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PhD Thesis

Geographical Mobility and Occupational Outcomes in Western Europe

A comparison between Italy, UK and Germany

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Index

Introduction

The aim of my research is to study internal geographical mobility and its association with social mobility in a comparative perspective for selected countries in Europe, namely Italy, UK and Germany using longitudinal data.

The first chapter of my thesis explains the theoretical framework of my analysis. I concentrate on the definition of geographical mobility, the problematics related to it and what are the drivers of mobility. I focus on the theories which explain the mechanism through which geographical mobility affects social mobility and its interaction with other achieved and ascribed factors such as education or social class of origin.

The second chapter focuses on the selection process that takes place in the movements of the population. What are the characteristics of individuals who move? How are they different from the non-movers in terms of education, social origin, civil status? The second part will analyze how geographic mobility affects labour market outcomes. Are individuals who move more likely to have an upward occupational mobility? Since geographic mobility affects men and women differently, a dedicated section will focus on gender differences in these trajectories. For the purpose of my research, geographical mobility is defined as inter-regional mobility within each country.

The third chapter analyses how geographical mobility affects the chances to social mobility in three European countries with different labour market characteristics: UK, Italy and Germany. What is the relation between migration and occupational outcome? I focus on the social mobility from a life course perspective and the question I try to answer is whether migration increases the chances to upward mobility. Traditionally, women have lower labor market participation rates compared to men and their earnings can fluctuate more during their life course. As a result, when migration decisions are made in the family, women are more likely to be followers than leaders. If women are tied-movers, the returns to geographical mobility will be lower and they will experience less upward mobility compared to men. A dedicated section analyses gender differences on the outcomes of geographical mobility on occupational outcome.

The contribution of this study to the existing research can be defined as follows: First, it is a comparative analysis of internal migration. There are not many studies which analyze internal migration in a comparative way, and one of the main reasons for this is that countries are different in terms of data collection, spatial territorial units, the definition of migration and so on and so forth, making cross-country comparison quite difficult (Stillwell et al., 2017). The use of longitudinal data helps us to avoid some of these problems. Even though caution is required in comparing rates of internal migration in absolute terms, we can compare trends over a relatively long period of time (after WWII until most recent years). The second contribution of the use of panel data is that allows a life-course perspective and a better understanding of the phenomenon. The third innovative contribution that can be pointed out is that the theoretical framework of the analysis is based on both internal and international migration theories. Efforts in building integrated approaches present some weaknesses, whether they try to build a comprehensive theory for all type of migration and all contexts, or when they rely solely on empirical generalizations (King and Skeldon, 2010). Both internal and international migration theories can be functional to this research and predicting selection into migration and outcomes, independently of what kind of movement we are looking to explain. The last point I would like to emphasize in my work is the importance of looking at geographical mobility from a social stratification point of view. This was central to classic social stratification studies until the late 1960s, but there are only few more recent studies which explore this relation.

Chapter 1

Migration, social stratification and inequality

1.0 Introduction

This first chapter has the aim to explain the theoretical framework of my research and to point out its contribution along with problems that might arise during the empirical work.

In the first section I introduce the importance of studying internal migration. The relation between international and internal migration literature will be explored with a critical approach towards the dominance of international migration literature in migration studies. The problems faced by a researcher when studying internal migration are related to the definition of the phenomenon, the comparability problem, lack of data etc. In the second section I will focus on the drivers of internal migration, which can be economic, demographic, social or political. The third section provides a description of the internal migration process after the World War II, in the countries of analysis, Italy, Germany and UK. The fourth part of the chapter is dedicated to the relation of geographical mobility and internal mobility. The main contribution here is given by classic social stratification studies and their focus on spatial mobility as a mechanism of labour market regulator. In the last section I explain more in detail the analytical framework. Starting from the OED triangle, in this section is explored the mechanism through which geographical mobility affects social mobility and its interaction with other achieved and ascribed factors such as education or social class of origin. Here, I will also point out the potential of longitudinal data and go in detail to the datasets that I will use.

1.1 Beyond the methodological nationalism: geographical mobility, internal and international migrations

The main theories explaining migration were built during the industrial era and their conceptual framework is shaped according to the economic structure, social and political institutions as well as demographic changes of that time (Massey et al, 1998). Internal and international migration theories have traditionally been two separate streams of studies and the reason for this dichotomic separation are multiple, such as different backgrounds of the researchers studying migrations, the research agendas driving the work and their policy implications, and not less important, different data sources and analytical techniques applied (Salt and Kitching, 1992).

When migration is being discussed in the media or public discourse, we often tend to consider mainly international migrants, moving from poorer to richer countries. Actually, the most important flows of migrants happen within country borders and this phenomenon is particularly strong in developing countries. The process of urbanization might be at a halt for developed countries and the movements from rural to urban are considerably smaller compared to previous decades, but this is not the case for most developing countries of the world where mass internal migration continues to take place.

The most recent reports estimate that the global number of international migrants is around 272 million in 2019, representing 3.5 percent of the world population (UN DESA, 2019). Whereas, the UNDP in the 2009 Human Development Report estimates that at least 740 million people are internal migrants, a number which is almost three times higher compared to that of international migrants. A reason for this disparity between internal and international migration relies mainly on the greater legal and economic barriers for international migrants, whereas it is easier and less costly to move within the same country.

Another important point made by King *et al.* (2008) is that the distinction between the two forms of movement is often blurred and not quite well defined. Using distance as a criterion of distinction can lead to inaccuracies in terms of defining cost and effort for migration: moving across borders from Switzerland to France does not have the same

impact as moving from the east to the west coast in the US. Likewise, international borders may mutate overtime as in the case of the free movement within the EU area, or with the disaggregation of the URSS and Former Yugoslavia new borders arose transforming internal migrations into international ones. A third point to be made is that internal and international migration present similarities in terms of the causes and drivers of the two forms of movements. This concept has been argued by authors studying African migrations (Adepoju 1998, Zacharia and Condé 1981): economic causes, growth disparities, but also ethnic wars, famines and droughts can be drivers for both internal and international migrants or refugees. In the same way, neoclassical economists explain that causes for both internal and international migration rely on wage differential and relative endowment of capital and labour between two geographic areas (Harris and Todaro 1970, Todaro 1976).

The vast literature on international migration focused on migrants' assimilation and integration can be functional to internal migration studies as well. Especially when looking at rural-urban movements, they bring together groups of people who often share different social, cultural and linguistic backgrounds (King and Skeldon, 2010). These authors emphasize that considering internal migrants as homogenous to the rest of society might be a mistake and this is particularly true for large countries with strong regional characteristics. Caution is required, however, when considering similarities between internal and international movers; the political dimension and legal barriers to border-crossing represent an unsurmountable obstacle for many potential international migrants. Cultural and linguistic barriers or their absence are important elements possibly making the difference between the two forms of movement.

Some authors have explained the hegemony of international migration over the internal migration studies as a consequence of "methodological nationalism" in social sciences. After World War II, Migration studies along with other sociological disciplines, have been pervaded by a methodological nationalism, which is based on the assumption that nation-state-society is the natural social and political form of the modern world (Wimmer and Schiller, 2002). In order to better understand the influence of the methodological nationalism and why international migration studies have come to overshadow those of internal migration, we should begin with understanding the four notions of peoplehood of modern nationalism, as described by Wimmer and Schiller.

The first notion is that people are a sovereign entity and they express their political power through democratic procedures. The second notion is that citizens of a state are equal under the law. Third, individuals belonging to a people are considered as part of a group with obligation for mutual support and solidarity and the fourth, citizens are part of an ethnic community and they share common customs and cultural background.

These combined notions identify the modern nation-states formed post World War II based on democracy, citizenship, social security and national self-determination traced by national territory. In this scenario, migrants are a source of concern because they challenge the concept of order within the national borders. Migrants, as foreigners, are perceived as loyal to another state, with different laws and rights. Having different ethnic origin with respect to nationals, they represent a challenge for national identity. Furthermore, migrants are considered outsiders of the space of national solidarity, they are not meant to be part of the welfare system. The hegemony of methodological nationalism has often led social scientists after the second world war, to perceive migrants as trapped into a cycle of unemployment and poverty with implications for the national welfare system. In quantitative studies, the measures for migrants' income, fertility, unemployment and social assistance dependency have almost exclusively been compared to national reference categories. Another major limit of these theories is that they concentrate mainly on the movement of non-citizens, as international migration has become the core object of migration studies, and less attention is put on internal movements.

Although most of recent migration theories have been focused mainly on international migration, the importance of studying internal migration and especially its interlinkages with international migration have been stressed out by different authors (Skeldon 2006, King and Skeldon 2010, Champion 1992; 2017). King *et al.* (2008) explain how internal and international migration are often sequenced phenomena and can push or pull each other. Migration is a process which requires different steps for an individual to take. Often international migration is preceded by one or more movements from a rural to an urban area where the migrant can have the possibility to accumulate the necessary resources (financial, network, logistic etc.) before going abroad. Another common scenario is that economic growth leading to urbanization and industrialization initially relies on internal manpower and once this reservoir of internal migrants is exhausted,

acquiring foreign workers becomes necessary. This is the case of Japan or South Korea, which drain non-qualified workers from lower-income countries in the South-East Asia. It is also true for Southern European countries with an aging population, which in the more recent decades have been drawing low-skilled workers from international migrants' groups. Another possible scenario is when international migrants become internal migrants in the hosting country. Here we can mention the case of Albanian migrants during the early 1990s, who first arrived in Apulia and later on moved to the Northern region of Italy.

King *et al.* (2008) argue that international migration can interact with internal migration through the mechanisms of displacement, substitution or diversion. Displacement happens when the arrival of international migrants is accompanied with locals moving out from the same areas. This happens mainly for two main reasons: 1) the incoming of migrants pushes salaries down and reduce the attractiveness of the residential areas they settle in or 2) migrants just fill in those jobs and housing market opportunities left by locals who have already moved to other areas i.e. the suburbs. The substitution happens when foreign migrants exploit job opportunities in a particular area that otherwise would have been taken by internal migrants. Internal migration is lowered because it is substituted by international migrants. The diversion mechanism is referred to the situation when internal migrants are attracted to a certain area because they learn about opportunities taken by international migrants there. In this scenario international migration leads to internal migration.

