# Workshop on Migration, Residential Mobility & Housing Policy

# The effect of geographical centralization of education for outmigration from fringe areas

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**Abstract**

*During the last 25 years population in fringe areas in Denmark has declined. The main reason has been that young people leave these areas and seldom come back. In this study is examined the connection between young people’s outmigration, their choice of education and the location of educational institutions. It is shown that geographical centralization of education since 1990 and the tendency for more young people to choose higher education has resulted in an increase in the outmigration of young people from fringe areas*.

Keywords: migration from fringe areas, start of education

**Introduction**

Like in many other countries Denmark has experienced a growth in population and employment in some urban centres and a population decline in some of the geographical areas most distant from the centres. It has been shown (Skifter Andersen 2010) that the most important reason for population decline in fringe areas is that young people move away and that this outmigration is not sufficiently substituted by their return later in life or by new immigrants.

One of the main reasons for young people to leave fringe areas is education. Few educational institutions are located in fringe areas, especially not higher education, which are the education most geographically concentrated in the larger cities. In many cases it is not possible for young people to remain in their place of birth if they want to obtain their favourite education.

In this paper is examined the reasons for why young people leave fringe areas in Denmark and how this is connected to the location of educational institutions. We look at the development from 1990 to 2012 in the choice of education, the location of institutions and the outmigration of young people from fringe areas. It is examined to what extent outmigration takes place in connection with start of education, start of employment or by change of job to a working place outside fringe areas.

**Theory**

Most residential moves are local, because of place attachment (Skifter Andersen 2009 and 2010). Long distance moves are much more seldom and have important reasons. The most important of these reasons are start of education and change in employment located far away from the previous residence.

Young people have a very high mobility. Besides education and employment it is due to fast changes in their family and housing situation. Most Danish youngsters move away from their parents before they become 25 years. Many of them move together in couples in their twenties. They often have to start their housing careers in unsatisfactory dwellings and gradually improve their situation by moving on. In general most of this mobility takes place in the local area, but for young people in fringe areas it could be different.

Moves away from fringe areas are, like other long distance moves, most often connected to either employment or start of education (Thissen et. al 2010, Stockdale 2004). The propensity to move away depends much on the chosen educational career. Young people, who only complete a primary education, tend to stay in the local area. A Danish study (Hedetoft and Stefaniak, 2014) showed that only 15 per cent with primary education left fringe areas, while half of those who completed a secondary education left. Some of those, who chose to start vocational training and other shorter educations tended to leave earlier than those going to high school, but in the longer run the last group most often moved away.

Some choose to stay at home and commute to the place of education. It is not sure, however, that these youngsters will stay in the fringe areas when education has been finished. Several studies (referred in Thissen et. al. 2010 ) have shown that many of them leave after having finished education because employment opportunities are better elsewhere.

The decision to move away, either before or after education, implies evaluation of several factors. The advantages by moving have to be compared with the inconveniences connected with loss of advantages connected to place where they have grown up, especially the loss of a local social network and social capital developed.

For young people the decision is especially complicated because they often have to leave their parents’ home and the friends they have gathered during their childhood. Moreover, they have been accustomed to the way of life that is usual in the fringe areas, which could be very different from life in the cities. On the other hand they have unclear ideas about how it is to live in cities, both positive and negative.

There are both push and pull factors connected to the decision for young people to leave their parents. Push factors are influenced by if the family is well-functioning or not and if housing conditions are good or bad. In a well-functioning family young people obtain many advantages. They can live there cheaply and get food and services. When you live alone you have a risk of being lonely, which is smaller when living in your family. Strong bonds to parents can reduce the propensity to choose education or job far away from home. Moreover, the opinions and norms of parents on education are more important for choice of education and for moving away to obtain this (Patiniotis and Holdsworth 2007). In the upper social classes parents put more weight on getting higher education and are more willing to let children move, while the lower classes tend to emphasise that children stay home or in the local area and choose an education here. If young people are much economic dependent on parents these have a stronger influence on the decision. More affluent parents can better give economic support to establish a new household far away in the normally more expensive cities.

