigrants hamper the net out-migration intensities in the first round but stimulate them in the second. Anyhow, without immigrants the problematic demographic situation in many rural areas in Sweden would be worsening as some of the immigrants stay in their ‘new’ settlement communities even if these are internal out-migration areas. In many cases the negative net-migration intensities are changed to positive net-migration intensities as a consequence of immigration. Another aspect is the potential hampering effects on the ageing process as many of the immigrants are relatively young and with a higher fertility but here the effects on natural population increase are hampered by the skewed gender structure. These divergent demographic processes are analysed based on the development paths between 1970 and 2014 in differing Swedish urban-rural regions – a period with drastic changes in the geographical migration patterns but also in the Swedish immigration policy.

The Swedish urban-rural system and the north-south divide

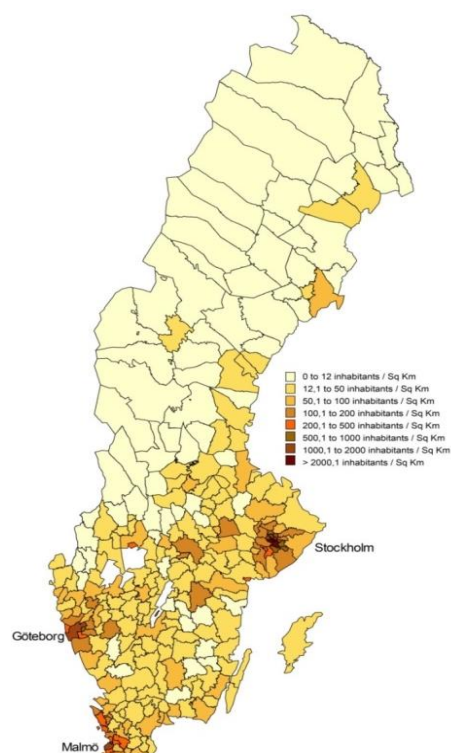
The Swedish settlement pattern is quite different compared to the continental or English ones. Sweden is, like Finland and Norway, a sparsely populated country – in some parts extremely sparsely populated. In a European context even the medium-sized towns are few and most of the towns are characterized as small towns. Only four cities in Sweden – Stockholm, Gothenburg, Malmö and Uppsala – have more than 200,000 inhabitants and nine cities have a population between 100,000 and 200,000. Thus, a medium-sized town in Sweden is not the same as a medium-sized town on the European continent. Instead, most of the Swedish towns could be classified as either small towns or minor regional centres in rural areas in a European context. The Swedish towns – with a few exceptions in the metropolitan regions – consist also of both built-up centres and surrounding rural areas. This implies that the Swedish community structure consists of relatively few towns and municipalities compared to other parts of Europe. The distribution of towns and municipalities is also focused on metropolitan areas with regard to population size and density. The rank-size curve with regard to cities and municipalities is very steep in the beginning and almost completely flat among three fourth of the cities – cities that in best of cases can be considered as medium sized.

The delimitations of the urban-rural municipalities in Sweden and where the north-south divide is obvious can be seen in Table 1 and Map 2 that are based on delimitations of the former National Rural Development Agency (*Glesbygdsverket*).

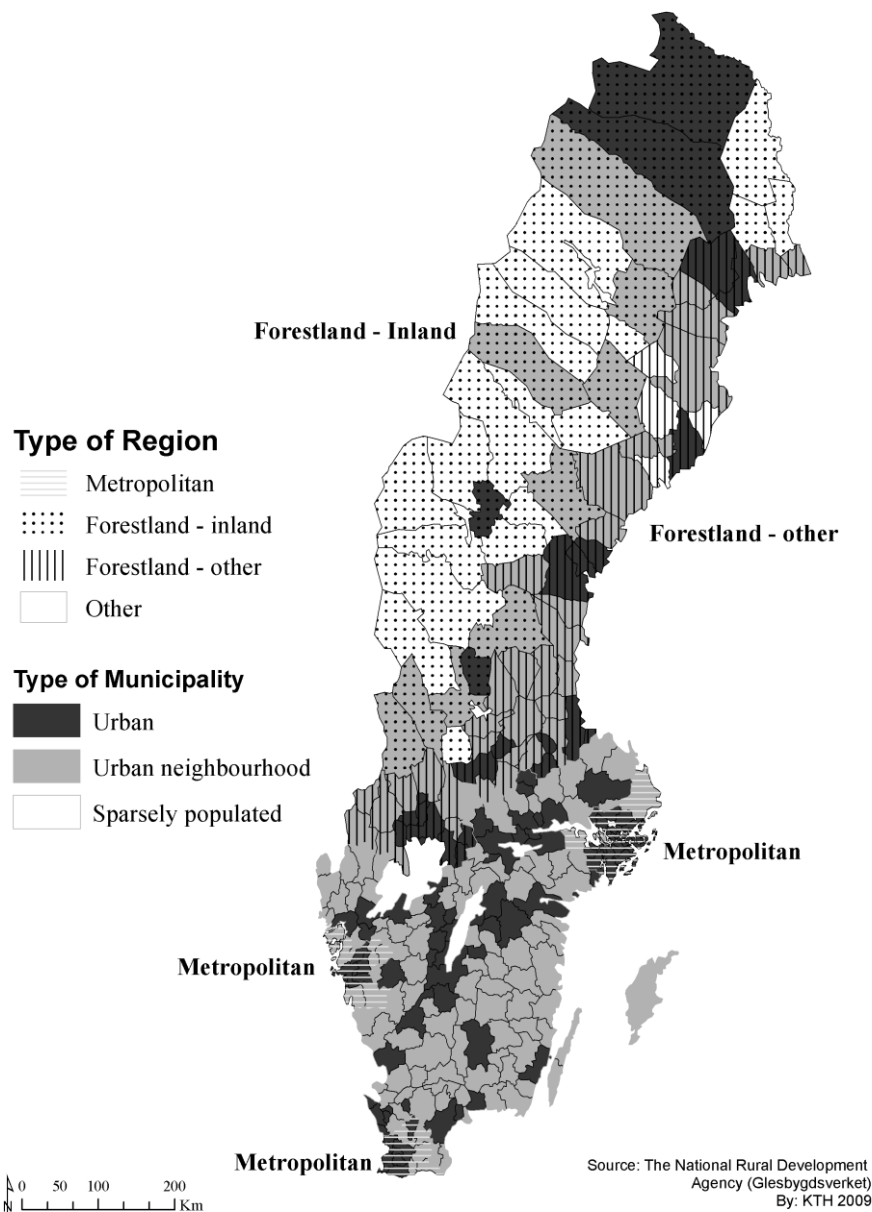
Table 1 illustrates, thus, the Swedish urban-rural system in a schematic way by combining the type of municipalities and their localization in differing kinds of regions and can also be seen as another version of Map 2. The metropolitan regions consist of Stockholm's, Gothenburg's and Malmö's functional local labour markets from 2008 and are based on the delimitations of 1998 that have been changed up to today through more intensive commuting and regional enlargement processes, especially in the metropolitan and southern areas. Large inland forestlands consist of the former EU-target areas (objective 6) and other forestlands of the local labour markets in the forest counties that not were included in the objective 6 areas. Other regions consist of the rest of the counties inclusive local labour markets. Sparsely populated areas have less than five inhabitants per km² and not more than 20,000 inhabitants. "Urban neighbourhood" is defined as a municipality where less than 70 percent of the population is living outside built-up areas and urban areas consist of municipalities with an urbanization share of more than 70 percent. This means that we get the following delimitations including the share of the Swedish total population and the numbers of municipalities (Table 1 and Table 2).

Table 1 The Swedish urban-rural system based on municipalities and regions. Population shares 2014. Source: Estimations based on the delimitations by the National Rural Development Agency (*Glesbygdsverket*) and data from Statistics Sweden.

Code	Type of region	Type of municipality	Localization	Number of municipalities	% of municipalities	% of total population
11	Forestland-inland	Sparsely populated	Northern rural	18	6,2	1,2
12	Forestland-inland	Urban	Northern urban but “densely” populated	4	1,4	1,1
13	Forestland-inland	Urban neighbourhood	Northern rural	9	3,1	1,1
21	Forestland-other	Sparsely populated	Northern rural	4	1,4	0,2
22	Forestland-other	Urban	Northern urban	21	7,2	8,0
23	Forestland-other	Urban neighbourhood	Northern rural but “densely” populated	33	11,4	6,5
32	Metropolitan	Urban	Stockholm, Gothenburg, Malmö	40	13,8	35,7
33	Metropolitan	Urban neighbourhood	Metro areas	18	6,2	5,5
42	Other regions	Urban	Southern urban	47	16,2	23,8
43	Other regions	Urban neighbourhood	Southern rural but densely populated	96	33,1	16,9



Map 1. Population densities in the 290 municipalities (LAU 2), 2012. (Source: Statistics Sweden, www.scb.se)



Map 2. Type of cities and municipalities in Sweden. Source: The National Rural Development Agency (*Glesbygdsverket*).