One of the first and most significant attempts to provide a comprehensive migration theory, linking international and internal migration, is that of Zelinsky in 1971. In his *theory of the mobility transition* Zelinsky (1971) states that "*There are definite, patterned regularities in the growth of personal mobility through space-time during recent history, and these regularities comprise an essential component of the modernization process*". The progress of a community can be evaluated by its control over energy, goods and knowledge but also from the attainment of personal mobility, i.e. the availability of alternatives of territorial locations. The mobility transition goes hand in hand with the demographic transition as with the modernization of societies, individuals gradually gain control over deaths and births. The progress in medicine has favoured the cure of many lethal diseases and prolonged the average life expectancy and

in the same way the diffusion of birth control measures has given people, especially women, the possibility to plan parenthood. In the same way, the progress of technology and economic circumstances enable the movement and circulation of people. This parallel development and different transition stages of the societies are represented in table 1.

Table 1: The vital-mobility transition

The Vital Transition	**The Mobility Transition**
Phase A-The Premodern Traditional Society A high fertility and mortality with some fluctuations over the years Little if any, long-range natural increase or decrease	*Phase I -The Premodern Traditional Society* Little genuine residential migration and limited circulation mainly for land utilization, social visits, commerce, warfare, or religious observances
Phase B -The Early Transitional Society Slight, but significant, rise in fertility, which then remains fairly constant at a high level Rapid decline in mortality A relatively rapid rate of natural increase, and thus a major growth in size of population	*Phase II -The Early Transitional Society* Massive movement from countryside to cities Significant movement of rural population to colonization frontiers, if there is availability for new lands Major outflows of emigrants to available attractive foreign destinations Under certain circumstances, a small, significant, immigration of skilled workers, technicians, and professionals from more advanced areas of the world Significant growth in various kinds of

	circulation
Phase C- The Late Transitional Society A major decline in fertility, initially rather slight and slow, later quite rapid, until another slowdown occurs as fertility approaches mortality level A continuing but slackening, decline in mortality A significant, but decelerating, natural in- crease, at rates well below those observed during Phase B	*Phase III - The Late Transitional Society* Slackening, but still major, movement countryside to city Lessening flow of migrants to colonization frontiers Emigration on the decline or may have ceased altogether Further increases in circulation, with growth in structural complexity
Phase D - The Advanced Society The decline in fertility has terminated, and a socially controlled fertility oscillates rather unpredictably at low to moderate levels Mortality is stabilized at levels near or slightly below fertility with little year-to-year variability There is either a slight to moderate natural increase or none at all	*Phase IV - The Advanced Society* Residential mobility has leveled off and oscillates at a high level Movement from countryside to city continues but is further reduced in absolute and relative terms Vigorous movement of migrants from city to city and within individual urban agglomerations Significant net immigration of unskilled and semiskilled workers from relatively underdeveloped areas There may be a significant international migration or circulation of skilled and professional persons, but direction and volume of flow depend on specific conditions

	Vigorous accelerating circulation, particularly the economic and pleasure-oriented but other varieties as well
Phase E- A future Super advanced Society Impossibility to predict fertility behavior, but likely births being carefully controlled by individual and also policies A stable mortality pattern, likely slightly below present levels	*Phase V - A Future Super advanced Society* The advanced technology and means of communication likely will reduce the levels of residential mobility and circulation Internal mobility becomes mostly inter and intra-urban New forms of circulation Strict controls on international and perhaps internal movements will be imposed.

Source: after Zelinksy (1971, pp 230-1)

Based on this model we can argue that most European countries are entering the fifth phase, with quite low overall internal migration rates. Communication technology makes it possible to work from home; fast and efficient means of transportation make it easier to commute to longer distances and less necessary to dislocate for work. International movements are strictly controlled but new forms of circulation have risen such as the free movement within the EU. However, as we will see in our analysis, there is a proportion of population that move for better job opportunities and they are well educated and relatively young compared to the totality of the population.

Apart from theoretical considerations, studying processes and patterns of internal migration within a country is also important from an economic policy-making

perspective. Internal migration works as an adjustive mechanism, functional to demand and supply matching in the national labour markets (Champion, 2017). A better knowledge of the internal migration processes allows to better design and target labour market policies. Another interesting aspect of internal migration for both academics and policy-makers, is its linkages with spatial inequalities, especially in large cities and metropolitan areas. Many qualitative and quantitative studies have shown evidence of the so called "neighborhood effect"; the place of residence is correlated with outcomes in the labour market, school achievement, health status and so on and so forth (Darlauf 2004, van Ham and Manley 2012). Flows of migrants towards a given area can have an important impact on its housing market. The increasing request for renting or buying houses will bring up the real estate prices. The opposite effect can happen if the concentration of ethnic migrants might make the neighbourhood less appealing, locals might decide to sell and leave, and the housing prices will subsequently fall.

1.2 Comparability issues in internal migration research

As different authors have pointed out, studying internal migration poses some challenges and problems to the researcher (Zelinsky 1971, Bell et al. 2002, Stillwell 2018). These problems arise especially when the analysis includes a cross-national comparability and are argued below.

1.2.1 Definition of internal migration.

As opposed to international migration, in the case of movements within the nation territories, there is not a border-crossing event, so the definition on internal migration is not straightforward. Migration can be short or long distance, individuals can move from one city to another, rural to urban areas, from inner regions towards the coast, from one region to another and so on and so forth. So, the division of space and distance of the population movements are crucial factors in the definition of the phenomenon. The same geographical area can be divided into different spatial units. Sub-national territorial levels can also pose a problem of comparability over time, since these units are not immobile and can change following administrative reforms. Differences in

territorial geography and administrative geographical units make it very hard to compare internal migration stocks between two countries. However, a solution to these problems in the literature is to compare processes: trends and changes over time of geographical mobility in selected spatial units for different countries (Bell et al. 2002). Another major problem for comparability is imposed by the distance of the movement. For instance, the impact in terms of effort and cost might not be the same if an individual from Calabria moves to Apulia or to Piedmont. The unit of analysis in each case is decided by the researcher according to data availability and/or the decision can be theoretically driven based on the research question and what we are trying to explain. For instance, to capture a selection effect of movers, focusing on long-distance mobility is more suitable than short-distance one. The selection effect would be more evident when the costs involved in the process are higher, which is the case of long-distance migration.

1.2.2 Data and measurement problem of migration.

Each country has its own means and methods of collecting data. Information on migration is mainly collected by censuses or by population registers. In national censuses the migrant is typically identified when there is a change in residential address at time *t* compared to *t-n*; in this case the change of residence is registered as a *transition data*. The censuses however are done periodically, every five or even ten years and a big limit is that information of multiple moves during the period between census can be lost. In countries where population registers exist, migration is registered as *event data*, where multiple moves should be captured each time, providing a richer and more precise information (Bell et al. 2002). A problem for cross-country comparability is that the change of residence as reported in national censuses, often is defined differently in different countries. For instance, in the UK the living address corresponds to the residence of the person, there is no formal definition of residence. In Italy instead, the residence might not coincide with the living address. Students who leave home to go to university often keep their legal residence in their family home, but also individuals who move for work purposes might keep the old address as a residence or they change it only after some time from the relocation. So, what is registered in the census as a residence might or might not coincide with the effective living address.

Even in the case of longitudinal datasets, where multiple moves as observed in different waves are registered, the nature of the datasets might be a limit for cross-country comparability. For example, the Italian Longitudinal Household is a retrospective panel, so it is possible to trace back all the migration events if they are reported correctly from the individual. Some loss of information might occur here due to recalling issues, for instance younger and more educated interviewees would give more accurate information compared to older or less educated individuals. The German SOEP and the BHPS register the information from the first wave the individual enters the panel and is followed on through the next waves. If the migration event has occurred before the individual enters the survey, it is not registered, therefore the event in this case is left-censored.

1.2.3 The temporal comparability problem.

Censuses and surveys take place in different time points in different countries, and also the temporal intervals from one data collection point to another are different. Furthermore, internal mobility follows economic cycles and the intensity of migration can change from one time point to another. So, trends of migration can be very volatile from year to year, as it has been the case of the British migration flows (Stillwell et al., 1992).

In conclusion to this section, I would like to point out that for the purpose of my research I will draw on both internal and international migration theories. The conceptual separation between international and internal movements can be avoided when explaining flows and outcomes. Since I am looking at the selection into geographical mobility, particularly concerning its drivers and its effects on social mobility, both approaches are valuable for explaining and analyzing these processes. The same can be argued when considering the migration outcome. Given that we are looking at individuals engaged in the labour market and we consider migrations as an investment in human capital, the expected outcome follows similar trajectories for both internal and international migrants.

1.3 Drivers of internal migration

Differences in migration rates and trends across countries reflect differences in labour market structure, but also cultural and historical migration tradition within each country. Empirical literature shows that internal migration rates and trends are different across countries with important fluctuation in some cases and more stable in others. In graph 1 it is shown the trend of lifetime internal migration as constructed by Bell and Muhidin (2009). The lifetime migration rate indicates if the residence registered at the moment of the census or survey is different from the birth residence, it does not capture intermediate movements, however it is a useful indicator to compare trends through time.