There have to be strong push factors, like conflicts in the family and bad housing conditions, before young ones decide to leave home. In some cases they might decide to move far away to obtain freedom and independence from parents (Holdsworth 2009). Research shows (Ottosen 2010, Lahelma and Gordon 2010) that those who leave home early typically comes from families with lower incomes, where parents are out of work and more often divorced. Besides the effects of having less well functioning families, there have also been pointed to that there might be different norms in different social classes and geographical areas for when it is expected that young people leave home (Patiniotis and Holdsworth 2007, Dribe and Tanfors 2005).

In general young women leave home earlier than young men (Dribe and Tanfors 2005, Skovgård Nielsen 2014), but it is not clear if this is because they have a greater need of emancipation and are better positioned to establish their own household or if it is because they have stronger desires to obtain education or jobs that are not available nearby the parents’ home. In general young people in fringe areas leave home earlier than in the cities, and this is especially the case for women.

Besides bonds to the family, attachment to the local area also is of great importance for young people. An earlier Danish study (Skifter Andersen 2010) showed that among those living at home 87 per cent felt strong attachment to the place where they lived, while this was only the case for 70 per cent of the whole population. Two Danish qualitative studies of youngsters’ preferences for education and mobility in fringe areas (Sørensen and Pless 2014, Hermansen 2011) conclude that most of them appreciate their life and opportunities in fringe areas, especially the close social relations to other youngsters, the good opportunities to participate in sport and other leisure activities and favourable access to natural activities and experiences.

The strength of these preferences, and family attachment, is important for to what extent youngsters in fringe areas prefer to stay in, or return to, their home area, or if they plan to move elsewhere. They are, however, influenced by conflicting exposures. They have mostly no experiences with how it is to live in cities and their ideas of it is influenced by dreams and myths produced by the media, where life in cities is displayed as the natural place to be and a must for young people (Beck og Ebbensgaard 2010, Svensson 2006, Sørensen m.fl. 2014, Hermansen 2011). They feel that it has a higher status to live in cities than in fringe areas. Some also see migration to a city as an opportunity to escape from what they see as social control from parents and the local community.

The impact of these conflicting influences on the decision of young people concerning choice of education and migration depends among others on their sex and social background. If they come from more resourceful families often have been raised to have high ambitions about education and a life with highly qualified and well paid jobs (Petrin et. al. 2014), which encourage them to move to the cities (Demi et. al. 2009, Helve 2003). On the other hand those coming from less resourceful families have a stronger wish to gain a life style, which only can be practised in less urbanised areas. These young people emphase objectives like obtaining a house and a car in an early age. They therefore go for educations that give admission to jobs that can be obtained here, and these most often are shorter educations, often located close to the local area. For some others it can, however, be a strategy for social mobility to move away and obtain higher education (Rye, 2006). Thissen (2010) postulates the existence of a dichotomy where the less rich and powerless feels a strong attachment to the local community in fringe areas, where they choose to stay as a defensive reaction against the threat from globalisation.

DROZDZEWSKI (2008) found that the conflict between place attachment and orientation against life in cities is influenced by the history of the family in relation to the local area. If the family more recently has migrated to the area, or if members of the family or acquaintances have migrated to cities, their inclination to migrate is stronger. It has also been found that women are more apt to migrate than men. This is mainly explained by their inclination to go for higher or middle-term education which provides other jobs than industrial employment.

An important question for the communities in fringe areas are to what extent the leaving young will return after finishing education. It has been shown that their actual preferences for moving to cities do not necessarily imply a wish to stay there in the long run (Eacott 2014) . In the qualitative study made by Sørensen et. al. (2014) only few of the interviewed rejected the possibility of returning to the local area when they get family and children. They conclude that for these young people life in cities is less in accordance with their ideas of their situation later in life. According to another Danish qualitative study (Gleerup og Kalsø Hansen 2014) many of the youngsters, who plan to leave for education, do not see themselves as city dwellers and want to go back to the place where they grew up, among others to find a good childhood environment for their children and be close to nature and to live in a small and foreseeable community. This is in accordance with other studies (Ærø et. al. 2005, Nørgaard et. al 2010) of why some chooses to move from cities to fringe areas. But it is critical for them to find a job for themselves and to some extent also for their partner (Drozdzewski 2008).