Migratory movements 1968-2015 – totally and internally

During the period after WW II Sweden has been an immigration country and the share of foreign-born persons increased from a very low level to over 12 percent of the population (SCB 2006b).¹ During this period the reasons for immigration to and staying in Sweden have been changed as well as the immigration categories. Up to the end of 1960s, Swedish industry was in need of labour, which was the principal reason for immigrants coming to Sweden from our Nordic neighbours Denmark, Norway and, primarily, Finland but also from

¹ By the way, already during the 1930s Sweden became an immigration country.

Southern Europe and it was primarily blue-collar jobs that were demanded. It can be mentioned that a Nordic common labour market (excluding Iceland) was introduced 1954. The period between 1970 and 1985 can, also, be seen as a transitional phase from labour immigration to refugee and family immigration. Since the 1980s immigration to Sweden has been dominated by refugee immigration and tied-immigrants (see e.g. Lund and Ohlsson, 1999, Andersson 2006, SCB 2006b, Johansson and Rauhut 2007, 2008).

The settlement patterns of the foreign-born population have changed considerably since the 1960 and 1970s, as a consequence of the transition from labour immigration to refugee immigration. While many labour market immigrants of earlier years settled down in industrial towns or communities as a result of the demand of blue-collar workers, the refugees after the 1970s and 1980s became more concentrated to the metropolitan areas – the Stockholm, Göteborg and Malmö regions. It is, also, very rare that the new immigrants leave metropolitan areas (Andersson 2006). This development resulted also in some changes in the policy concerning immigration and integration. Politicians, researchers and media noticed the increased concentration in the metropolitan areas in combination with the low labour market participation rates for new immigrants. As a result, the new “countrywide strategy for refugee reception” was launched in 1985 and shifting the responsibility of the new immigrants from a government authority to the cities and municipalities. In an attempt to hamper the concentration in the metropolitan areas, the new strategy further stated that a refugee no longer could settle down where he/she wanted to live. From 1985 to 1994, in line with this countrywide strategy, the majority of the immigrants were more than before dispersed across Sweden (SCB 2006b, Johansson and Rauhut 2007, 2008).

This strategy had only partial effects and the immigrants continued to be concentrated in metropolitan areas. The countrywide strategy was also partially abandoned in 1994 as an evaluation showed that, although the policy was successful in spreading people initially over the country, secondary migration tended to concentrate people again over the years (Andersson 2003). Since 1994 in accordance to the EBO-legislation, refugees are allowed to arrange for their own living and housing and fewer immigrants have since 1994 been involved in the original countrywide placement strategy (SCB 2006b, Johansson and Rauhut 2007, 2008).

In Figure 2 the migration fluctuations are shown. The three lines show how the migration intensities have been developed both in short- and long-term between 1968 and 2015. The figure shows the internal migration intensities between 21 counties but also the total migration intensities – immigration and emigration – and their impact on the migration fluctuations.

By comparing the three lines some hints about the effects of the increased immigration and emigration can be given. With regard to internal migration it must be kept in mind that this is a zero-sum game as all internal migrants are a consequence of migration between the 21 Swedish counties. Otherwise they are defined as immigrants or emigrants. This means also that the intensities should be higher if the estimations had been based on migration flows between towns and municipalities instead of counties. The immigration and emigration intensities are then not affected at national level even if they differ between towns and municipalities. This does not, however, mean that especially the immigrants have not any impact on the internal migration. The results shall, thus, be interpreted with some scepticism as it must here be borne in mind that refugees formally are immigrants in the municipalities where they got their residence permit. After that, they are internal migrants in the second round if they move to other places in Sweden – that often is the case – as they are then

registered as foreign-born internal migrants but not as immigrants. This means that the immigrants hamper the net out-migration intensities in the first round but stimulate them in the second. Anyhow, without immigrants the problematic demographic situation in many rural areas in Sweden would be worsening as some of the immigrants stay in their "new" settlement communities even if these are out-migration areas. In many cases the negative net-migration intensities are changed to positive net-migration intensities as a consequence of immigration (more of this later).

As can be seen in Figure 1 the migration intensities have varied a lot since the end of the 1960s and this is valid both for the internal and international migratory movements even if the factors behind varies a lot over time. The highest internal intensity is registered 1970 and this can be seen as the end of the industrial internal migration pattern. This year had also a huge immigration from especially Finland and this can be seen as a consequence of still good times in Sweden but a deep down-swing in the Finnish economy. This can be contrasted to the following years when the situation in the two countries was reversed – "bad times" in Sweden and "good times" in Finland that resulted in increased return migration to Finland. This can be seen as a typical case where free international movements also resulted in vulnerable migration between two neighbouring countries as a consequence of differing business cycles. It shall also be kept in mind that the Swedish immigration policy had changed during the end of the 1960s when a more restrictive labour immigration policy was introduced and the immigration policy was changed and instead of labour import refugee immigration increased (see e.g. Lund and Ohlsson 1999). Still the free labour market between the Nordic countries was not abolished but the labour migration was anyhow decreasing as Sweden experienced an economic downswing and deindustrialization with a falling demand for blue-collar workers during the 1970s at the same time as the Finnish economy expanded.

After that the immigration to Sweden has had a strong connection to the conflicts around the world. During the 70s and 80s from Latin America, during the 90s from the former Yugoslavia, Middle East and Northern Africa and this have been accentuated during the last ten years. The top 1989 was an effect of the "cleaning the desk" strategy when the Swedish government and the Swedish immigration board gave all asylum seekers residence permits (ref). As mentioned earlier this has also implications on the internal migration as the immigrants are registered as internal movers – if they move within the country – when they move internally after they had got their residence permits. This raises the internal migration intensities even if the Swedes internal migration will be the same especially after 1994 when the "whole Sweden strategy" was abolished and the immigrants could settle down where they want. This redistribution increased the moves to the metropolitan areas both internally and from abroad and the settlement segregation was even more accentuated. It can also be mentioned that today (2016) immigration has diminished drastically as a consequence of the more restrictive immigration policy in Sweden in the end of 2015 but this has not yet get any effects on the official immigration figures that are shown in this paper. The break after 1994 is illustrated in Figures 1 and 2 where the significant correlation between immigration and internal migration is obvious especially after 1994.

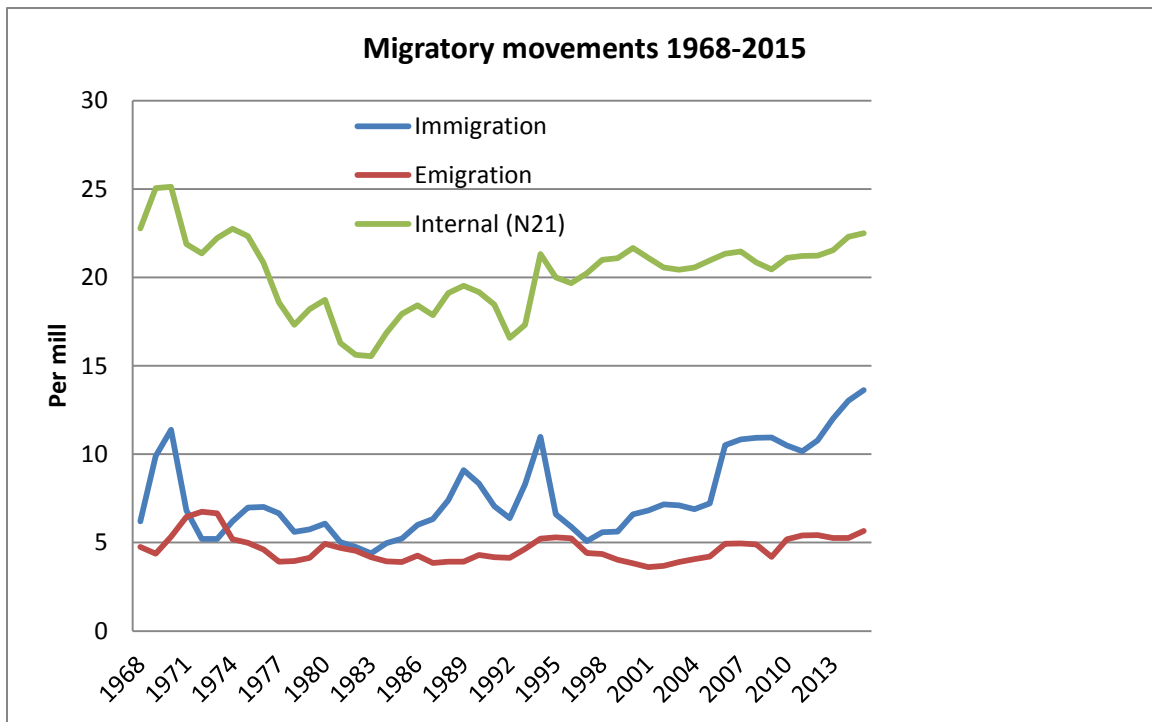
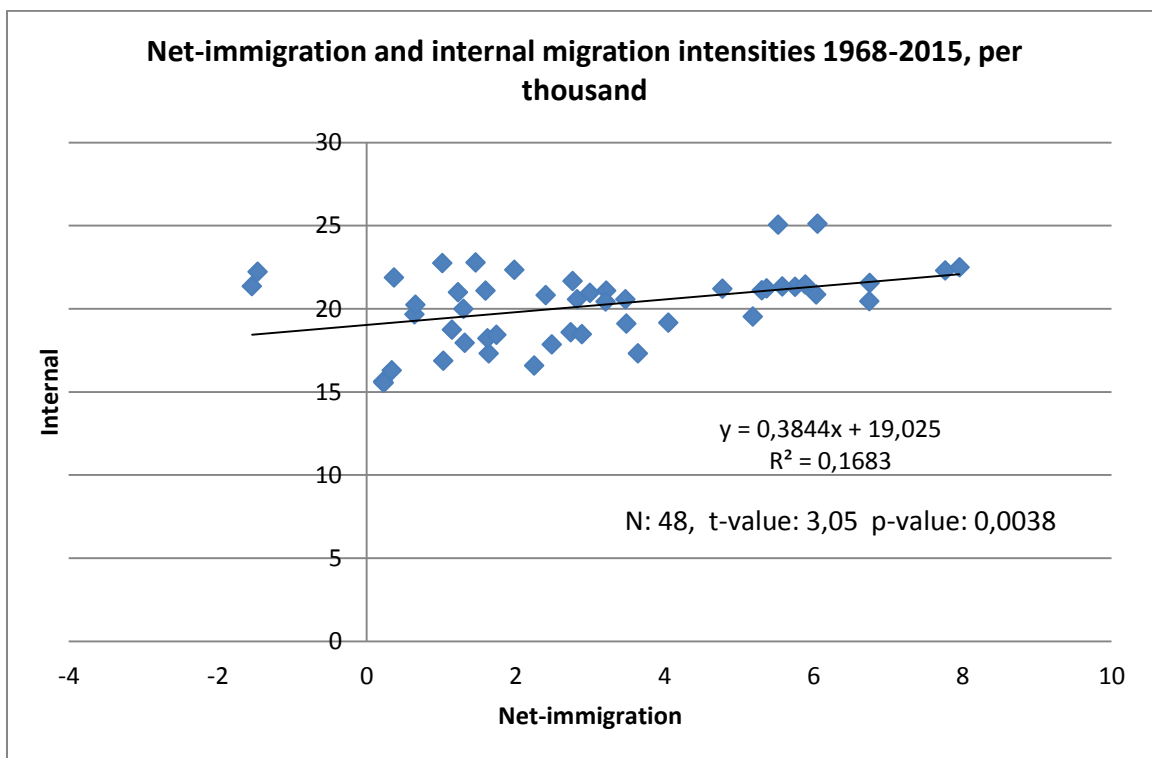