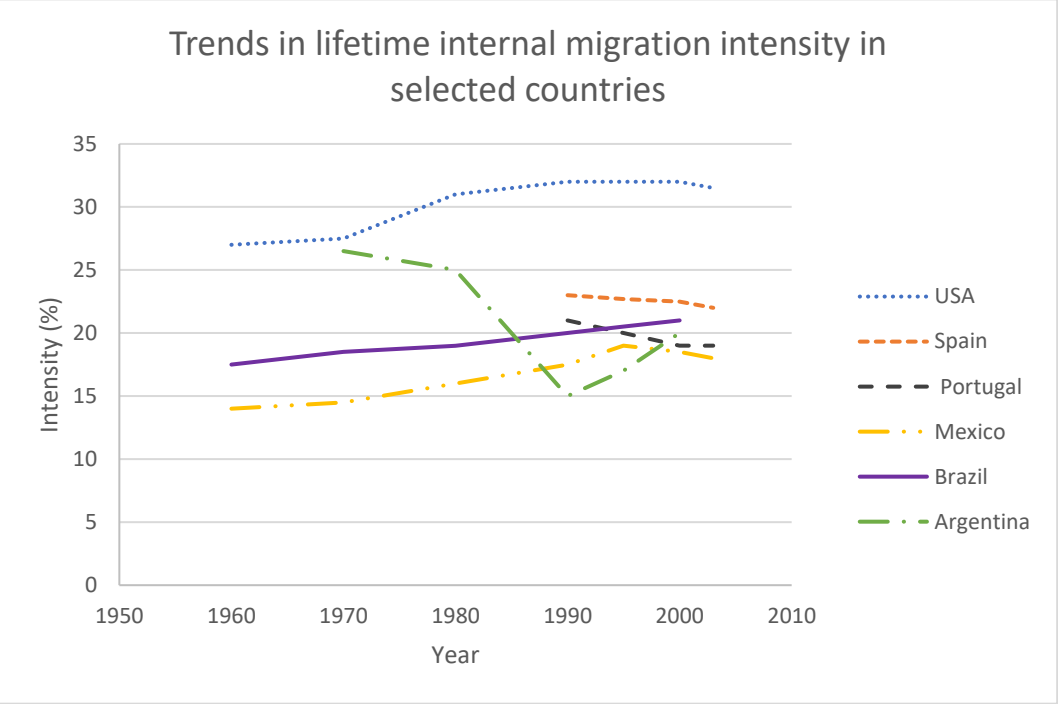


Figure 1 Trends in lifetime internal migrations. Source Bell and Muhidin, 2009

According to the UNDP report (2009), the vast majority of migrants move in search for better living standards, and only a small proportion of the migrants is represented by those who are forced to move due to conflicts or displacement.

In his work on migration theories, Lee (1966) argues that the decision to migrate is determined by a set of factors related to the area of origin, the area of destination, intervening obstacles to the movements, as well as individual characteristics. Lee

defines migration as an individual's permanent change of residence and for his model he makes no formal distinction between internal and international migration. Some areas might present characteristics attracting migrants or keeping natives from moving, or other areas might be repelling or pushing individuals to leave. Lee calls these factors respectively plus (+) and minus (-) factors. The volume of migration in a given territory will depend on the *degree of diversity between areas of that territory*. Movers will be attracted by new opportunities for work, land etc.

Another determinant for migration is the *diversity of people* in the territory considered. In very homogeneous societies, in terms of social class, wealth, education, culture, ethnicity, etc. there will be less incentive to move from one area to another. In this case Lee associates diversity, and in particular ethnic diversity, with a greater specialization in certain jobs. Migrant groups will scatter around a country where a specific job is required. However, the opposite can be argued if we consider cultural and language homogeneity. Sharing the same culture and language can facilitate migration because lowers transactions costs of moving and this can be particularly true for internal migrants.

The volume of migration varies also with the *fluctuations of the business cycle*. Periods of economic expansion can increase the attractiveness of destination areas and in the same way economic depression might become relevant for people to leave their origin area. An important Lee's assertion is that "*unless severe checks are imposed, both volume and rate of migration tend to increase with time*" (Lee, 1966, p. 53).

Economic progress, industrialization and technological development are all factors incentivizing the circulation of people. Lee also denotes that the flow of migrants from origin to destination areas presents stable and regular patterns and in the same time flows in the opposite direction might develop. The contact with migrants makes available for residents in the destination area new information on the migrants' area of origin and the availability of new investments or business opportunities there. Another quite common phenomenon is return migration; that is migrants might decide to return to their place of origin after a certain period of living away. Streams of migration can in this way create counter-streams (Lee, 1966).

To better understand the macro-level drivers of internal migration I rely on the work of Green (2007), where she identifies five main drivers and explains how they can increase or decrease migration flows and stocks: 1) changing demography, 2) macro-economic and labour market factors, 3) technological developments, 4) societal and non-economic considerations and 5) other markets, regulatory and institutional structures.

1.3.1 Changing demography

Age. Age is a key determinant of life-course events, such as education, marriage, having children, first job, retirement and so on and so forth. The propensity to migrate changes considerably with age. The majority of moving people are young adults, and the mobility event occurs to attend tertiary education or for the first job. At older ages, people move less since they get married, buy a house and have children, and all of these events have a negative effect on the propensity to move (Coulter and Scott, 2015). In most Western countries there is a compositional effect of age on internal migration. Since the share of older population is growing then the internal mobility rates have lowered over time. Some studies show that these compositional effects might be in part offset by a behavioral effect: the increase of young adults who move long-distance for tertiary education purposes. This has been shown for Sweden (Lundholm, 2007), but other authors have argued that the proportion of young people who do not leave home and choose universities close to their hometown has been increasing even in the UK. The choice to stay in the parental home during tertiary education is often a strategy to overcome the burden of tuition fees and the cost of living of students (Christie, 2007). This is also true in Southern European countries where the availability of universities in nearby urban centers makes it possible for many students to commute. Also, the tendency for young people to stay longer at their parental home has been increasing. This has been the case of Italy and Spain for many years now, but also in other countries such as the UK, the proportion of people aged 20-34 living with their parents has increased in the last decade (Office for National Statistics, 2015). A life-course perspective emphasizes the importance of the interlink of migration and other biographical factors other than age. The migrants' behaviour is embedded in a societal context and defined by a cumulative effect of previous events (Wingens et al.2011). A migration research study in the USA, shows that often a residential move is preceded by

changes in the family structure, or financial instability or risk of poverty. Different sub-groups of population in terms of social origin will experience different mobility trajectories (Geist et al. 2008). Migration events occur in different stages of life and the type and motives for migration can be very different from one stage to another. Tyrrell and Kraftl (2015) adopt a life course perspective in analyzing internal migration based on a large number of studies in the UK and trace the propensity and characteristics of migration for different life stages. For instance, during infancy the migration that children usually experience is rural to urban, to a better neighborhood following their parents. Later on, during schooling age, the propensity to migrate is lower and when it happens it is mainly residential mobility from one neighborhood to another. When entering adulthood, unmarried individuals are very likely to migrate whether for short or long distance. In this stage the move is driven by education or first employment, or simply for the search of independence and the desire to leave the parental home. Married individuals will migrate for union reasons, or to leave the parental home, but they can also be driven by the search for occupational opportunities. During parenthood, the propensity to migrate decreases and people would move mainly for short distance. In the retirement age the main type of migration is from urban to sub-urban areas or for health reasons to care facilities or homes near to their children (Tyrrell and Kraftl, 2015).

Ethnic diversity and international migration. Changes in the ethnic composition of the population can have an impact on the volume and types of movements in a country. Migrants have a higher propensity to move compared to the native population, so with the increment of the share of minorities in a country, mobility rate would increase. Furthermore, there are changes in migration flows and types by ethnic population (Green, 2017). Part of this positive effect of ethnic groups on migration propensity is a compositional effect since they are on average younger than the native population, therefore show a higher likelihood of mobility.

Bell et al. (2015) suggest a positive relation between international migration flows and internal ones. Individuals that are mobile through international borders are expected to be more mobile within a country. For instance, low-skilled migrants that work in the agriculture move from one site to another according to the season and the labor demand. Also, high-skilled migrants move more in search for better job opportunities.

Furthermore, they tend to affect the moving propensity of the local population through the displacement and diversion mechanism as mentioned above.

Household structure and living arrangements. The household structure is an important determinant of migration, since often individuals do not move alone but as a family, and even when they move alone the decision to do so might be taken at the household level. The share of single-person households and more complex household structure is rising and the proportion of nuclear families is diminishing. This has some impact on migration behaviour of individuals. The increase of single-member households is associated with an increase in migration volumes, because single individuals are freer to follow their own ambitions and satisfy their needs and desires. The increase of the number of divorces might increase short-distance migration but decrease long-distance movements, because divorced parents will relocate but they also need to be close to the children. The increase of dual earner couples makes the decision to migrate more complex, as they would decide to move if it will be convenient for both of the partners in terms of job opportunities.

1.3.2 Macroeconomic and labour market factors, changing labour demand and labour supply

The state of the economy and changes in labour demand. Classical economic theories predict that migration flows follow the economic cycle. In times of economic growth, the demand for labour increases and so does the number of people who move to fulfil that demand. In periods of recession the opposite would happen. Since the 1980s there has been a decline in jobs in the primary and secondary sector, whereas the jobs in the service sector have been increasing. These sectoral changes are linked to changes in migration flows, translating into spatial diversification of migration patterns but even in the reduction of flows in aggregate terms.

Green (2017) points out a polarization of the labour demand: there has been an increase of demand for high skilled non-manual workers and in the same time the demand for low- skilled service workers has also increased. What appears to be declining are the intermediate income range workers such as skilled manual workers, administrative workers etc. The increased flexibility of working hours has a negative impact in the long-distance migration. Especially for low-qualified workers engaged in the service

sector, the increasing requirement for part-time work makes the cost of moving unaffordable, and commuting might be a more efficient choice in those cases. The work organization of firms and corporations is shifting progressively towards a network-oriented, outsourcing, flexibility adapting to the business cycle, and so on. These changes in work organization translates into less necessity for long distance migration.

Changes in labor supply. A first factor impacting changes in labour supply is age. People enter the labour market later and leave at an older age, this has a compositional effect on migration since the propensity to migrate decreases with age. Another important factor affecting labour supply is the progressive increment of women participation in the labour market. The sectors with higher concentration of women occupations are characterized by lower opportunities for wage advancement over time and often spatially constrained such as teaching or health services. This decreases the likelihood of women to be lead-movers. On one hand the increment of women participation in the labour market should increase the internal mobility but this effect can be mitigated by the fact that there is a gender segregation in sectors with low mobility. Furthermore, the rise of dual earners couples might have an overall negative effect on the mobility of the family, since the decision to move might be affected by the expected returns of both partners.