For those who have left the fringe areas and moved to cities it can be important how well they operate in their new environment. An English study (Stockdale 2004) among youngsters, who had moved to a city to study, showed that some of them had problems with creating a new social network and had homesickness, not only for parents but also for their social network at home. Some of them missed their home environment and complained about noise and pollution in the city. A similar Australian study (Drozdzewski 2008) showed, however, that most of the migrated succeeded in building a new social network and that the importance of the network at home declined in the course of time. This depended on to what extent they had established a family and moved into homeownership.

It can be summarized form the literature that choice of education and location of educational institutions have a crucial importance for if young people move away from fringe areas. This is, however, very dependent on sex and family background. It is also important when and how they move away from their home with parents. Those who stay at home until start of education are more inclined to migrate, while those who established their own family in the local area are less. Moreover, other events than start of education, especially getting employment could trigger migration.

**Data and methods**

The paper is based on a database with data on the whole Danish population every year from 1990 to 2013. It contains personal data on age, family situation, income, education, employment etc. It is combined with an education register containing data on time of start and finish of education, and the character and location of the institutions where the education have taken place. As data are available for every year changes in the situation from year to year for every person can be calculated, for example moves, family changes, start of and finish of education, start or change of employment etc.

For this paper two datasets have been constructed. The first contains young people in the age 17 to 39 in the two years 1990 and 2011. The other is a longitudinal dataset containing data on young people in the age of 17 to 25 years for every year in the period. The selected group has been divided into four cohorts after what year they became 17 years old. It contains also data on parents and the household where the young ones were living when they were 17. Their place of upbringing is defined as the place where they lived in the age of 17. Fringe areas in Denmark are defined as municipalities with a decline or a somewhat smaller growth than average for the country 1990 to 2013.

**Fringe areas in Denmark**

As in most other countries economic growth and population increase in Denmark in the last 20 years has taken place in the more urbanised parts of the country. The Copenhagen area is the largest urban conglomeration with about 1.3 million citizens. The next largest cities are Aarhus in eastern Jutland, Odense on Funen (the island in the middle), Aalborg in north Jutland and Esbjerg in the south-west. Moreover, a conglomeration of three cities south of Aarhus has been growing.

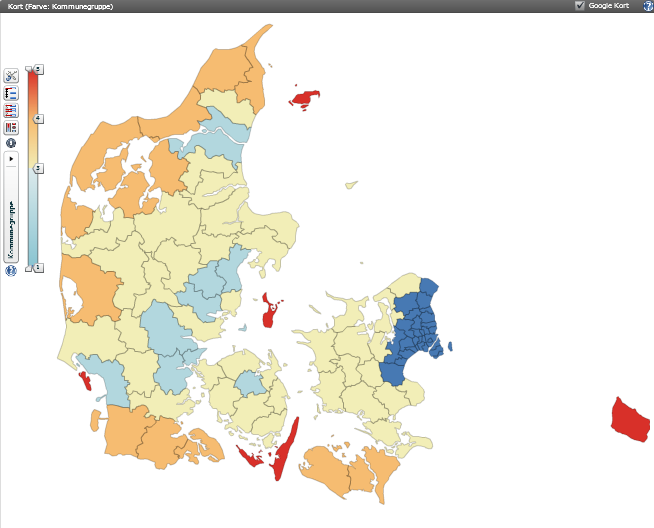


Figure 1. Classification of municipalities in Denmark in area types after population growth 1990-2013.

In Figure 1 is shown the classification of municipalities after population growth since 1990 used in the paper. The dark blue area is greater Copenhagen. The light blue areas are growth areas outside the capital. The orange municipalities are the fringe areas that have been most declining apart from the islands, which are red in the map. The light yellow municipalities are medium areas with neither growth nor decline. In Figure 2 is shown the growth in population 1990-2013 in the five area types and how it differs from the average growth in the country.

Figure 2. Population growth 1990-2013 in area types and deviation from the development in the whole country.

The population decline in the fringe areas has, however, been very unevenly distributed over age groups as can be seen from Figure 3.