Figure 1. Internal and external migration intensities 1968-1915. Source: Estimation based on data from Statistics Sweden



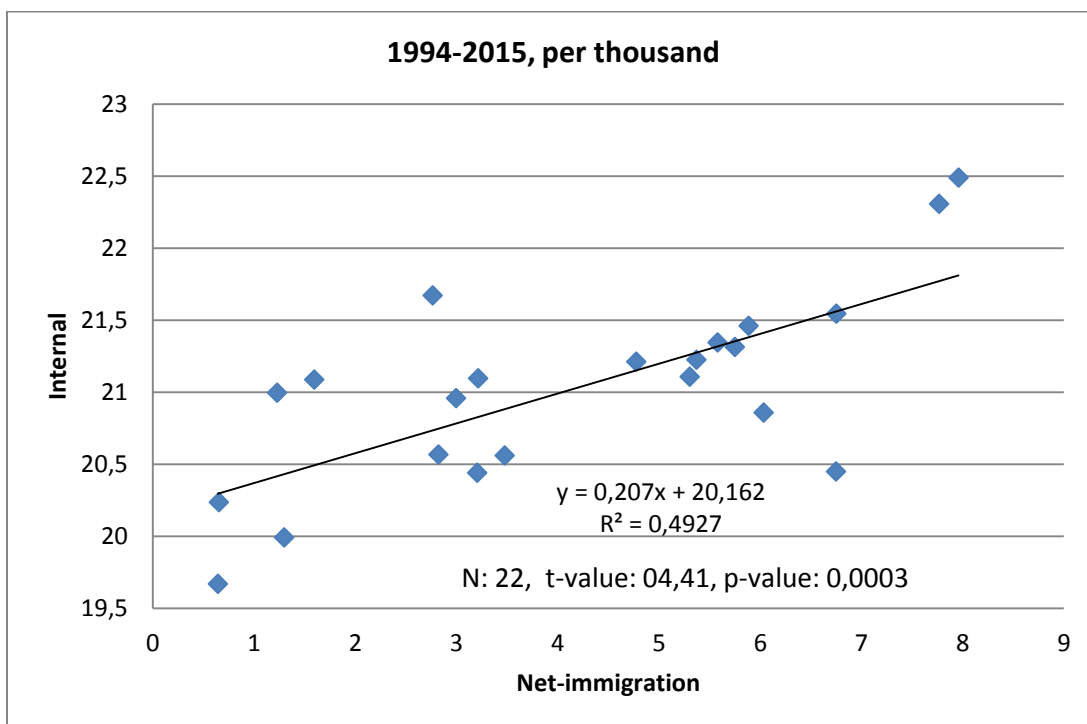
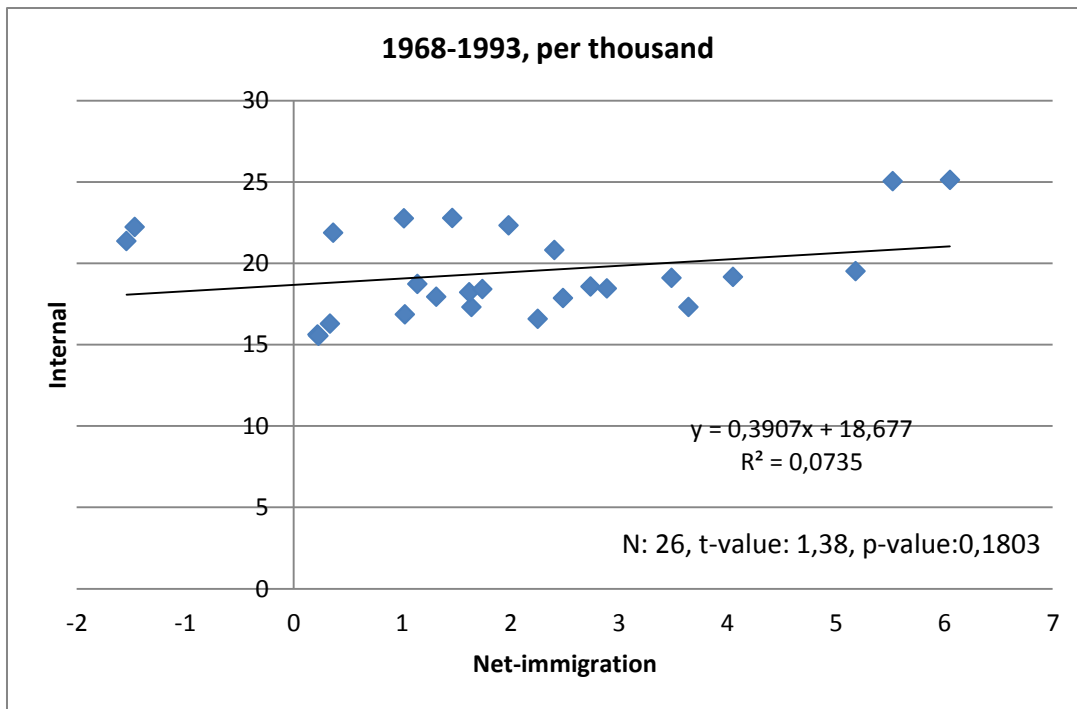


Figure 2a-c. Correlation between net immigration and internal migration in Sweden 1970-2014. Source: Estimations based on data from Statistics Sweden.

A life-cycle approach

This paper focuses on the migration patterns – internationally as well as internally – of different cohorts in rural and urban areas and how this has changed from 1970 to 2014. The period is motivated by the changed municipality delimitations and the effects concerning population sizes and migration pattern and the turbulent migration pattern last year (2015). As the cohorts that are analysed are 5-9, 20-24, 40-4 and 65-69 a life-cycle approach is used

because many different age-specific events occur between these cohorts: from being a child to being a pensioner. All these events have implications for in-, out- and return-migration in different kinds of areas and also on the migration intensities within these age groups. The hypothesis put forward in this paper, is then that the migration patterns between the different cohorts in the analysed age groups differ between rural and urban and especially metropolitan areas, and consequently the truth or falseness of statements concerning the rural exodus are dependent on the different cohorts and their position in the life-cycle (see e.g. Geist and McManus 2008, Johansson 2015) and this is valid both for internal and international migration flows.