An important factor that affects positively the geographical mobility is the increase of the qualification and education level. First, university students who leave the parental home represent a large part of the movers within countries. Second, higher educated individuals face lower costs for migration because they have more financial resources, so they have more incentives to move.

1.3.3 Technological change

The reduced cost of travelling and transportation has enabled individuals to commute to longer distances, reducing the necessity to move their residence. On the other hand, the reduced cost of travelling, the multitude means of transport (by land and air), virtual contacts thanks to ICT make it possible to reach to geographical areas at larger distance with a positive impact on internal migration. Millennials have grown up in the internet era, where ICT gives new opportunities in terms of job searching, and also new type of jobs are being created. People move less and less for explorative reasons, in most cases

they have already a job position when they decide to move. Furthermore, ICT developments have increased the possibility of working from home. For many tasks the physical presence of the worker in the office is not necessary. Atypical jobs, in terms of working hours have become more and more prevalent in the labour market. Overall, we can argue that technology is an enabler of migration, it is crucial in reducing the costs of moving, but also it makes it less necessary to move for many new types of jobs.

1.3.4 Non-economic factors and mobility

Networks are an important phenomenon when considering mobility. The presence of strong ties in a community can hamper migration, since individuals can benefit from help and support, economic or not from relatives, family and friends, especially in times of hardship. On the other hand, migrants' networks can be a pull factor for people to move. It is easier to find a house and a job if you are supported by someone who has been through the same experience. Some authors argue that there is an increase in the desire for rootedness as a counter response to hypermobility. There are social, emotional and psychological costs to mobility which are often overlooked in the classic migration paradigms (Cohen and Gossling, 2015).

1.3.5 Other macro factors as drivers of mobility

Other factors at regional or national level can have an impact on the general trends of mobility. The housing market is one of them and different types of housing tenure are linked to more or less propensity to move. Studies have shown that for individuals living in social housing the mobility rate is very low. Also, house-owners are more binded to local ties, have less propensity for long distance migration and are more likely to choose commuting over residential moving (Hughes and McCormick 2000, Mulder 2007). Private renters show higher propensity for geographical mobility. This has an effect also in compositional terms, since private renters are younger compared to the rest of the population. Overall adverse labour market conditions might hamper geographical mobility. Difficulties in renting or buying a house or rising price can disincentive individuals to move. Labour market regulation is associated with low rates of mobility. In countries with high unemployment benefits and services provided by the welfare state the individuals are less likely to move in order to find a job. Whereas in

countries with lower benefits and welfare such as the liberal market economies, individuals tend to move to longer distances for a job.

1.4 Internal migration in Italy, Germany and UK after the Second World War

1.4.1 Italy

After the WWII, in the 1950s and 1960s, Italy reached high levels of economic growth and industrialization, especially in the North of the country. These processes were accompanied by the reduction of rural population which represented the majority of the Italian population until the end of the War and the increment of industrial jobs, civil servants, clerks etc. The Italian population which had shown low rates of internal mobility compared to other western countries and Italians preferring to migrate abroad, started to experience higher internal mobility rates and South-North internal migration became an alternative of international emigration (Bonifazi et al., 2017). The migration patterns during this period were multiple, from the inlands to the coastal areas, from the hills and mountains to the plains, rural to urban, small to large cities and from South to the North (Panichella, 2009). The industrialization process and urbanization did not grow in the South as fast as they did in North, and southern regions continued to be characterized by a majority of rural population, slow agriculture modernization, and increasing unemployment. These structural differences between the North and the South in terms of modernization, employment opportunities, and other economic factors are the main reason behind the migration waves in Italy (Ibid.). The migrants in this first wave were predominantly young male individuals from the highlands of the Southern regions moving to the so-called triangle in the North West formed by Turin, Milan and Genoa (Bonifazi et al., 2017). They would leave their wives behind in order to minimize the migration costs and also because women were engaged in small-scale agricultural activities and taking care of children (Ambrosini, 2008).

After the two oil crisis in the 1970s, the long-distance migration of workers dropped consistently, reaching the lowest point in 1994, where only 92.292 migrants departed from the South to reach the North (Panichella, 2009). Subsequently the “Third Italy” became a new destination of southern migrants, even though at much lower rates

compared to the first wave. The third Italy refers to the center and north-east regions of the country which development was based on small-scale industries, family entrepreneurships and cohesive local communities. Another form of migration happening in the 1980s is short-distance migration within municipalities (Pugliese 2011, Bonifazi 2013).

The internal migration in the mid-1990s was mainly short-distance movements across municipalities and with an increased share of international migrants and students moving within the country for education purposes.

Some of the factors impacting changes in the Italian internal migration have been described in the literature as follows:

The aging of the population and the migration behavior of young adults. Since the migrants are usually young individuals in the early stages of their career, the aging population in Italy has a negative compositional effect on migration flows. Furthermore, this effect is strengthened by the postponed transition to adulthood (young adults live longer with their parents) and the delayed entering in the labour market (Livi Bacci, 2008).

After the 2008 crisis, the youth unemployment rate reached high records. Whereas the total unemployment rate reached 8.4 percent in 2011 and 12.7 percent in 2014, unemployment in 2014 was at 39.3 percent for 20–24 year old and 18.6 percent for 25–34 year old individuals. The situation was worse in the south where youth unemployment would reach peaks of 50 percent and 31 percent for the two age groups (Bonifazi et al. 2017). Economic slowdown and the rigidity of labour market can hamper the occupation opportunities of young individuals, making less attractive to move in search of a job within the country. The rigidity of the housing market and high rents in the North make it less appealing to leave home, especially when wage differentials between regions are not very high to cover the additional costs.

One of the main reasons for young people to move is to attend University. Although there has been an increase of the share of population with at least upper secondary education, the participation in higher education is still low compared to other European countries. Furthermore, the presence of universities in many southern cities makes the

long-distance migration less necessary because they can study near home (Bonifazi et al., 2017)

The recent internal migrations differ from that in the 1950s and 1960s in many ways: they are characterized by a much lower intensity; there has been an increment of the share of women moving independently; migrants have higher human capital compared to non-movers (Panichella 2009, 2014, Impicciatore e Tuorto, 2011).

1.4.2 Germany

By the end of World War II, many towns and cities in Germany had been evacuated and right after the war a large number of refugees, displaced people and expellees flowed the country from the eastern territories. These were individuals of German nationality who lived in territories previously under the German domain and now controlled by the Soviet Union and Poland. Also, German nationals living in other eastern European countries as ethnic minorities relocated in Germany in the years 1944-1949. The proportion of refugees and expellees represented around one fifth of the total population of the country (Ther, 1996). By 1950, 4.3 million expellees had settled in what would later become the German Democratic Republic and 8 million had moved to the Western Germany (Ibid.). During the 1950s, the urban reconstruction motivated individuals to move from rural areas to bigger cities. A constant flow of individuals moving from east to the west of the country was put to a stop when the borders were closed definitely in 1961 (Kemper, 2004). In the late 1970s and 1980s two phenomena would characterize the migration movement in Western Germany; the first type is an intra-regional migration from core-urbanized centers to the periphery, represented mainly by nuclear families relocating in less populated sub-urban areas. The second is a counter-urbanization process, inter-regional migration of people moving out of counties with high-density population towards less populated regions (Kontuly, 1991). For instance, from mid-1970s to the early 1980s, the core region of North-Rhine Westphalia shows a trend of negative migration rate whereas the southern region of Bavaria has a positive net in-migration rate (Ibid.). One main factor in this internal migration trends is the de-industrialization process happening in old industrialized regions like the Ruhr in West Germany or the heavy manufacturing district of Saarland. Whereas, the economic restructuring in the South gave birth to North to South migration in the Federal

Republic of Germany (Bucher and Heins 2001, Kemper 2004). The overall regional migration in West Germany and the counter-urbanization process has seen waves of reinforcing and diminishing over time. Although in the rural regions the net migration is mainly positive, in the big high-density metropolitan areas there are more fluctuations of net migration rates through time. Until the mid-1980s the big agglomerations cities would show negative trends of net migration, but from 1985 the metropolitan areas would experience new migration gains, especially in the Southern regions. From the 1989-1991 all regions, and most metropolitan centers in West Germany would face important waves of positive migration due to the east-west movement and the redistribution of ethnic German population (Kemper, 2004). The internal migration patterns in the GDR are quite different from those in Western Germany. First, the counter-urbanization i.e., individuals moving to less populated areas did not happen. Geographical mobility in the East was much lower compared to the West, but the movement patterns were very clear, from rural areas or smaller towns to big cities. East Berlin was the main destination of internal migrants in the GDR, who would reside in pre-fabricated buildings in the city peripheries. Similar trends would happen in other regions' capitals (Ibid.).

All the above-mentioned internal migration trends were overshadowed by the massive East-West migration flows in the 1990s. In the 1989-1998 decade the number of migrants from east to west is estimated to have been 1.2 million, representing the 7% of the total population, and 17% of the 18-24 group age in the GDR (Schulz, 2000). The high volume of East-West migration is indicative of regional disparities in terms of economic growth, labour market structure and other regional inequalities after the unification (Kemper, 1997). Big manufacturing firms in east Germany were characterized by low productivity and low efficiency, which brought many of them to fail. This led to a rapid process of de-industrialization and high rates of unemployment. Regional migration flows began decreasing along with the spatial disparities in most recent years, and in the same time counter-flows in the opposite direction would take place (Sander, 2014). The east-west migration flows and counter-flows would be quite different in terms of composition. While individuals moving from east to the west would be young (mainly aged 16-25), single and gender balanced, those going to the East from the West were older, married males who moved alone, without their partners.