Figure 3. Growth in age groups in area types 1990-2013.

In general there has been a decline in Denmark in the number of people in the age 16-30 years and an increase in people more than 45 years old. This decline in the number of young people has, however, mostly hit fringe areas and to some degree the medium areas, while the growth areas have nearby kept their young population. On the other hand all area types have had a growth in the older population. This development has resulted in a marked change in the population structure in the fringe areas with a much larger proportion of older people, many on pension, and a much smaller proportion of younger people and wage earners. These municipalities have come into a situation where they have big troubles in collecting taxes. It has been difficult to sell vacant houses and house prices have declined much.

**The development in the location of education providing a formal qualification**

Educations providing formal qualifications in Denmark have been divided into three groups. In Table 1 is shown the number of students in these groups in 1990 and 2012.

Table 1. Number of students in institutions in different educational groups in 1990 and 2012

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1990 | 2012 | Growth  1990-2012 |
| Vocational training and shorter ed. | 189.594 | 237.250 | 47.656 |
| Medium term | 54.994 | 101.924 | 46.930 |
| Higher education | 97.769 | 171.393 | 73.624 |
| All | 342.357 | 510.567 | 168.210 |

There has been a dramatic increase in education during the period 1990-2012 from 340 to 510 thousands students in educations providing formal qualifications. It is especially higher education that has been growing, but also the medium educations like teachers, nurses etc. Higher education has somewhat restructured in the period. Some studies have been divided into a bachelor degree and a more advanced part. Some of the bachelor studies could be more geographically dispersed the master studies.

In Table 2 is shown the capacity of education in different area types in 2012 compared to the number of residents in the age of 17 years, which can be assumed to be the potential students in the areas preparing to start an education.

Table 2. Number of students in educational institutions localised in area types 2012 compared with number of residents in the age of 17.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Vocational training etc. | Medium term | Higher education | Total | Residents 17 years old |
|  | **Number of students** | | | |  |
| Copenhagen area | 72.263 | 38.043 | 44.129 | 154.435 | 20.460 |
| Other growth areas | 77.254 | 41.772 | 78.196 | 197.222 | 14.998 |
| Medium areas | 61.335 | 15.332 | 2.406 | 79.073 | 26.735 |
| Fringe areas | 24.802 | 5.407 | 1.415 | 31.624 | 9.601 |
| Islands | 1.395 | 395 | 0 | 1.790 | 946 |
|  | **Relative deviation (%) between educational capacity and residents 17 years** **old** | | | |  |
| Copenhagen area | 9 | 35 | 25 | 19 |  |
| Other growth areas | 55 | 97 | 195 | 102 |  |
| Medium areas | -30 | -59 | -95 | -54 |  |
| Fringe areas | -20 | -59 | -91 | -48 |  |
| Islands | -55 | -70 | -100 | -70 |  |

Especially higher education is concentrated in the larger cities in the growth areas. Much education is found in the Copenhagen area, but compared to the number of young people in the area the concentration is highest in the growth areas in the provinces, especially around Aarhus, Odense and Aalborg, where universities also are located. Fringe areas are not much worse supplied than the medium areas, but these municipalities are located much closer to the growth areas. Worst off are the Islands where very few educational institutions are found, and they are also located furthest away from the growth centres.

The strong concentration of education in Denmark is partly a result of a development that has happened in the last 25 years. In Table 3 is shown the growth from 1990 to 2012 in the number of students at institutions located in in the different area types.

Table 3. Growth in educational capacity in area types 1990-2012 (%)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Vocational training etc. | Medium term | Higher education | Total |
|  | **Growth 1990-2012 (%)** | | | |
| Copenhagen area | 24 | 81 | 46 | 41 |
| Other growth areas | 46 | 99 | 105 | 76 |
| Medium areas | 24 | 85 | 47 | 34 |
| Fringe areas | -10 | 39 | 15 | -3 |
| Islands | -3 | 132 | 0 | 11 |
|  | **Deviation from average growth** | | | |
| Copenhagen area | -1 | -5 | -31 | -7 |
| Other growth areas | 21 | 14 | 28 | 29 |
| Medium areas | -1 | -1 | -30 | -14 |
| Fringe areas | -35 | -47 | -62 | -50 |
| Islands | -29 | 47 | -77 | -36 |

The growth has been quite uneven. The growth areas outside Copenhagen have got the largest part of the increase in educational capacity while Copenhagen has been stagnating. Fringe areas have been much disadvantaged.