It is a well-known fact that the movement of peoples occurs in different ways and with differing intensities over the course of the life-cycle (see Figure 3). Children move with their parents and arguments for moving associated with children are generally around amenities, good environment, good schools, low criminality, etc. (see e.g. Cooke 2008). The next stage in the life-cycle of migration is when teenagers and young adults leave home to begin a new 'independent' life, often far away from their home towns and home regions, and frequently as a consequence of studies. After finalized studies, young adults commonly prioritize jobs and careers and move to areas where they will find the best (future) possibilities to realise their human capital investments. This includes migration to regions with large, flexible labour markets and good long-term employment possibilities, even if the labour turnover in the (internal) labour markets is high. The latter can be seen as a precondition for better jobs and career possibilities and a 'better' life in the future, in line with the reasoning underlying the human capital theory (see e.g. Sjaastad 1962, Liu 1975, for differing migration motives concerning regions, ages and genders in Sweden, see Garvill et.al. 2000, Lundholm et.al. 2004).

It must also be borne in mind that during some phases in the life-cycle, 'love and marriage' also forms a commonly cited motivation for migration (at least in Sweden). This also has an impact on the migration pattern; changing from an individual movement to a household movement. This has a hampering effect on migration intensities in general and particularly for adult households as two available jobs often are precondition for migration. Even children can hamper migration as long as they are in the school ages. From an economic standpoint, this also implies a change in economic motivations in a wider sense. Rather than maximizing the individual economic benefit, the total household economic benefit is prioritized. However, it must be remembered that the 'economic' benefits change over the course of an individual's lifecycle and that they are not the same for a young person who has just left home as for parents with children who are going to leave their home, and who experience a decrease in the size of the household while living under the same housing conditions.

With regard to changed urban-rural relations and their impact on the migration of younger women, the relations between fertility levels, particularly with regard to urban-rural differences in the timing of the first baby, are also incorporated into the analysis. Even if the current total fertility rates (TFRs) are roughly the same in urban and rural Sweden, the age-specific fertility rates still vary between these regional types. There seems to be a time-lag between rural and urban areas – and particularly in metropolitan areas – with regard to the age of the mothers that might hamper out-migration from rural to metropolitan areas, as singles are more mobile than families. This can be seen by analysing the age-specific fertility patterns in rural and urban Sweden. From another study it has been shown that for the age group between 18-34 the fertility level in rural Västernorrland County was 28 per cent higher than for Stockholm's metropolitan county in 2010. The corresponding discrepancy for the

youngest category (aged 18-24) was 83 per cent higher, but based on very low numbers. For the age group 30-34, there was a reversal of the relationship, in the sense that Stockholm County had an 8 per cent higher fertility rate than Västernorrland County (estimations based on data from Statistics Sweden). This has been even more accentuated if the cohort 35-39 is included (Johansson 2015). This indicates that there is a time dimension acting on rural and urban fertility development even if in the end the TFR will be nearly equal. The effects on the pattern of migration over the course of the lifecycle might, however, be different as a consequence of the time-lags related to childbearing ages between rural and urban (metro) areas. This has implications for the frequency of childbirth in differing regions and also for migration amongst different age groups.

Just before and after retirement, migration intensities rise again as a consequence of the changes in the individuals social, economic and work context, with better economic stability and a more ‘independent’ life-style (see e.g. Kresl and Ietri, 2010). For many people at this stage in their life, their current house may be too big and short-distance moves increase. For others even long-distance migration intensities increase (see Figure 4) as a consequence of return-migration, migration to the surrounding rural areas and to be close to relatives and friends - at least in Sweden all of these four migration patterns seem to have some relevance to explain the rise in the migration rates of people aged in their early to mid-sixties (for Sweden, see e.g. Niedomysl 2008, Niedomysl and Amcoff 2011 for the three last migration motives). Many of these retired persons are ‘good’ local consumers that stimulate the local economy wherever they settle down and it is only during the last years in their life-cycle that they become an economic ‘burden’ to the local communities and their health and care services, even if they will cover much of the social costs themselves – at least in Sweden.

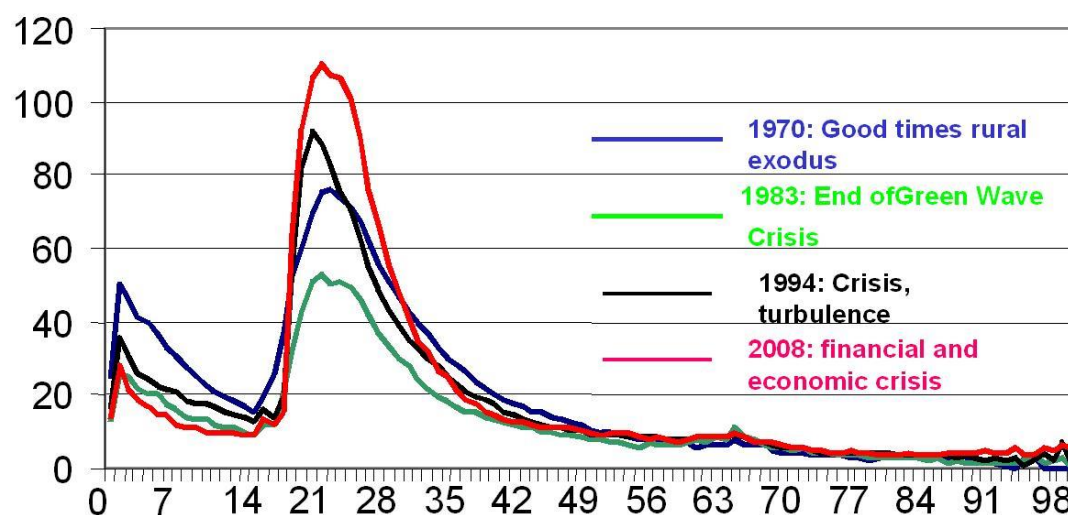


Figure 3. Age-specific long-distance migration intensities 1970, 1983, 1994 and 2008 (migration across county borders). Per thousand. Source: Estimations based on age-specific data

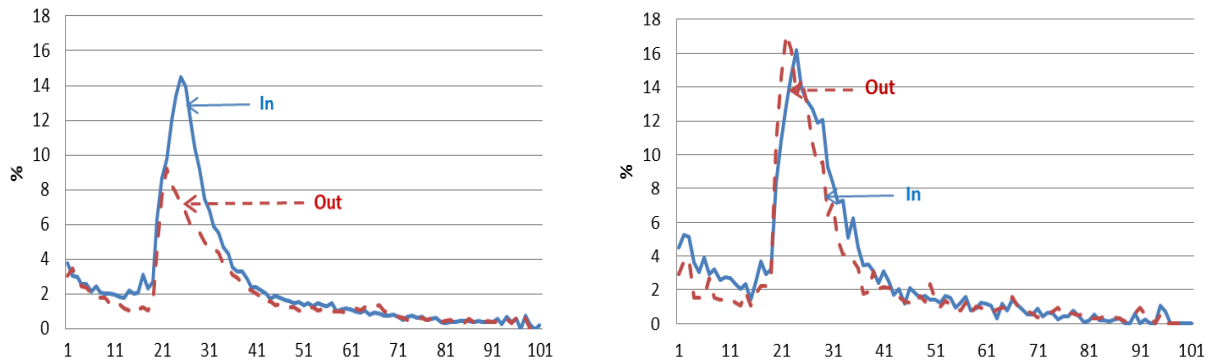


Figure 4. Age-specific female long-distance in- and out-migration intensities (%) in 2014 (migration across county borders) for Stockholm (metropolitan, left) and Västernorrland Counties (rural, right). Source: Johansson 2016.

Figure 4 also indicate that the turnover of young women and young people in general is higher in Västernorrland than in Stockholm. There are also signs that the migration intensities follow – at least partly – the business cycles (not shown here; for Sweden, see Johansson and Persson 1999; Johansson 2011, see also Figure 2). This seems to be demonstrated by the out-migration curve for Västernorrland and the in-migration curve for Stockholm, which show almost identical shapes and fluctuations but at different levels. In-migration to Stockholm corresponds to out-migration from Västernorrland even if the series are not identical. It is only the out-migration series for Stockholm that appears to be more or less insensitive to the business cycles. By checking Figure 4 and Figure 5 it is obvious that these circumstances had very negligible impact on elderly people’s migration pattern. That the curves for people over 50 are more shaky in rural Västernorrland than in metropolitan Stockholm might be a function of the smaller amount om migrants in rural north than in metropolitan urban areas. To sum up the preferences among elderly people’s settlement pattern is not a function of labour market conditions – rather it seems to be a function of social networks including children and grandchildren.

Age distribution among Swedish inhabitants and immigrants

Figure 5a-c shows how the age distribution among immigrants and Swedish inhabitants has developed between 1970 and 2014. Here it can be seen that the immigrants are much younger than the Swedish inhabitants. This might also have a positive impact on internal migration as the immigrants have higher migration intensities as the age distribution was more favourable concerning internal migration at least in the first round when the move to from the rural to the urban areas and especially then to big cities that resulted in an accentuated urban concertation and especially then after 1994 free settlement pattern was introduced.