There was an over representation of qualified civil servants, professionals in finance, insurance, real estate and other jobs previously not available in the GDR (Wendt, 1995). Since the mid-1990s the characteristics of migrants in both directions have been converging, and the also the proportion of West to East female migrants have been increasing, representing the 44% in 1996 (Maretzke 1998, Kemper 2004). More recent studies confirm the overall decreasing rate of migration East-West flows and counterflows, furthermore the female component of internal migrants has been decreasing in the past decade (Stawarz et al., 2020).

According to Sander (2017), the recent internal migrations are shaped by two characteristics of the country:

Berlin is not more dominant than other regional capitals in attracting migrants. With a large number of cities being as important as Berlin in terms of migrant destination, the long-distance migration is lower compared to short-distance movements.

Regional economic disparities are less prevalent compared to other European countries because the economic developed centers are not concentrated in a particular region. Scattered, well performing small-medium firms in middle size towns, a consistent number of vocational schools outside large cities, play a role in the low rates of long-distance migration too.

When decomposing the migrant population based on demographic characteristics, long-distance movements have been increasing for the 18-24 age group, but decreasing for the 30-49 age group (Sander, 2017). Berlin is a major attractor for young adults compensated by an outflow of families towards the hinterland. Relocation of families towards the suburbs and hinterland is a phenomenon present in other large cities in other regions. The labour market in Western Germany remains more favorable for young educated individuals in the first career stages compared to the East Germany (Stawarz et al., 2020). Another study focused on urban labour migration in Germany confirms that labour market structure is the main determinant in attracting young qualified workers. This analysis also show that the quality of life measured by non-economic indicators has a significant positive effect in the choice of residence of young adults (Buch et al, 2013).

1.4.3 United Kingdom

The movement of people and the changes in the population demography in the end of the 19th century and in the first half of the 1900s in Britain are closely related to the industrial revolution and the urbanization processes that consequently developed earlier than other European countries. Studies based on the ten-year national population census, tell that the urbanized counties had an aggregate population of 33,055,000 in 1951 compared to 11,130,000 in 1851, i.e. a rate of growth of 300%. The main pattern observed in this period is that of rural areas losing population and the urban centers gaining higher volumes (Friedlander, 1970). The urbanization began first in two regions, the first was London County, although the areas around the city remained prevalently rural for a long time. The urbanization of London is associated with its industrial and economic development as well as with its capital status. Another region experiencing urbanization in early stages in the North, are counties like Durham and Lancashire which developed fast and became high density population centers. Durham gained its economic importance thanks to the coal mine industry and later from the developing of sectors such engineering, shipbuilding, chemical industry etc. Lancashire grew at first as a big textile manufacturing and export center and later in the production of machinery and locomotives. This trend of urbanization followed in other regions from north to the south creating flows of internal migration from rural to urban areas (Friedlander, 1970). Later studies based on 1971 census data show a trend of counter-urbanization in population movement since 1961-1971, where the metropolitan areas, but also the suburbs and larger district areas, would experience negative migration rates. Rural areas instead would show positive net migration rates and this process accelerated even more in the 1970s (Champion, 1987). These population changes in Britain were led by the urban-rural migration in three heavily urbanized regions i.e. South East, North-West and the Midlands, whereas regions such as Scotland, the Northern Region and Wales would see an increase of migration inflows. In the 1980s the South-East would show again positive rates of urbanization attracting population from other regions, being the main driver in regional differences in North to South migration flows whereas the trend of de-concentration is still persisting for other regions (Ibid.). Some of the explanations in these counter-urbanization trends reside in the de-concentration

and delocalization of manufacturing employment away from the industrialized centers towards smaller towns and remote areas in Britain. Another factor can be the increasing investment in strategic rural economic sectors such as energy resource development, agricultural and forestry. The increment of investments in health, schooling, and other strategic infrastructure in previously remote areas, has played an important role in the reverse trend of internal mobility (Champion 1987). Another factor affecting the counter-urbanization process has been suggested to be the changing preferences of retirement destinations in Britain. Until the 1960s the preference trends for retiring houses would be the seaside and spa towns, whereas in the 1970s the it changed for the countryside (Warnes and Law 1984, Jones et al 1986). Another important factor which has been the focus of newer studies is that of the housing market. Families with children can choose to move away from city centers for affordable houses. These explanations are not exhaustive of the totality of internal migration movements which are very complex and also related to individual characteristics such as age, educational level, career stage and family composition.

The *Escalator region* concept was formalized by Fielding (1992) and refers to the movement of people to and from the South East Region and London and its metropolitan area. The region attracts young people in the beginning of their working careers which are selected in terms of qualification, education, ambition etc. seeking for better job opportunities. The region provides opportunities and a context where these selected migrants can improve their social position. Upward social mobility is enabled because of labor market characteristics and the housing market. In the same time there are outflows of people who had already experienced upward social mobility. They can be near retirement age or older professionals who aspire to build their own entrepreneurship somewhere else, or to exploit the occupational advantages already acquired in the South East or London.

Other cities in the UK such as Glasgow or Edinburgh show similar patterns to the South East, attracting young individuals at the early stages of their career due of economic opportunities offered and a dynamic labour market (Van Ham et al., 2012).

1.5 Geographical mobility and social mobility in the classical stratification theories

From a sociological perspective, migration is considered as a means for the individual to escape or loosen the social and economic constrains that are locally defined. By allowing individuals to take advantage of economic opportunities in other geographical locations, migration represents a possible mechanism for upward social mobility. Classical stratification studies used to focus primarily on internal mobility and its effects on social mobility. In many of the early social stratification works, part of the analysis has been focused on how industrialization and demographic changes reflected on geographical and social mobility.

Migratory processes has always been part of human societies, and European people have been migrating along centuries for a variety of reasons such as wars, famines, displacement, provision of resources, economic factors etc. (Tilly, 1976). The industrialization process and the economic growth of western countries created a large demand for specialized workers and gave rise to a massive mobility from rural to urban areas. With the advent of "modern" societies the territorial mobility of individuals has grown progressively. The number of individuals that changed residence, even multiple times through their lives, increased continuously from the second half of XIX century (Sorokin, 1927). During that period, the increment of territorial mobility of individuals happened both internationally and within countries. Sorokin considers geographical mobility a form of horizontal mobility as opposed to vertical mobility. Through horizontal mobility, individuals do not move upwards or downwards in the occupational scale, but they change their job within social class. Another form of horizontal mobility which affects industrial societies, is that of the jobs' horizontal turnover: workers moving from one factory to another or from one job to another within the same professional category. During the first decades of 1900s the intra-professional turnover was an intensifying phenomenon, increasing more during industrial prosperity and decreasing during periods of depression. The horizontal professional mobility is higher for manual workers compared to high qualified professionals (Sorokin, 1927). Geographical mobility represents a possibility for individuals to expand their occupational opportunities, since they usually move from smaller communities to bigger

ones, with a larger and more flexible labor market. A larger occupational structure provides more job opportunities for movers.

Lipset and Bendix in their 1959 work cite several studies from Europe and US, but also from Japan and Latin America aimed at analyzing occupational mobility and social mobility. Despite differences in methods of data collection, all show strong changes in social mobility after the end of World War II enabled by economic growth and geographical mobility. The urbanization process follows similar patterns in most countries: sons of farmers being occupied in manual work positions in the city and urbanized centers and sons of manual workers being occupied in non-manual positions, however the proportion of upward and downward mobility changes across countries, regions and cities. After the World War II the massive international migration flows slowed down, but high rates of internal migration still continued changing and reshaping the (western) societies. In the US and other receiving countries, a large number of international migrants entered mainly in the lower positions of the occupational scale, whereas natives were able to acquire better job opportunities created by the economic expansion. Movements from rural areas and smaller communities to metropolitan centers affected the occupational structure in the same way the big international migration used to (Lipset and Bendix, 1959). Thirty-five million Americans (25.2 per cent of the total population) were living in a different state from their birth one, as registered in the 1950 US population Census (ibid.).

From their study appears that the sons of middle-class small-town communities have a better education compared to their peers in large cities and many of them do move to the city where more job opportunities exist. This upward success was mainly in the industrial bureaucracy and big organizations where middle-class sons of small communities do as good as or better than the sons of middle class in large cities. This pattern is not true for the working class however. Young people brought up in a working-class family in large cities have better chance to achieve higher occupational status compared to their peers grown up in smaller communities. The majority of migrants flowing from the rural areas towards large cities fill the lowest positions in the occupational scale, allowing the city-born workers to move up to better and new positions created because of the economic growth. A well-educated minority of migrants however compete with the large city natives for the top positions of the

occupational scale. Lipset and Bendix go further and try to explain why those born and reared in urban areas, even if lower-class and/or low-educated, are more successful in improving their position compared to migrants from rural areas. One of the main factors as hypothesized by the authors is the proximity of Universities in metropolitan cities which can be attended by young students staying at home. Children and young people there would grow up being aware of the advantages and working opportunities achieved through education. Furthermore, in large cities and metropolitan areas teachers are better prepared and better paid than their counterparts in rural areas, so they will incentive high school students to attend college. Another factor is that urban young people from the working class "*are more likely to be acquainted with the occupational possibilities which exist in such communities than those who are raised in a less heterogeneous smaller community*" (Lipset and Bendix, 1959, pp 221). The occupational structure of the cities is larger and more variegated and for that reason it might directly affect the occupational aspirations of the metropolitan youth. The occupational structure of small cities is instead more rigid, and young people born there have fewer information and are less aware of occupation opportunities elsewhere.

In 1967, Blau and Duncan published an important book for social stratification studies called "The American Occupational Structure". Their work is based on a sample of 20,000 men, collected in a national survey in the US. They argue that the place of birth is an ascribed factor which affects the occupational opportunities of individuals, in the same way as ethnic and social origin do. Economic opportunities and labor market structure change across countries, regions and even smaller territorial units, and for that reason the occupational status might be different according to the place of birth. Geographical origin, however, is not an immutable condition and a person who is looking for better opportunities can decide to move. Their approach is a demand-driven one, in that migration is an "adjustive mechanism of manpower". The movements of workers from rural areas towards urbanized centers follow the increased demand for workers not only in the industry but also in the service sector. Another factor that pushes migration flows in industrial societies is the differential of fertility rates, which in the period considered was much higher in the rural areas.