**Outmigration of young people from fringe areas in 1990 and 2011 in connection with start of education providing a formal qualification**

As a result of the uneven geographical distribution of educational institutions young people in fringe areas more often have to move from their home municipality when they want to obtain education. In Figure 4 is shown the proportion of people in the age of 17 to 39, starting an education providing a formal qualification in 2011, who moved away from their area type the same year. Moreover, the change in these proportions from 1990 to 2011 is shown.

Figure 4. Proportion of young people 17-39 years old, who in 2011 move away from their area type when starting education providing a formal qualification, and the change in these proportions from 1990 to 2011.

In average about 35 per cent moved away from fringe areas the same year as they started education in 2011. As expected there is a dramatic difference between outmigration from the central growth areas and the fringe areas and these differences depend much on the kind of education chosen. Only 12 % of young people in fringe areas starting vocational training are leaving the areas (24 % on the islands), while nearly 50 % are leaving when starting on a middle sized education. When starting higher education 85 % are leaving the fringe areas and nearly all living on the islands. A new Danish study (KRAK’s Byforskning 2015) has shown that students in fringe areas more often choose vocational training instead of higher education, but that this to a great extent can be explained by family background.

As is seen from the lowest section of the figure the differences between area-types in 2011 to a great extend have been created in the period since 1990. Especially the increased geographical concentration of medium term education, as shown in Table 3, has resulted in an increased outmigration from fringe areas and islands. But also for vocational training and higher education a marked growth has happened.

**Determinants of outmigration of young people from fringe areas**

In this section statistical analyses are made on the longitudinal dataset to examine how different factors influence the combined decision of beginning an education and move away from fringe areas and islands. In the first place is made an estimate of the causes of outmigration from fringe areas by examining what events took place in the life of young people, grown up in fringe areas, the same year as they moved away to other parts of the country. The longitudinal dataset contains data for every year on three cohorts of young people in the age of 17-25 years, who lived in the fringe areas when they were 17 years old in either1990-94, 1995-99 or 2000-2004. It is possible from our data to determine, if they started education, got their first job or changed job to a working place in another municipality the same year as they moved away. In Figure 5 is shown a distribution of all persons in every cohort on not moving and estimated causes of moving.

Figure 5. Estimated causes of outmigration from fringe areas (and islands) for three cohorts of young people 17-25 years old.

The proportion not moving away from fringe areas (and islands) declined as expected from the first to the last cohort from 47 per cent to 41. The proportion of the cohorts moving in connection with start of education increased from 29 to 34 per cent. The share of cohorts, who moved the same year as they started their first job, has been quite stable on 9 per cent. Moves in connection with starting a new job in another municipality, only changed between cohorts from 8 to 9 per cent. Moves happening in years when none of these events happened, called ‘other motives’ in the figure, were estimated to about seven per cent for all three cohorts.

*Statistical analyses of factors determining moves in connection with start of education*

As discussed in the theoretical section choice of education and to move away from the place where one has grown up is a complex and interwoven decision, which is affected by many factors as choice of education, family background, residential career and sex. The object of the analyses is to illuminate the influence of such factors on the decision to move away in connection with start of education. Moreover, to test differences between the cohorts in moving when controlled for background variables.