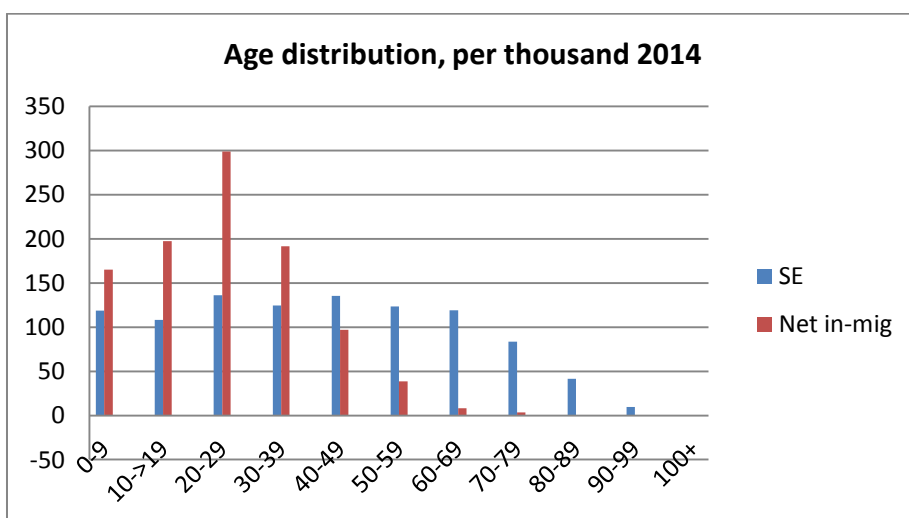
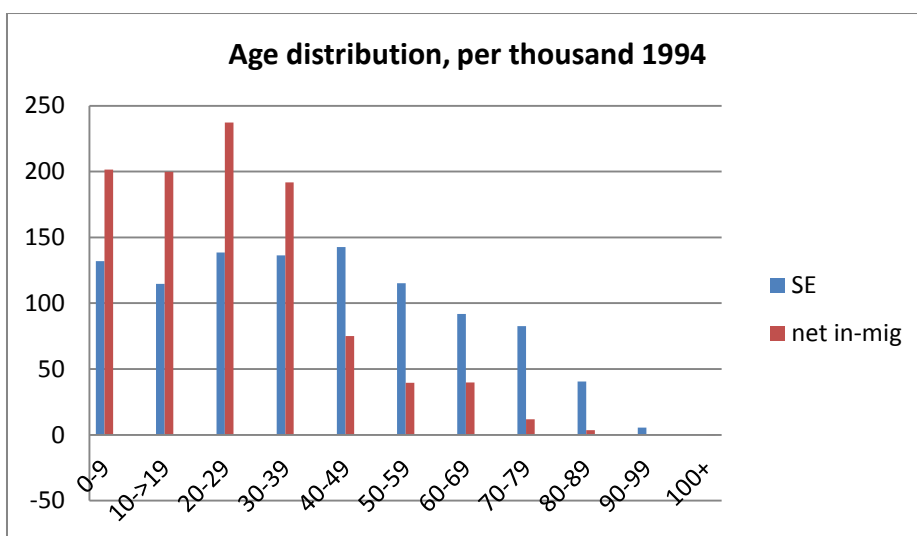
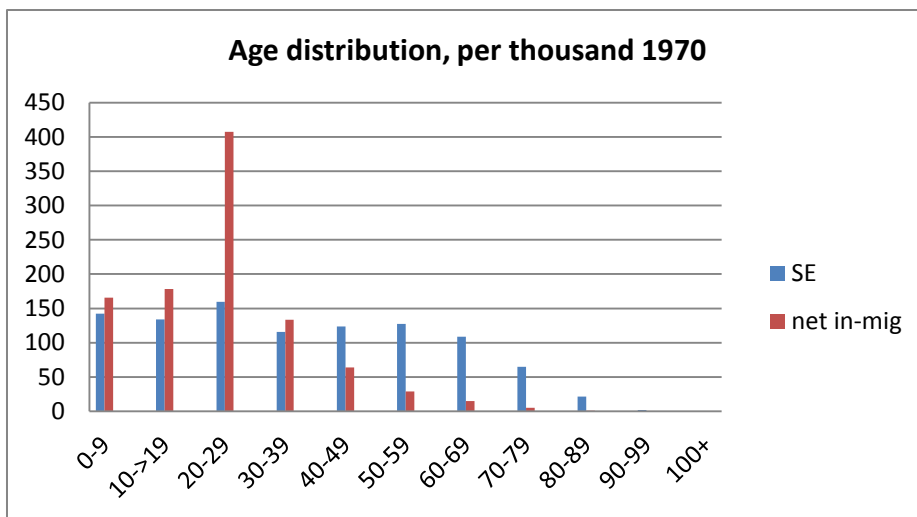


Figure 5a-c. Age distribution 1970, 1994 and 2014 among the Swedish inhabitants and net-immigration (%). Source: Estimations based on data from Statistics Sweden.

Differing ages – differing settlement patterns

Long-distance migration has traditionally been associated with the migration pattern of the industrial society. People moved from farming and forestry areas to industrial ones, and from towns and regions with unemployment to places where labour was in demand. It was relatively easy to get a job if you chose the migration alternative, and there was a strong connection between economic fluctuations and long-distance migration. The difference between various generations' migration patterns was more in terms of quantity than of different types and blue-collars were largely demanded.

The migration patterns of today are of a different character than the industrial migration pattern of e.g. the 1950s and 1960s (for a schematic view see Figure 6). The result of the structural transformation is a further regional segmentation and polarisation of the labour force, a development that hampers labour migration from rural and old industrial areas to regions dominated by more dynamic and knowledge-based activities and an increased labour market mismatch. This is an indicator that new out-migration towns and municipalities has disturbed and changed the traditional map of depopulating Sweden. It is not only the sparsely rural areas that have experienced internal net out-migration – it is also an indication of the crisis of the small and medium-sized towns during the 1980s, 1990s and up today. One result of this process is accentuated ageing in the out-migration areas with low labour force participation as one result but also a skewed gender balance in the ages 20-40 as young women moved first (SEMIGRA 2012, Johansson 2016).

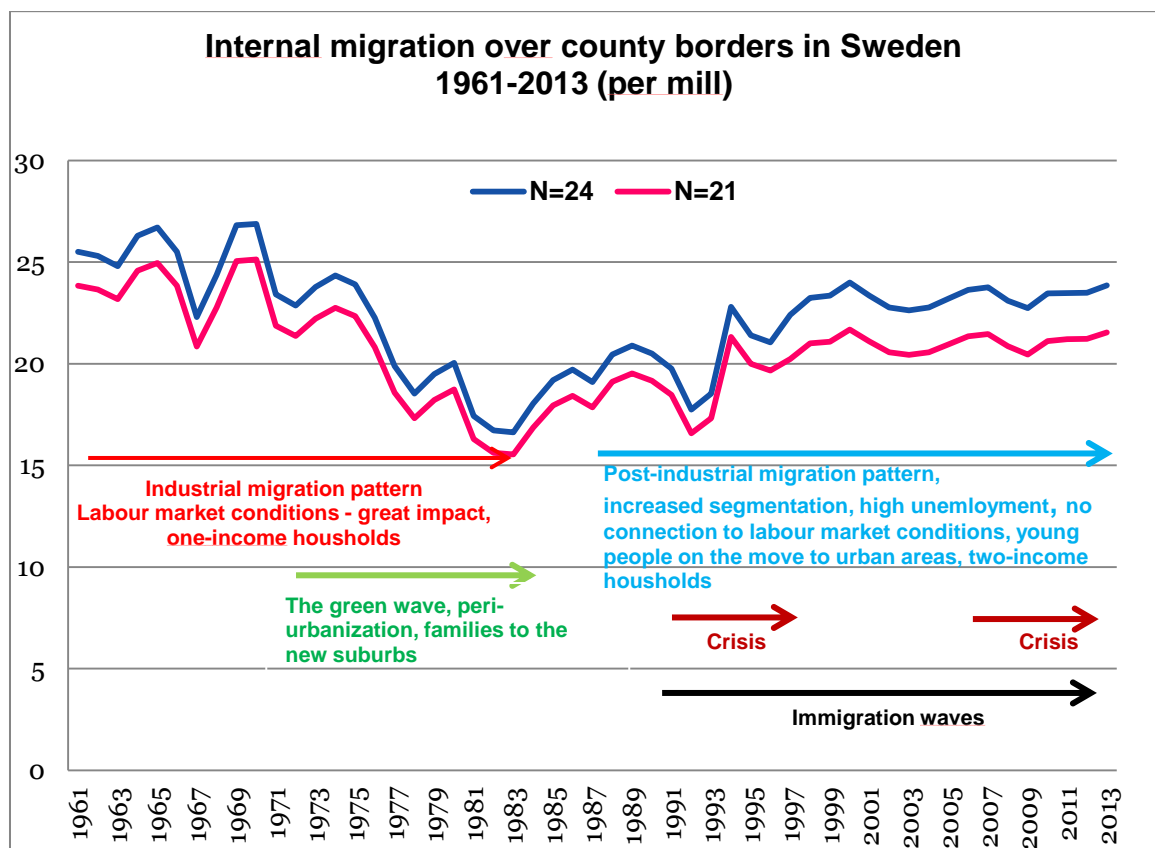


Figure 6. Different kinds of internal migration pattern over county borders 1961-2013. Source: Estimations based on data from Statistics Sweden.