The first part of the analysis shows a clear relationship between geography and social mobility. The occupational status of men improves with the size of the community

where they live. In very large cities (> 1 million inhabitants), most successful men live in the suburbs and those migrating in the city center from rural areas experience more upward mobility and less downward mobility. These differences persist even when ethnic background and race are controlled for. The status of the first job also improves with the size of the community. When the ethnic background is controlled for, men living in central metropolitan areas have the highest status of first job. The authors proceed by looking at the occupational status of migrants defined as individual who in 1962 do not live in their region of birth. Data show that geographical mobility is associated with superior occupational achievements, independently from place of birth. Men who move to another region achieve a higher occupational position compared to stayers in their place of birth. The first job of migrants is overall superior compared to stayers in the region of birth. Migrants are also less likely to experience downward mobility, with the exception of second-generation migrants.

When social origin is accounted for, however, not only the occupational superiority of migrants disappears, but the upward mobility is lower compared to individuals who stayed in the region of birth. This suggest a positive selection of migrants, that is those who move are on average in a better position in terms of social origin compared to the stayers.

This definition of migrant is very broad and includes also children who have followed their parents from one place to another. In order to consider only those who have migrated of their own initiative, Blau and Duncan define as non-migrants, individuals that have reported to live in 1962 in the same community as they were living when 16 years old. Those who have changed place of living compared to age 16 are considered migrants. Furthermore, they distinguish among migrants who live in the same type of community or otherwise in terms of degree of urbanization. Then they compare non-migrants with migrants in the same community type. Through this procedure the occupational structure associated with community type is hold constant. The findings show that urban migrants have superior social origin compared to non-migrants. They are better educated and have a higher first job position with respect to non-migrants, confirming the selection hypothesis.

The same is not true for rural-migrants, which do not perform as good as non-migrants. When first job and education are controlled for, the difference reduces but still persists. This residual difference might be due to non-observable individual characteristics of migrants or it can be that migration improves the occupational chances of individuals thanks to new opportunities that before were missing. Blau and Duncan findings show that in more urbanized environment natives have on average higher occupational status and only migrants from urbanized communities are more successful than natives. Migrants to small cities, overall do better than migrants to urbanized areas. This suggest that not only the place of birth is an ascribed factor which influences individual's occupational chances, but also the environment where one is reared can become one. Boys brought up in large cities achieve higher success in their careers, regardless if they migrate or stay in the place of birth. An explanation for this is that in larger cities the education opportunities are better and the possibility to have a good first job is higher. Migrants from rural areas to large city achieve better occupational position with respect to stayers in their region, but they do not achieve upward mobility compared to natives or other community-type migrants. This confirms the Lipset and Bendix (1957) hypothesis that internal migration affects the occupational structure in the same way that great international migration used to in the US. Geographical mobility is a regulatory mechanism that modifies upwardly the occupational structure favoring both natives and migrants.

Another author that tries to explain long distance migration from rural to urban areas is Piore (1979), through the Segmented Market Theory. This theory suggests that the dualistic nature of the labour market structure is a pull-factor for low-qualified migrants which take upon low-end jobs in the occupational hierarchy. The migration from a less developed region to a more developed one starts not from different wage levels but from the demand for the recruitment of migrant workers for specific jobs. Employers cannot attract workers for low-status jobs by simply offering higher wages. A higher wage at the bottom of the occupational hierarchy requires a wage increment for the all the jobs' distribution, in order to keep the hierarchy of occupation and avoid overlapping. This would create a problem of structural inflation for the economy.

Another problem for recruiting native workers is the lack of motivation to accept a job in the bottom of the occupational hierarchy. Since a job does not provide individuals

only with an income but it is also associated with social status, the incentive for natives to accept low-qualified jobs is very small. For that reason, migrants are more suitable to take those kinds of jobs. They are mainly looking for a job that provide earnings for them and their families, at least in the first period after arrival. Even though they have a low-prestige job in the developed country they can improve their honour and prestige in their home country through remittances.

Economic growth and industrial advancement are closely related to the dualization of the economy and the labour-market. The primary sector of the economy is capital-intensive, where skilled workers are employed in highly specialized jobs. Firms invest in training and specialization of their employees, which accumulate human capital during their career. The high investment costs, and the fact that this sector is highly unionized makes it difficult for firms to let go workers in the primary sector. In the secondary sector, which is labour intensive, it is easier to hire and dismiss workers when not needed. These jobs are paid less and do not provide the benefits enjoyed in the primary sector. Low-wages, job instability, unskilled mansions characterize the secondary sector, so the recruitment of immigrants is the best option for the employer. In many industrialized countries, in the first stages of urbanization and economic growth, women and teenagers were relegated to the secondary labour market. As western societies were pervaded by social and demographic transitions, women began to engage more and more in the labour market and become more career oriented in the primary sector. Changes in family structure such as divorce or single parenthood often put women in the position of the primary breadwinner. In the same way young people stay longer in education becoming unavailable for certain type of jobs. For this reason, according to Piore's theory, there is a constant demand for immigrant workers in the developed countries.

1.6 The analytical strategy and aims of this study

The aim of this research is to study the characteristics and occupational achievements of individuals who have experienced geographical mobility in a cross-country comparison in Europe. As stated in the previous section I will look at internal mobility, i.e. migration across regions within country border. The analytical strategy can be summarized by the diagram in figure 2, where are shown two triangles. The first one is

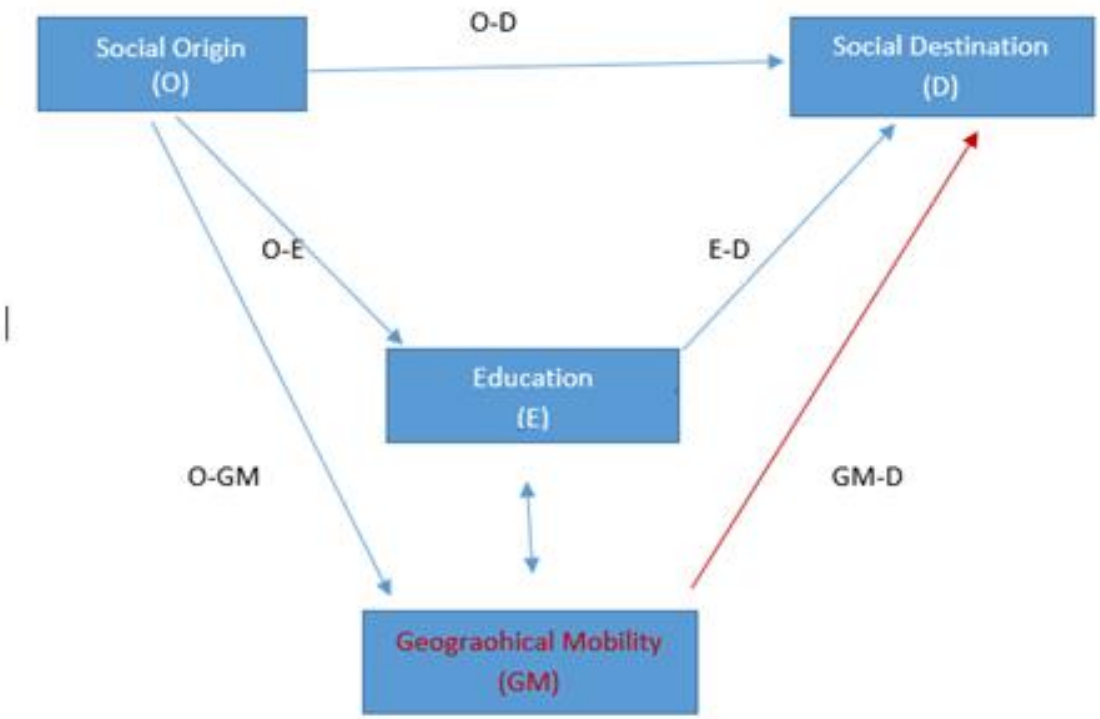
the classical OED triangle which describes the association between individual's social origin (O), education (E) and social destination (D). The O-D path represents the direct effect of social origin on destination. Social mobility can be achieved due to individuals' social origin (family resources and parental social position) or through education which should mitigate ascribed inequalities. The effect of education on social destination is not given, it depends on the quality of education as well as on how it is valued in the labour market. Education can be a means for an individual to achieve a higher occupational outcome with respect to their parents. However, individuals from higher social class of origin have more resources and can have access to a better level of education with respect to individuals from a lower class. The E-D association represents the return of education and the stronger it is, the more education achievement will enable social mobility. In the contrary, if O-D and O-E remain strong, there will be less social fluidity (Bukodi and Goldthorpe, 2018). There is a large consensus in country comparative research that the expansion of education has weakened class inequalities and promoted social mobility for the 20th century cohorts (Breen et al 2009, Breen 2010). The expansion of education has affected the reduction of social origin inequalities. For instance, the social class that has mostly benefited from the educational expansions in Italy and Spain is the agricultural class, followed by the working class and petit bourgeois (Ballarino et al., 2009). The OD effect has been shown to be stronger for individuals with lower level of education and weakens for those with higher level of education. The higher the proportion of people in a society attending higher education, the higher will be social mobility (Bukodi and Goldthorpe 2018, Breen 2009). For my research purpose I have added to the classical triangle, geographical mobility, as shown in the figure 2. Geographical mobility, similarly to education, can help the individual to escape the occupational boundaries of the local community of origin. By moving to another location, where the occupational structure is larger and the labour market opportunities are better. However, relocating oneself geographically has certain cost and therefore there is selection in terms of education and social origin of individuals who migrate. O-GM relation expresses how social origin affects the individuals' propensity to move. GM-D expresses the relation of geographical mobility and social destination. GM, like education, represents an investment in human capital, and therefore will translate into occupational returns. The first part the analysis will

explore the selection into geographical mobility. Based on theory, better-educated individuals are more likely to move. A comparison between movers and stayers, based on socio-demographic characteristics can tell us how social class of origin and education affect geographical mobility.