The method used is to make three logistic regressions of what determines if young people in the age of 17 to 25 move away from fringe areas (and islands) in connection either with starting vocational training, middle term education or higher education. Moreover an analysis is done for starting all kind of education providing a formal qualification. The independent variables used are:

* **Cohort**: 1990-94, 1995-99, 2000-04, 2005-

**Geographical location**

* **Fringe area/Islands**
* **Region**: Sealand, Fynen, Jutland

**Personal variables**

* **Age** at end of year: every year 18-25
* **Man/Woman**
* **Ethnic background**: Danish, Immigrant, Descendant

**Events during the year:**

* Lost job
* Moved together with partner
* Got divorced
* Got first child birth
* Got second or more child birth
* Have been abroad last year

**Situation at start of the year**

* **Family situation**: With parents, Single without children, Single with children, Couple without children, Couple with children, Mixed families
* **Housing situation**: with parents, Owned detached, Owned flat, Co-operative, Social Housing, Private Renting

**Situation when living with parents in the age of 17**

* **Living with both parents**
* **Parents education:** Primary school, Secondary, Vocational training etc., Medium term, Bachelor, higher education

In Table 4 is shown the results (odd ratios) for the four regressions.

Table 4. Results from four logistic regressions of determinants of moving away from fringe areas in connection with start of education

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **All educations** | | **Vocational training** | | **Medium term** | | **Higher education** | |
|  | Signifikans | Odds | Signifikans | Odds | Signifikans | Odds | Signifikans | Odds |
| Ratios | ratios | ratios | ratios |
| **Cohort (1990-94)** |  |  |  |  |  |  |  |  |
| 1995-99 | 0,00 | 1,19 | 0,00 | 1,23 | 0,00 | 1,26 | ,00 | 1,09 |
| 2000-04 | 0,00 | 1,37 | 0,00 | 1,40 | 0,00 | 1,41 | ,00 | 1,24 |
| 2005- | 0,00 | 1,69 | 0,00 | 1,66 | 0,00 | 1,76 | ,00 | 1,47 |
| **Islands** | ,00 | 1,25 | ,00 | 1,49 | ,00 | 1,33 | ,89 | ,99 |
| **Region (Sealand)** |  |  |  |  |  |  |  |  |
| Fynen | ,00 | ,87 | ,06 | 1,13 | ,01 | ,79 | ,00 | ,71 |
| Jutland | ,00 | 1,08 | ,32 | 1,03 | ,63 | 1,02 | ,00 | 1,13 |
| **Age at beginning of year (18)** |  |  |  |  |  |  | ,00 |  |
| 19 | ,00 | 3,16 | ,00 | 2,50 | ,38 | ,93 | ,00 | 7,04 |
| 20 | ,00 | 11,05 | ,00 | 5,04 | ,00 | 5,13 | ,00 | 26,75 |
| 21 | ,00 | 20,99 | ,00 | 6,81 | ,00 | 14,24 | ,00 | 45,15 |
| 22 | ,00 | 23,35 | ,00 | 7,57 | ,00 | 22,81 | ,00 | 38,09 |
| 23 | ,00 | 18,34 | ,00 | 7,36 | ,00 | 21,63 | ,00 | 22,11 |
| 24 | ,00 | 14,19 | ,00 | 6,52 | ,00 | 15,77 | ,00 | 15,94 |
| 25 | ,00 | 12,64 | ,00 | 6,18 | ,00 | 13,27 | ,00 | 13,07 |
| **Woman** | ,00 | 1,30 | ,00 | 1,08 | ,00 | 2,32 | ,07 | 1,03 |
| **Etnic background (Danish)** |  |  |  |  |  |  |  |  |
| Immigrant | ,00 | ,73 | ,29 | ,93 | ,00 | ,50 | ,00 | ,80 |
| Descendant | ,31 | 1,11 | ,83 | ,96 | ,62 | 1,10 | ,26 | 1,17 |
| **Events during the year** |  |  |  |  |  |  |  |  |
| Have been abroad last year | ,00 | ,15 | ,05 | ,86 | ,00 | ,06 | ,00 | ,04 |
| Lost job | ,00 | ,13 | ,00 | ,37 | ,00 | ,08 | ,00 | ,07 |
| Moved together with partner | ,00 | 2,98 | ,00 | 3,00 | ,00 | 2,41 | ,00 | 2,78 |
| Got divorced | ,00 | 4,67 | ,00 | 3,45 | ,00 | 3,62 | ,00 | 4,33 |
| Got first child birth | ,00 | ,29 | ,00 | ,43 | ,00 | ,21 | ,00 | ,15 |
| Got second or more child birth | ,00 | ,48 | ,04 | ,81 | ,00 | ,35 | ,00 | ,18 |
| **Family situation (With parents)** | | |  |  |  |  |  |  |
| Single without children | ,00 | ,43 | ,00 | ,58 | ,00 | ,37 | ,00 | ,40 |
| Single with children | ,00 | ,12 | ,00 | ,26 | ,00 | ,04 | ,00 | ,08 |
| Couple without children | ,00 | ,30 | ,00 | ,45 | ,00 | ,26 | ,00 | ,28 |
| Couple with children | ,00 | ,07 | ,00 | ,16 | ,00 | ,03 | ,00 | ,03 |
| Mixed families | ,00 | ,58 | ,18 | ,92 | ,00 | ,47 | ,00 | ,50 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Housing situation (with parents)** | |  |  |  |  |  |  |  |
| Owned de*ttached* | ,00 | ,77 | ,00 | ,79 | ,00 | ,76 | ,00 | ,77 |
| Owned flat | ,82 | 1,02 | ,48 | 1,10 | ,53 | ,90 | ,40 | 1,13 |
| Co-operative | ,64 | ,95 | ,77 | 1,05 | ,22 | ,74 | ,65 | 1,09 |
| Social housing | ,00 | ,79 | ,06 | ,87 | ,38 | ,92 | ,00 | ,71 |
| Privat renting | ,51 | 1,03 | ,07 | 1,12 | ,05 | 1,16 | ,18 | ,92 |
| **Grown up with both parents** | ,00 | 1,28 | ,49 | ,98 | ,00 | 1,29 | ,00 | 1,50 |
| **Family situation when living with parents (Couple with children)** | | | | | | |  |  |
| Single with children | ,41 | ,98 | ,00 | 1,18 | ,10 | 1,09 | ,00 | ,79 |
| Mixed families | ,05 | ,94 | ,00 | 1,16 | ,94 | 1,00 | ,00 | ,75 |
| **Parents education (higher education)** | | | |  |  |  |  |  |
| Primary school | ,00 | ,33 | ,00 | 1,46 | ,00 | ,66 | ,00 | ,20 |
| Secondary | ,00 | ,61 | ,00 | 1,54 | ,25 | ,87 | ,00 | ,51 |
| Vocational training etc. | ,00 | ,42 | ,00 | 1,65 | ,02 | ,87 | ,00 | ,25 |
| Medium term | ,00 | ,66 | ,00 | 1,32 | ,00 | 1,23 | ,00 | ,52 |
| Bachelor | ,02 | ,79 | ,01 | 1,76 | ,93 | ,98 | ,00 | ,68 |
| Nagelkerke R2 | ,276 |  | ,114 |  | ,239 |  | ,279 |  |