The rise in the migration intensities during the 1990s and 2000s is - at least partly - a consequence of the crisis in the sense that many more young people have started to study. During the 1990s, the number of persons in higher education has increased compared both to the situation in the 1970s and 1980s. This fact is also an indication that the importance of labour force migration has decreased during the past decades. Instead, besides studies, it is other factors as urban lifestyles and negative attitudes to the “boring” home regions in rural or traditional industrial areas as well as small and medium-sized towns that are of greater importance.

With regard to *internal migration* the increased *immigration flows* since the middle of the 1990s must once again be highlighted. In the middle of the 1990s there was a sharp rise in immigration as a consequence of the war in the former Yugoslavia and during the first decades of the new century the immigration from Iraq and the Middle East held back the population decrease to some extent in rural areas. As mentioned earlier, the other side of the coin is, however, that refugee immigration has reinforced the internal out-migration deficit to other parts of Sweden from small cities and rural areas – primarily then towards the metropolitan areas – as the immigrants from abroad after some time preferred to move to these kinds of regions and then are officially registered as internal migrants and not as immigrants. The effect of this kind of population turnover will then be higher internal migration intensities in the second round.

That immigration from abroad creates internal out-migration is thus partly a function of the change in Swedish immigration and integration policy. When e.g. a refugee immigrant arrives in Sweden he or she will, in many cases, be placed in a refugee centre if they have not any relatives or friends that take care of them. As mentioned earlier when the residence permit is granted the immigrants are allowed to settle down wherever they want. The cumulative result of many individual choices might then be the out-migration of immigrants to other parts of Sweden in this second phase and especially then to the big cities. The net result will nevertheless be a migration surplus for many traditional out-migration municipalities as a consequence of immigration and of the 2006 change in Swedish immigration policy which made it easier to gain residence permits and then settle down wherever they wanted and that accentuating the redistribution of people. This phenomenon should not however be seen as a way of avoiding the consequences of the unsustainable demographic situation in these kinds of areas in the long term. Despite this almost all regions and municipalities should have fewer inhabitants without immigration from abroad even if many of them are leaving for other destinations after a while.

It has been shown that the migration intensities and patterns differ a lot between the differing age groups. Concerning the levels this is not surprising. Perhaps more surprising and interesting is the fact that the disaggregation also demonstrate quite different patterns concerning in- and out-migration with regard to small rural or traditional industrial municipalities especially in the northern part of Sweden – from out-migration during the studies and youngest ages to in-migration in the household creating ages. The high migration intensities in the youngest ages will result in out-migration for the whole category as it dominates heavily among the migrants. Another effect is the ageing process and the top-heavy age structure will be accentuated – not by low fertility rates but by out-migration of young fertile women and people in active ages (20-40). The latter is valid for women as well as for men.

This is a typical situation for regions outside the metropolitan and university regions where studies, urban life-styles, “go with the stream”, bad expectations about the future are pull- and push factors that seem to be especially relevant for migration decisions concerning young people in Sweden. On the other hand, for this age group the traditional labour market conditions seem to be of minor importance.

It can thus be shown that the “turbulent” migration situation is to be found in the ages 18-28 and that the problematic situation is a youth phenomenon. In the ages when the entrance to the labour market is most frequent the mobility is lower but the return migration seems also to be higher. The turnover of the mobile young people is high as many of the former out-movers are coming back in order to work but also probably as a consequence of “love and marriage”. This phenomenon is even more highlighted in cohorts in the ages 30-34 when the household and family creating is even more frequently occurring. In these ages the bonds to the old and new residence region is also tighter as a consequence of jobs, houses and two income households that hamper migratory movements – two jobs are often a precondition for a two-person household to move. This is perhaps not as apparent for in-movers to an out-migration region as many of the in-migrants are return-migrants with social and family relations to their former “home region” (Johansson 2001; Johansson and Rauhut 2012; Johansson 2015b). On the other hand “oldies” have low return migration intensities and almost no impact on the age structure – instead elderly people are often stayers and will so be.

The above sketched development has thus resulted in accentuated differing feedback processes in Sweden during the past decades. The settlement development around the big urban centres – in many ways dependent of the dynamics of one or two dominant centres – has created an enlargement of the local labour markets in these regions. In-migration has resulted in enlargement of the functional labour markets with a strengthening of the urban-rural relations especially with respect to the residence patterns. At the same time many small local labour markets have lost their competitive power especially with respect to human capital and the negative spiral has been accentuated. The internal migration pattern of today is thus not the same as migration of the 1950s and 1960s when the migratory movements were characterized by a net outflow from north to south as a consequence of increased demand for blue-collars and transformation of the rural areas. Instead, cut-backs in the public finances in combination with deindustrialization have resulted in out-migration and top-heavy age structures in many Swedish municipalities and local labour markets. Instead of convergence and polycentric development the result has been an increased dualization and segmentation between differing municipalities, local labour markets and regions (Johansson 2001, 2011).

With regard to internal migration the effects of the increased immigration flows since the middle of the 1990s must once again be highlighted that hampered the population decrease to some extent for a while in almost all depopulating rural areas. As already mentioned the refugee immigration has reinforced the internal out-migration deficit to other parts of Sweden from small cities and rural areas – primarily then to the metropolitan areas – as the immigrants from abroad after some time preferred to move to these kinds of regions and are then registered as internal migrants. The effect of this kind of population turnover and redistribution is then higher internal migration intensities in the second round. Despite this almost all regions and municipalities should have fewer inhabitants without immigration from abroad even if many of them are leaving for other destinations after a while. As shown earlier (see Figure 2a-c) is a strong significant correlation between in-migration and internal migration since the middle of the 1990s. On the other hand older immigrants are too few for having any greater impact on the ageing process (see Table 5). Instead immigration hamper

the ageing process in the Swedish regions and especially then in the in-migration metropolitan areas.

As can be seen in Tables 1 and 2 most of the Swedish population lives in urban areas and the north-south divide is obvious as well as the urban-rural divide. The more densely populated regions in the south result in more in-migration, commuting and larger labour markets (regional enlargement) than in Northern Sweden where long distances and few built-up areas hamper this kind of mobility pattern and only a small part of the Swedish population are living in the forestland-inland – less than five percent

Table 2. The Swedish urban-rural system based on municipalities and regions. Population shares (%) 1970 and 2014. Source: Estimations based on the delimitations by the National Rural Development Agency (*Glesbygdsverket*) and data from Statistics Sweden.

<i>Code</i>	<i>Type of region</i>	<i>Type of municipality</i>		<i>% of total population</i>	<i>% of 5-9 years</i>	<i>% of 20-24 years</i>	<i>% of 40-44 years</i>	<i>% of 65-69 years</i>
11	Forestland-inland	Sparsely populated, rural, north	1970	1,9	1,8	1,5	1,7	2,3
			2014	1,2	1,0	1,0	1,0	1,5
12	Forestland-inland	Urban, north	1970	1,4	1,6	1,4	1,5	1,2
			2014	1,1	1,0	1,2	1,0	1,2
13	Forestland-inland	Urban neighbourhood, rural, north	1970	1,7	1,5	1,4	1,7	2,0
			2014	1,1	1,0	1,0	1,0	1,4
21	Forestland-other	Sparsely populated, rural, north	1970	0,4	0,3	0,3	0,4	0,5
			2014	0,2	0,2	0,2	0,2	0,3
22	Forestland-other	Urban, north	1970	8,7	8,9	8,7	9,0	8,4
			2014	8,0	7,6	9,0	7,7	8,5
23	Forestland-other	Urban neighbourhood, rural, north	1970	8,4	8,0	7,4	8,4	9,8
			2014	6,5	5,7	5,7	5,9	8,0
32	Metropolitan	Urban, south	1970	30,5	30,0	33,1	30,9	26,8
			2014	35,7	37,9	35,8	38,9	29,4
33	Metropolitan	Urban neighbourhood, rural, south	1970	4,0	4,3	3,6	3,8	4,1
			2014	5,5	6,1	4,7	5,9	6,1
42	Other regions	Urban, south	1970	23,7	24,3	24,4	23,7	22,9
			2014	23,8	23,7	26,6	22,9	23,5
43	Other regions	Urban neighbourhood, rural, south	1970	19,4	19,1	17,2	18,7	22,0
			2014	16,8	15,7	14,9	15,5	20,0

Urban – big, young and attractive; rural – small, ageing and stagnating

One way to analyze if various age groups are over- or underrepresented in the different regions is to relate the regional distribution of different age groups to the regional distribution of the total population. An index is created by calculating the share of people in the relevant ages in region *i* divided with the share of total population in region *i*, and then multiply it with 100. If the result is over/under 100 the share of the age group is higher/lower in the region *i* compared to the distribution of the total Swedish population and vice versa. It is then possible to compare the results in order to get a hint of the settlement changes for differing regions

over time. The over- and underrepresentation is shown in Table 4. This index can thus be written as:

$$SI = (A_i/P_i) * 100 \quad (F1)$$

SI (Size Index) = weighted index according to size

A_i = age-specific share of the Swedish population in region i

P_i = share of the total population in region i

From Table 3 the above described settlement pattern seems to be the expected one. For the urban metropolitan category families as well as young people are overrepresented. This is also valid for the “metropolitan urban neighbourhood” except for the young people or young adults (ages 20-24). The young adults are underrepresented in this type as a consequence of the urban and then especially metropolitan in-migration in this category. It is also obvious that the urban category is overrepresented in all regional types among people in the ages 20-24 with one minor exception – ”forestland other north” 1970. It must be kept in mind that the ”metropolitan urban” category consists of a large part of the Swedish population for all types of people.