In the second part of my analysis, I will look at the effect of geographical mobility on occupational outcomes net on social class of origin and education. Here, a within individual life course comparison (before and after mobility) is necessary to understand the occupational outcome of people who move. A between individual comparison will show the difference between movers and stayers in terms of occupational outcome.

The last part of the analysis will focus on how gender affects geographical mobility. Do women have a lower propensity to move compared to men? Part of the analysis will explore if geographical mobility will affect differently the occupational achievement of men and women.

Figure 2 Geographical mobility and Social mobility



1.6.1 Country selection

My empirical analysis is based on the comparison of three countries, namely UK, Italy and Germany. The choice of these three countries has been motivated mainly by three factors. First, I follow the criteria of Champion and al. (2017) in their book *Internal Migration in the Developed World*. The three countries present similarities but also some distinctive features which make the comparisons of internal migration trend quite interesting. These are three European countries that share some common characteristics from a macro perspective: they have similar population size and demographic structure. The three countries have an aging population at various degrees and a fertility rate below the replacement rate (although UK has a higher fertility rate compared to Italy and Germany). They are economically advanced countries and have reached at least Stage IV of Zelinsky's (1971) mobility transition model after passing through Stages II and III by the mid-twentieth century. They share similar trajectories of the industrialization process, also they have post-industrialist economies characterized by a high level of GDP per capita and high levels of the Human Development Index.

Second, drawing on the work of Esping Andersen (1990) and Ferrera (1996), these three countries represent a peculiar combination of the Market, State and Family in the provision of welfare and consequently of the labour supply composition. UK can be defined as a liberal market economy, with a very flexible labor market, with no entry or exit barriers and a relatively higher participation of women in the labor market compared to other models. Germany represents the conservative/continental model of capitalism, characterized by a family-based assistance and a social insurance based on the male bread-winner model. The workers in the core industry sector are highly qualified, mainly due to in-job training. Women participation in the labor market is lower compared to men and mainly engaged in part-time jobs, with an overrepresentation in the service sector jobs. Italy can be considered as a Mediterranean country welfare state, also based in family assistance provision, where women have traditionally been care-takers within the household. Similar to the continental model, Italy has a primary protected labour market sector and a secondary sector of temporary and irregular employment. What distinguishes the Mediterranean model from the continental one is the presence of a large informal economy and a less efficient public

bureaucracy. The welfare state paradigm is useful especially when considering the gender differences in terms of selection and occupational mobility, and also to help interpret the analysis output for each country.

The third criterion for the country selection is a pragmatical one and has to do with data availability. The three countries have large longitudinal datasets which provide information for a representative sample of the population and consistent time-period.

For the purpose of my research, I use inter-regional mobility as a measure of internal mobility within national boundaries. The advantages of using regional mobility can be summarized as follows:

- It is analytically clear and is the most suitable indicator for cross-country comparisons (Long, 1991)
- Can be clearly distinguished from short-distance migration and international migration
- Allows to capture a clearer selection effect when studying internal migration because important costs for moving are involved

A drawback of using inter-regional mobility as an indicator of geographical mobility is that the definition of region is determined in each country following different criteria and regions vary in terms of spatial and population size. This poses a problem of comparability in terms of total mobility rates. However, regions are fixed within countries overtime, so it is possible to compare trends and draw conclusion on the intensity of internal migration phenomenon across countries. Furthermore, in the EU countries since the 1970s, there has been a process of standardization of nomenclature of territorial units for statistics purposes (NUTS), according to which European regions are defined. Another limit of using region as a territorial unit of analysis is that the movement of an individual between two border regions has the same weight as a relocation from much longer distance. Unfortunately, the data that I use do not allow to measure movements in terms of distance (in km). Also, although recognizing its limits, the inter-regional migration has been largely used in internal migration studies, especially when substantial migration flows and patterns are considered. In the second chapter when I explain how the dependent variable is constructed, I go in detail on which are the regions considered in each country.

1.6.2 The data

Adopting a life-course perspective when studying mobility gives a richer information compared to using age as an explanatory variable. The choices made by individuals in terms of mobility are defined by previous events such as timing of education, entering the first job, marriage or cohabitation and so on and so forth. Even though a given cohort might experience the same events at a similar age, there might also be differences in these trajectories. As Geist et al. (2008) point out, a life-course approach allows to capture better the variation in timing and sequencing of life events and to explore the diverse paths towards a certain outcome. Another strength of the life course research is that it evidences the importance of social context. The cost and constrains of mobility will be faced differently according to individual's parental status, occupational class etc. (Geist et al., 2008). Many authors have made the argument of the potential of life course approach in internal migration research (Wingens et al 2011, Impicciatore and Panichella, 2019). Most traditional migration studies consider age a fixed proxy for life events and treat individuals as social groups with defined cohort-specific characteristics. Important information regarding migration processes in terms of timing and social contexts might not be captured when using age as an explanatory variable, hence the importance of more holistic life course approach (Tyrrell and Kraftl, 2015).

This approach is feasible through the use of longitudinal or panel data, where the subjects are observed over a long period of time. Longitudinal data have become increasingly attractive in social research and for this reason the number of panel surveys has been increasing. As mentioned, the panel data have many benefits for the researcher, but also some challenges.

The first benefit of collecting panel data is the measurement of change at the individual level. Since the same subject is followed for a substantial long period of time, it is possible to analyze the change of a phenomenon for a single unit. For instance, when studying poverty, often we think at the poverty rate, that is the proportion of people whose income falls below the poverty line. For the EU, at risk-of-poverty are persons with an equivalised disposable income below the risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income (after social transfers) (Eurostat, 2020).

To better understand the phenomenon and also for better policy response it is necessary to analyze the trend of poverty over time. It makes a big difference if an individual is permanently below the poverty threshold or if he or she goes in and out of poverty in particular moments of life. Events that can be critical to a person's wellbeing can be a loss of job, becoming a lone parent, health problem etc. Permanent and transient poverty require different policy response. The same argument can be made for many other social inquires, such as the analysis of employment or unemployment trends, or marriage, parenthood, migration, electoral behaviour and so on and so forth.

Another advantage of longitudinal data is that it is easier to separate the age and cohort effects when analyzing change. Each unit is observed repeatedly over time and so individuals belonging to the same generation are surveyed at different ages. In this way it is possible to analyze the effect of age in an individual's life and separating it from the cohort mean.

A recurrent problem that researchers face during empirical analysis is that we do not know all the determinants that might affect our dependent variable, and even if we do sometimes it is difficult or impossible to measure all of them. With cross-sectional data the best we can do is to control for as many variables as we can and being aware of the omitted variables. Longitudinal data instead allow to control for part of this unobserved heterogeneity. The assumption in this case is that unobserved characteristics that are inherent to the individual are constant over time. It is possible to estimate the effect of only the variables that change from time t to time t+1.

Another advantage is the potential of longitudinal data to address the causality problem in an empirical analysis. This is related to the previous point as we can control for unobserved heterogeneity but also the changes of the independent variable are ordered in time. It is possible to assess whether a change in the determinant happened before the change in the dependent variable. In a cross-section analysis, we can determine a correlation but we cannot disentangle the timing effect.

The use of panel data presents of course some challenges and the most problematic one is *attrition*. Attrition is the gradual increase of the non-responsiveness of units over time. When units drop out the survey from one wave to another there is risk that the sample is not randomized anymore and can lead to selection bias. However, many

surveys deal with this problem by boosting the sample through time. For instance, in the SOEP and BHPS datasets when a member leaves the household, is continued to be followed and if he or she gets married or cohabitates, the new family enters the sample. Another way to boost the sample is that of involving new regional areas which were previously left out from the study. In the case of IHLS, which is a retrospective panel, the attrition is not a big problem, but some information can be left out because of recalling problems during the interview.

For my research I will use three longitudinal datasets:

Italian Household Longitudinal Survey (IHLS), which is a panel survey with five waves between 1997 and 2005 and a sample of 5000 households. During the first wave, a retrospective survey was conducted in order to reconstruct the life history of all the household members aged 18 and above. The main area covered by the survey are geographical mobility, educational career, vocational training, military or civil service, fertility, family history and work history. In the subsequent waves the information collected is updated following the previous interview and all changes between waves are recorded. When a member of the family comes of age, he or she enters the sample, and also the spin-off households have been followed in later waves. For the purpose of my research, I have restricted the sample on all individuals born in Italy between 1945 and 1980 (about 11000 individuals).

The British Household Panel Survey is a multi-purpose study which began in 1991 and has 18 survey waves. The last one is in 2008 before it was incorporated in a new longitudinal study called “Understanding society”. The first wave panel consisted of about 5,500 households and 10,300 individuals drawn from 250 areas of Great Britain. Additional samples of 1,500 households in each of Scotland and Wales were added to the main sample in 1999, and in 2001 a sample of 2,000 households was added in Northern Ireland, making the panel representative of the UK population. The are 18 waves in the BHPS and it records a multitude of information such as employment status and changes, residence, health conditions, fertility, work of parents living conditions and so on and so forth. I have restricted the sample on about 23000 individuals born in the UK between 1945 and 1980.

The German Socio-Economic Panel (SOEP), is a longitudinal survey of approximately 11,000 private households. It involves 35 waves from 1984 to 2018 Federal Republic of Germany from 1990 to 2018 for the eastern German lander. Variables recorded in the survey include household composition, employment, occupation, earnings, health and satisfaction indicators, migration history etc. For my empirical research the sample has been restricted to about 36000 born between 1945 and 1980 in Germany.

The three panel datasets provide us rich information and allow to build longitudinal models. They are however demanding in terms of managing, recoding and harmonizing the variables and require specific statistical tools.