Note: Results in red are not significant

The models are to a reasonable extent explaining migration in connection with start of education (Nagelkerke R2). The results for all educations in the first row show that the later cohorts have higher odds ratios for migration than the first cohort. This indicates that education over time has got more importance in promoting migration from fringe areas in Denmark. It is start of vocational training and especially middle term education that have resulted in more migration. Higher education has also produced more migration, but the increase is a little smaller.

Women are more inclined to migrate to start education, but this is mainly due to start of middle term educations, while the differences between the sexes are not dramatic for the two other kinds of education.

Those who experienced other upheavals in their life are more ready to migrate to study. Different events, which happened in the same year, have influenced the decision to start education and move away. Changes in the family situation like moving together with or from a partner increased much the propensity to start education and move, while getting children reduced it. Those who had lost their job seldom moved to start education.

The highest mobility was found among youngsters living with parents, while those who had established a household for themselves in the local area more seldom moved. This especially applies for lone parents, who can be expected to be weaker groups of women, and those residing in homeownership or in social housing.

Like other studies these analyses also show very significant effects of factors connected to the family and to parents’ education. Young people who lived together with both parents at the age of 17 were much more inclined to start education and move away and the effect increased for choosing higher degree of education. Compared to parents with higher education the propensity to move to start education in general was much lower if parents only had primary or secondary school or vocational training. These differences were also especially significant for moving to higher education. For moving to vocational training, however, the probability of moving was higher among those whose parents did not have higher education. Moving to middle-term education was most common among those whose parents had this kind of education.