As can be seen in Table 3 the age group 65-69 is overrepresented in almost every regional type and this is valid for 1970 as well as for 2014. The reasons for this might be out-migration of young and active people and that the “oldies” consist of stayers. One argument that support this is that the age group 65-69 is the fast growing in-migration metro urban types are underrepresented both 1970 and 2014 and this change the age structure in a “positive” way.

If the category 5-9 years is expected to be an indicator of family migration and rural revival Table 3 tells us another story. In all rural and sparsely populated areas and even in the urban neighbourhood areas the group 5-9 years is underrepresented with the exception of the urban metropolitan areas and especially then the metropolitan urban neighbourhood, where the increasing index is matched by an increasing index for the 40-44 cohorts between 1970 and 2014. This is in accordance to the peri-urbanisation process that is a well-known phenomenon on the European continent and in UK (ESPON 1.1.4, Copus *et.al.*, 2006, 2011, Johansson 2012, 2015a). This is also a central ingredient in the ”new rurality” or the ”new rural economy” where the rural areas change character and are going to be more like the urban ones with respect to demographic as well as economic structures. In most cases the reason for this development – at least in Sweden – is the amenity factors that often are connected with out-migration from metropolitan areas to the surrounding ones but also in-migration to the metropolitan areas but not to the centre as housing shortage instead stimulates the surrounding municipalities with increased commuting as one result. This has also positive impact on creating larger local labour markets and then “regional enlargement”.

Table 3. Over/underrepresentation concerning different age groups in various types of regions in Sweden 1970 and 2014 related to the total Swedish population in the regions. Index > 100 = overrepresentation (yellow), index <100 = underrepresentation. Index = 100, neither/nor. Source: The estimations are based on data from Statistics Sweden and the delimitations are from the National Rural Development Agency (*Glesbygdsverket*), 2002, but still valid for analyzes of long-term development.

Code	Type of region	Type of municipality		% of total population	5-9	20-24	40-44	65-69
11	Forestland-inland, north	Sparsely populated, rural, north	1970	1,9	93,4	77,1	96,9	121,4
			2014	1,2	86,6	82,2	85,2	128,6
12	Forestland-inland, north	Urban, north	1970	1,4	115,2	101,9	105,6	84,0
			2014	1,1	92,1	105,0	92,7	107,1
13	Forestland-inland, north	Urban neighbourhood, rural, north	1970	1,7	88,5	82,3	101,4	121,5
			2014	1,1	87,0	85,0	84,9	126,8
21	Forestland-other, north	Sparsely populated, rural, north	1970	0,4	91,4	77,3	98,0	125,4
			2014	0,2	92,7	74,0	83,6	130,4
22	Forestland-other, north	Urban, north	1970	8,7	102,8	99,8	104,0	96,4
			2014	8,0	94,8	111,7	96,2	105,5
23	Forestland-other, north	Urban neighbourhood, rural, north	1970	8,4	95,8	88,3	101,1	117,1
			2014	6,5	88,3	88,8	90,9	124,5
32	Metropolitan	Urban, south	1970	30,5	98,4	108,4	101,3	87,9
			2014	35,7	106,1	100,2	108,9	82,2
33	Metropolitan	Urban neighbourhood, rural, south	1970	4,0	108,1	89,2	96,1	102,6
			2014	5,5	110,6	85,6	106,5	111,0
42	Other regions, south	Urban, south	1970	23,7	102,7	103,0	99,8	96,6
			2014	23,8	99,3	111,6	96,3	98,6
43	Other regions, south	Urban neighbourhood, rural, south	1970	19,4	98,9	88,9	96,6	113,8
			2014	16,8	93,7	88,6	92,2	119,3

Even if the migration is the prime driver regarding population development in differing regions it must be kept in mind that the low fertility rates during the 1990s in Sweden reinforced this dual development as its effects were seen five to nine years later for the age group 5-9. It must hereby also be kept in mind that the age structure in the metropolitan areas is more favourable for childbearing as the share of fertile women is higher than in other parts of the country even if the fertility rate usually is lower. Traditionally the fertility rates have been lower in the metropolitan areas but during the past 20 years the gap has been closed and is in many cases higher in e.g. the metropolitan Stockholm region than in other parts of Sweden. Bad times also seem to have more negative effects on childbearing in other parts of the country as higher unemployment seems to be a hampering factor on natural population change. This was obvious also during the first half of the 1990s when Sweden experienced a

deep economic crisis that especially hurt old industrial as well as the rural areas (Johansson, 2000).

It can also be observed that this development is underlined by the settlement patterns of people in the ages 40-44. As a consequence of the postponement of childbearing this age group shows almost the same regional settlement pattern as the ages 5-9. This may be an effect of the fact that many families in this category have children in the ages 5-9 and this is valid for “stayers” as well as for in-movers.

By checking the figures for the young people it is obvious that the “rural exodus” still is a fact. In almost all urban areas the group 20-24 years is overrepresented. The fact that overrepresentation is not highest in the urban metropolitan regions is perhaps somewhat surprising. Instead it is highest in the type “other urban regions” and urban municipalities in “forestland-other”. The first category consists of urban areas in the southern part of Sweden and a lot of these cities have universities or university colleges. This is valid also for the “forestland-other” that consists of the cities and municipalities along the northern part of the Baltic Sea but also – perhaps more surprising – the urban areas in the Swedish “rust belt”. This can be seen as a string from the Baltic Sea and over parts of Dalecarlia and ending at the Norwegian border. In both types the settlement patterns have diverged instead of converged and the internal dualization has been accentuated (Johansson, 2001). The ageing process is more accentuated in rural areas with huge out-migration than in urban areas with in-migration. This is a process that reinforces the interregional duality both from a social and demographic point of view. This can also be seen by the overrepresentation of people aged 65-69 in almost all regions with except for the metropolitan ones. This has been accentuated over time as – among other things – life expectancy has increased at the same time as younger people have moved away.

As mentioned above the settlement pattern with respect to all age groups indicates also that the ageing process is a general phenomenon except in the metropolitan areas – urban as well as in rural areas in the surroundings – and this might be an effect of longer life expectancy. This seems to be most pronounced in “forestland-inland” and “forestland-others” including “urban neighbourhood” regions that to a large degree consist of rural areas – typical out-migration areas. It is a general phenomenon in Europe today and the risk for “structural depopulation” and dying-out regions is obvious (for explaining “structural depopulation”, see ESPON 1.1.4). This has, however, been going on in the rural and sparsely populated regions in Sweden for a long time and reinforced the inter-regional dualities.

Immigration – a way out of the rural population crisis?

In Table 4, the net-migration intensities for the investigated regions and age groups are shown. The most negative values are to be found in “forestland-inland” 1970 and “forestland-other”. In the year 2014 the picture is somewhat better as the negative net-migration intensities have dropped and the depopulation seems to have been hampered at least for while even if the figures in general are negative. It shall, however, be noticed that a very low share of the Swedish population is living in these areas.

The contrary development can be found in the metropolitan areas and “other regions-urban” that predominately are localized in the southern part of Sweden where in-migration has dominated the population development during 1970 as well as 2014. During especially 2014 – and the past 20 years – the huge inflow of immigrants, especially refugees, has accentuated the net-migration surplus. It is a well-known fact that the immigrants are gathering in big

cities and this can have a positive effect on the high level of migration intensities. It ought to be noted that immigrants are a positive contribution even in the rural areas in the first phase as they are often localized in refugee centres that are spread all over the country that raise the in-migration intensities even in rural areas. The relations between the total and the internal net immigration intensities for the differing regions can be seen in Table 4 below.

By comparing the left yellow figures with the right in Table 4 some hints about the effects of the increased immigration can be given. For all regions and cohorts immigration has positive impact on the net-migration intensities and for most of geographical types the negative intensities have changed to the contrary when immigration is integrated in the estimations. The results must, which has been said before, be interpreted with some scepticism as it must here be borne in mind that the refugees formally are immigrants in the municipalities where they got their residence permit. As mentioned earlier after that they are internal migrants in the second round if they move to other places in Sweden – that often is the case – as they are then registered as foreign-born internal migrants but not immigrants. This means that the immigrants hamper the net out-migration intensities in the first round but stimulate them in the second with regard to the out-migration areas and vice versa in the in-migration areas. Anyhow, without immigrants the problematic demographic situation in many rural areas in Sweden would be worsening as some of the immigrants stay in their "new" settlement communities even if these are out-migration areas. In many cases the negative net-migration intensities are changed to positive or smaller net-migration intensities as a consequence of the huge immigration as can be seen in Table 4 (see the yellow figures). This has, however, only small effects on the "oldies" as migration propensities among elderly immigrants are low in those ages as can be seen in Figure 6a-c. This is also shown by the fact that the positive population effects in the ages 65-69 is almost negligible in all rural types even if it raise the intensities 2014 compared to 1970.

Immigration and ageing in expanding and shrinking regions – concluding remarks

As previously mentioned, the concept of functional local labour markets has been used more frequently concerning regional development topics. This has also resulted in a situation where the traditional separation of urban and rural has become increasingly unrepresentative at least in the southern part of Sweden. Instead, when the labour market regions are expanding, the rural parts within a local labour market gradually become more dependent on and interconnected with the development and transformation in the urban areas, while the remote rural areas become even more isolated and homogenous with regards to inhabitants and attitudes. This emerging interregional new urban-rural duality has also been accentuated during the past decades as a consequence of deindustrialization and stagnation/deterioration in old rural and industrial areas with low accessibility and a skewed gender balance and top-heavy age structure; and the expansion of the metropolitan rural areas.

Table 4. Net-migration intensities (per thousand), total net-migration/internal net-migration, 1970, 1994 and 2014 for different age groups in various parts of Sweden.

Code	Type of region	Type of municipality	Year	All ages	5-9	20-24	40-44	65-69
11	Forestland-inland	Sparsely populated, rural, north	1970	-26,5/-26,8	-17,6/-16,1	-136,0/-138,8	-18,7/-19,1	-2,9/-2,9
			1994	-3,6/-6,9	4,1/-4,3	-50,8/-56,5	-1,2/-5,0	-1,1/-2,1
			2014	0,7/-9,7	3,1/-12,9	-45,5/-65,8	0,3/-13,8	2,0/2,0
12	Forestland-inland	Urban, north	1970	-1,1/-3,3	-13,0/-13,5	12,7/1,6	-1,2/-1,3	-1,3/-1,5
			1994	-1,3/-9,1	24,1/-20,8	-0,9/-6,7	0,2/-5,0	-3,0/-3,2
			2014	3,5/-5,7	8,5/-4,6	8,1/-11,3	6,1/-2,8	-3,8/-4,2
13	Forestland-inland	Urban neighbourhood, rural, north	1970	-14,2/-14,4	-18,3/-17,9	-77,3/-78,4	-8,0/-8,1	1,2/0,4
			1994	0,8/-4,4	12,8/-3,0	-41,5/-49,6	0,1/-3,8	5,6/3,6
			2014	4,4/-7,3	16,0/-3,7	-26,8/-51,3	5,1/-7,3	-0,6/-1,2
21	Forestland-other	Sparsely populated, rural, north	1970	-10,0/-10,4	6,2/7,8	-99,0/-101,1	1,8/1,8	-4,4/-4,4
			1994	-0,0/-10,9	14,0/-8,2	-50,1/-65,3	2,3/-12,5	-3,2/-4,4
			2014	8,2/-1,0	18,1/2,4	-92,3/-100,7	16,1/3,8	18,1/16,5
22	Forestland-other	Urban, north	1970	5,5/1,8	0,3/-2,9	18,3/4,9	3,9/2,0	0,6/0,3
			1994	4,8/-2,3	10,1/-8,3	26,1/17,1	2,7/-2,7	0,2/-0,9
			2014	6,8/0,2	13,4/2,7	21,1/10,3	7,0/0,9	-1,8/-1,9
23	Forestland-other	Urban neighbourhood, rural, north	1970	-2,8/-5,3	4,5/2,1	-35,3/-43,5	-0,9/-2,5	1,1/0,6
			1994	-0,7/-8,6	7,7/-10,4	-41,0/-51,4	2,0/-5,4	2,8/1,6
			2014	4,8/-4,8	13,2/-3,8	-26,1/-44,3	9,1/-1,2	2,4/2,2
32	Metropolitan	Urban, south	1970	12,4/4,7	5,1/-0,4	67,5/37,3	4,5/0,8	-2,4/-2,8
			1994	9,0/6,9	8,8/7,2	50,6/41,1	2,7/3,6	-1,0/-2,6
			2014	8,8/1,6	2,6/-3,3	47,3/29,1	3,3/-1,7	-3,4/-3,4
33	Metropolitan	Urban neighbourhood, rural, south	1970	15,4/10,7	24,6/21,8	13,1/-4,6	15,2/9,6	5,5/5,1
			1994	8,2/4,9	16,8/12,2	-46,6/-51,5	10,3/7,7	8,5/7,5
			2014	8,3/4,4	16,6/11,7	-47,9/-55,6	13,1/8,7	4,1/3,9
42	Other regions, south	Urban, south	1970	8,7/1,4	6,6/-0,5	27,8/4,2	5,7/1,0	2,9/2,3
			1994	7,2/1,5	14,7/2,3	17,0/8,6	6,9/3,0	3,1/0,6
			2014	7,9/0,9	13,5/2,8	22,7/10,4	7,8/1,3	1,1/0,5
43	Other regions, south	Urban neighbourhood, rural, south	1970	1,1/-5,2	0,9/-6,8	-22,4/-40,2	3,8/-1,3	0,7/0,0
			1994	2,7/-8,5	13,3/-6,4	-46,3/-61,2	4,6/-6,8	4,1/1,0
			2014	7,9/-2,8	21,3/0,6	-30,2/-50,3	11,5/0,5	3,6/3,1

The above described developments have thus resulted in accentuating differing feedback processes. The more polycentric settlement development around the big urban centres – in many ways dependent on the dynamics of one or two dominant centres – has created an enlargement of the local labour markets in these regions. In-migration has resulted in widening the functional labour markets, with a strengthening of the urban-rural relations particularly in respect to the patterns of residence (Johansson et.al. 2004b) and in many cases also been characterized as ‘rural gentrification’ (for a critical discourse of the concept ‘rural gentrification’ in Swedish rural areas, see Amcoff 1999). At the same time, many small local labour markets have lost their power to compete particularly in relation to human capital and this has accentuated the negative spiral. ‘Dual Sweden revisited’ is thus not the same as ‘black Sweden’ of the 1960s, when the migratory movements were characterized by a net outflow from north to south and from the rural areas to large urban agglomerations. Today, the crisis of the public sector, in combination with deindustrialization and the higher migration intensities of young people have resulted in out-migration and top-heavy age structures in many of the Swedish towns and municipalities. Rather than convergence and polycentric development, the result has been an increase in dualization and segmentation between differing local labour markets and regions, but also within regions with huge in-migration flows where the suburban and peri-urbanized communities have been more and more dependent of the centres for jobs and employment. Even if small and medium-sized local labour markets still exist, and are frequently dominated by one municipality or town, they have lost much of their competitive power and, instead of development towards convergence based on endogenous economic growth, the opposite scenario has in many cases been the result – and this accentuates the vicious circles hampering development in these types of (monocentric) areas. This is especially a phenomenon that is associated with ageing rural areas in the northern part of Sweden but these tendencies can also be detected even in rural areas quite outside the expanding metropolitan local labour markets (Johansson 2010) where the ‘backwash effects’ are stronger than the ‘spread effects’ (Myrdal 1957). This is especially obvious with regard to the ages 20-29 where the migration intensities are highest.

There are thus, following the reasoning above, signs that the results of these transformation processes during the past decades, has been a loosening up of the divisions between urban and rural areas, particularly in the metropolitan and southern regions. Instead, a new type of duality with new economic, social and settlement structures has emerged between the urban and the rural areas but also between and within the differing types of rural areas. There are many signs to suggest that regional enlargement has transformed these kinds of rural areas with intra-regional duality as one effect – particularly in the outskirts of the metropolitan and big city regions with a large inflow of people in “active” ages – while the remote rural areas have experienced contrasting development pathways with ageing, low reproduction potentials and depopulation (Johansson 2010).

If the population is concentrated in specific large urban centres, investments and service production will also be concentrated in these areas, and not spread to the sparsely populated areas where the demand is considered insufficient. Instead, the economic and population concentration in urban agglomerations might stimulate the ‘backwash effects’, and thus also the formation of a monocentric structure with divergent internal development. Monocentric structures where the ‘backwash effects’ dominate, are often regions with one large dominant city. A result of this process is the retardation of peripheral areas with eroding territorial and social cohesion, and where the population base for investments and firm establishment are limited. As the centripetal forces are larger than centrifugal forces, the consequence will be ‘vicious circles’ with more service accessibility for large shares of the population, but a worse

situation for ageing people living in the periphery – both at the national and regional level. If this is an economisation with restricted resources or not like the conflict between monocentrism and polycentrism in sparsely populated areas can of course be discussed. Anyhow, this problem is accentuated as these areas are often populated by elderly people and this is an indication of the increase of inter- as well as intra-regional duality that is a function of migratory movements especially in the northern part of Sweden. This can be contrasted with the migration patterns in the southern part of Sweden where the new rural economy has better precondition to develop and expand and out-migration is much less frequent. It must also be kept in mind that ‘regional enlargement’ is – at least partly – a function of in-migration to municipalities outside the relevant functional local labour markets and this might stimulate commuting and consequently ‘regional enlargement’ in the end.

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