**Discussion and conclusions**

As has been shown in Table 2 educational institutions in Denmark, like in most other countries, have been concentrated in the more urbanised parts of the country. This implies that young people in fringe areas have difficulties in finding education in their local area and thus often are forced to move away to the urban centres to obtain education providing a formal qualification.

Denmark has, as many other countries, experienced a geographical concentration in the last 25 years, leading to population losses in the parts of the countries located furthest away from the growth centres, so-called fringe areas. The loss of population in these areas is mainly due to outmigration of young people. Fringe areas in Denmark have thus had a 40 % reduction of young people in the age 25- 30 years old in the period 1990 to 2013.

As described in the theoretical section there are different reasons for why young people choose to migrate from fringe areas or to stay there. It has been shown that most of them have a high degree of place attachment, which implies that there should be very good reasons before they choose to leave. On the other hand some of them believe that their career options are better in cities or perceive life in cities as a must for young people.

The most important reasons for leaving fringe areas are education and work. Start of education showed to be the most important factor with increasing importance over years. 29 per cent of the cohort of young people in fringe areas getting 17 years old in the start of the 1990’ties left the areas before getting 25 years old in connection with start of education. For later cohorts this increased to 34 per cent. Migration in connection with start or change of employment only accounted for outmigration of 17 per cent and this did not change with time.

In 2011 on average about 35 per cent in the age 17 to 39 moved away from fringe areas the same year as they started education. The extent of migration was, however, closely connected to the kind of education chosen. Among those, who started higher education, more than 85 per cent moved out, for middle-term educations it was about 50 per cent and for vocational training it was only 12 per cent. Migration and choice of education is thus of crucial importance and the literature has shown that many youngsters in fringe areas are split by a dilemma between the inclination to stay and their aspirations of education and career.

Like some other studies the statistical analyses show that outmigration in connection with start of education depends on how far they have come in their family, work and housing career and on their family background. Those who stay at home, until they start an education providing formal qualification, have a much higher propensity to migrate than those who have moved away from parents, especially if they also have formed a family and got children. The educational background of parents is crucial for choice of education and for migration. If parents’ highest education is vocational training or only primary or secondary school the probability of migration is much lower in connection with start of education and especially in connection with higher education. This group are, however, more inclined to migrate in connection with vocational training than those whose parents have a high education.

Qualitative studies have indicated that young people, who come from families with social problems, leave home earlier, more seldom start higher or middle-term education and are more inclined to stay put in fringe areas. This is confirmed by the fact that those who lived together with both parents in the age of 17 more often migrate than those who did not. Having divorced parents thus reduces the inclination to start education and migrate, especially to do it in connection with higher education.

It is well known from the literature on causes of migration that major changes in the life situation of people increase the probability of moving, and if people has started moving they are more inclined to do it again. The analyses show that young people in fringe areas have a higher propensity to migrate. If they have experienced a separation from a partner the same year the probability of migration increases dramatically, and also moving together with a partner increases migration. Other events, however, like birth of children reduces migration. This confirms the conclusion that start of a family career reduces outmigration form fringe areas.

It could be expected that those, who lost their job during the year, would be more inclined to start education and migrate, but this is not the case. This group has a very low probability of moving away, which could be connected to that this is a socially weak group.

In general women in fringe areas are more inclined to migrate in connection with start of education, but this differs much between levels of education. In fact it is only in connection with middle-term educations that women are much more inclined to migrate. This is somewhat surprising as other studies have shown that women more often go to higher education than men.

It is shown that the geographical centralisation of education has continued in Denmark in the last 25 years (Table 3). An important objective of the study was to examine the effects of this centralisation on migration from fringe areas. The analyses showed (Figure 4) that the frequency of migration, when starting education, increased with nearby eight percent in the period 1990 to 2012 when starting middle-term or higher education and 5 percent for vocational training. The statistical analyses also showed that the probability of migration in connection with start of education in general increased much among the later cohorts compared to the first cohort.

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