1.6.3 The structure of the research

Chapter 2: selection into GM

The second chapter addresses the issue of selection into geographical mobility. First, I will explain the theoretical framework where my research hypotheses are based on. In the second part I will describe the data and the variables used in the model. The analysis consists in linear probability models, (random effect with robust standard errors and pooled regressions) to compare movers and non-movers based on achieved and ascribed characteristics such as education, social class or origin, geographical region of origin, marital status and so on and so forth. Two of the research hypotheses are aimed at explaining gender differences in the selection process and the propensity to move of men and women. The empirical analysis results will show some commonalities but also differences for the three countries considered.

Chapter 3: outcomes of GM

The third chapter will analyze the relation between geographical mobility and social mobility. Does the occupational status of migrants change after migration? I focus on social mobility from a life course perspective. Fixed-effect probability models estimates the *within* effect of mobility on the propensity to enter the upper service class. Random-effect probability model will be run to understand differences between movers and stayers. The last part will be dedicated to gender differences outcomes in social mobility for individuals who move.

Chapter 2

The decision to move: the selection into geographical mobility

Introduction

Migration is a selective process, meaning that migrants are not a random sample of the population. They have some observed and unobserved characteristics that on average are different from the stayers' population. As was mentioned in the first chapter according to Lee (1966), individuals respond differently to positive and negative factors that might favour or discourage migration both in the origin and destination areas. According to Lee's theory, migrants who respond to attractive factors of a certain territory tend to be positively selected. Those who move because of negative push factors in their area of origin can be negatively selected. High educated individuals, professionals and managers can decide to move if better opportunities are offered elsewhere, whereas those who are forced to leave because of war, political persecution, famine, high crime rates etc. are not necessarily positively selected. The degree of

positive selectivity increases with the difficulty of intervening obstacles (Lee,1966). For instance, when the cost of moving is high or the distance of migration is long then, those who decide to move would be individuals with higher probability to succeed. Push and pull macro factors are not sufficient to explain migration flows, individuals who migrate do need financial resources, information and capabilities. Migrants are also selected by demographic factors. Individuals who are entering the labour market or getting married are more likely to leave the parental home and migrate to other regions compared to those who have a stable job and are already settled. Later life events such as divorce or becoming a widow/er can also increase the probability to move (Simpson, 2017).

To explain the process of selection in internal migration I start by looking at the neoclassical approach which seeks the explanation of migration at a micro level. Individuals' decisions are embedded in a macro context where not only wage differences, but also other socio-economic factors will affect the cost and returns to migration.

In the next section, I will discuss the theories about gender differences in the selection into migration. The New Economics Labour Migration theories stem from neoclassical economics and consider the family as a decision unit making. Women's unstable labour market position might translate into a weaker decision-making position and are more likely to become tied-movers. Other theories argue that the bargain position of women has improved due to dual couple earners and the decision to move is made on their own return to migration.

In the subsequent section I will in turn explain the research hypothesis, the data and variables. The empirical results will be discussed in the sixth section followed by the conclusion.

2.1 The neoclassical theory of migration

The theories that analyze migration at a micro level, as opposed to those who consider macro structural factors, consider migration a consequence of individual choices. These

choices are rational, spontaneous and voluntary, made by the potential migrant after assessing the future benefits of mobility. The rational actor has a hierarchy of preferences and is capable to choose among two scenarios, the one with expected higher revenues (Faist, 1997). This is the starting concept of the neoclassical approach, according to which wage differentials and occupational disparities between countries or regions, provide a framework or a background to the individuals' choices (Sjastaad, 1962). According to the individual rational choice theory, migration flows are the collective sum of individual moves and they will continue as long as the expected earnings in the destination geographical area will be higher than in the origin community. Individual's human capital can increase the probability of (a better) employment, hence a probability of higher returns to migration. Other factors such as technology, welfare policies, health system, safety etc. will be considered by the potential migrant when valuating cost and expected returns.

Some of the most influent migration theory stem from neo-classical economics and are based on assumptions of rational individual choice, utility maximization and positive net returns. These neoclassical theories consider both micro and macro factors affecting migration flows. For instance, the Harris and Todaro model (1970) explains rural to urban migration as a rational choice driven by wage differential in the two sectors. Urban wage is higher compared to the rural wage due to the lower productivity of the agriculture sector. This wage differential will incentive workers to move from rural areas to urbanized ones and these flows will go on as long as the wage differential persists. In a similar way, international migration is explained by differences in the distribution of labour and capital between two geographical areas. Some countries have an abundance of labour force compared to capital and consequently its relative price is lower, whereas some other countries are more abundant in capital but labour force is scarce. So, workers will move from countries with abundant labour and lower wages to countries with scarce labour and higher wages, and a redistribution of the production factors will take place (Todaro 1976).

Individual choices are embedded in this macro context where the demand of labour force and wage differ from one region to another. Potential migrants are rational actors and will decide to migrate if the net return of migration is positive. Monetary cost and non-monetary costs as well as monetary and non-monetary returns will be taken into

account by the individual in the decision whether to migrate. Non-monetary costs can be opportunity costs (i.e. lost earnings due to leaving, training for a new job etc.), but also non tangible costs such as emotional or psychological distress due to leaving one's family and friends. Non-monetary returns for an individual can be represented by territorial preferences related to climate for instance (Sjaastad, 1962). These non-monetary costs and returns are difficult to be estimated empirically, however they affect somehow the individual choice to migrate.

Findings from Chiswick 1978's study suggests a selection of foreign migrants in the US. Even though they suffer an initial setback due to an adaptation period, their human capital will give positive returns some years after migration. If we consider geographical mobility as an investment in human capital, individuals who decide to move share some observed or unobserved characteristics that are different compared to non-movers. For these reasons we can say that movers are selected based on those characteristics. One of the main observed variables that affect the selection process can be the education achievement of an individual, which will in turn have a positive effect on employment outcomes. Other unobserved variables which are intrinsic to the individual, and therefore difficult to measure empirically, can have an impact in the migrant success of improving his or her employment position. These characteristics and can be defined as higher ability, being more ambitious, entrepreneurial drive, social communication skills, capacity of adaptation and so on (Chiswick 1978, Borjas, 1987, 1990).

Ultimately, the decision to migrate is driven by the differences in returns to migration: higher ability or higher educated workers will have higher expected returns in terms of income and occupation with respect to lower-ability or lower educated workers, hence will be more motivated to move. Furthermore, the cost of moving will be lower for high-ability individuals because they are more capable to manage better time and money (Chiswick, 1999).

Borjas (1987), adds a further condition to the selection hypothesis in geographical mobility: not necessarily only the more motivated individuals and with higher human capital will decide to move, but the income distribution differences between the two countries or regions will play an important role in the decision to migrate. If the income

distribution in the hosting country is more equal compared to the country of origin, there will be a "negative" selection of migrants (belonging to the lower tail of distribution); whereas a more unequal distribution in the hosting country will create a "positive" selection effect. Melzer (2013), studying inter-regional migration and self-selection patterns from east to west Germy, confirms that highly educated individuals are more likely to migrate compared to less educated individuals.

2.2 The new economics of labour migration

The neoclassical approach to geographical mobility has been criticized in the fact that it represents a too simplistic picture because it considers only economic factors. One of the main criticisms raised is that it does not consider the political dimension of migration. For instance, in today's world, there are barriers to international movements. A rational choice approach which does not take into account the impossibility of potential migrants to legally go from one country to another is far from representing the truth (Arango, 2000). Another criticism raised is that it downplays the cultural dimension treating migrants and societies as homogeneous. Wage differential and economic disparities between regions are not enough to explain migration phenomena, there are factors that act as push and pull factors for migrants such as demographic transformations, or political and social factors that might overcome the economic reasons for moving (Golini et al., 1991).

Another stream of theories that questions the centrality of human capital and rational choice theory in migratory movements are those which consider the importance of network formation in the migration processes. "*Migrant networks are sets of interpersonal ties that link migrants, former migrants, and non-migrants in origin and destination areas through the bonds of kinship, friendship, and shared community origin"* (Massey, 1988). Migration networks have an important role in the reduction of the migration costs, in addition to a higher wage level in the hosting country, increasing considerably the expected net returns of migration (Ibid.).

Usually, the first migrants that move face a higher cost, so it is more likely that they have more economic resources and higher human capital than those at the bottom of the

income distribution in the sending region, but when the number of migrants rises and the network is established, the costs and the risk for migration fall progressively. The decrease of cost and the availability of information allows other friends and relatives to migrate, or partners and children can easily join the other members of the family. The decision to migrate is affected not only by expected revenues or wage differentials, but also from transnational social bridges which reduce the costs (Portes, 1995). As the network grows and becomes mature, once a critical threshold of number of connections is reached, migration becomes self-perpetuating; each migrant reduces the cost for subsequent relatives or friends (Massey,1988 and Massey et al, 1997). The network is an important means of reliance for potential migrants, who take the information for the decision to move or not from interpersonal connections with other migrants. They might limit their decision of potential places to migrate accordingly to previously established networks and the cost and time of finding a job is progressively reduced (Tilly, 1990). According to Massey's et al (1997) study of Mexican migrants into the US, the return migration plays a crucial role in reinforcing and perpetuating the migrant networks. Returning migration is a phenomenon concerning the seasonal workers but also migrants who have lived in a foreign country for many years and decide to go back to their origin country. The probability to return decreases with the years of residence in the US and increases with the ownership of land or other property.

Other authors who study rural to urban migration, especially in developing countries, assert that focusing exclusively on the labour market can be misleading. The choice to migrate from the agricultural areas to urbanized centers can be a rational choice in order to overcome market failures that typically characterize the agricultural context (Stark and Levhari 1982, Massey and al. 1998). The urban income represents a risk diversification strategy for the agricultural family. Some of the most common market failures in the rural areas are the absence of a crop insurance market, the absence of unemployment insurance, absence or fragmentation of credit market resulting in a credit crunch, etc. All these market failures are linked to the volatility and uncertainty inherent of the agricultural activity. The farmers are uncertain about the amount of product that they will be able to collect or to sell and at what price they will sell it. This depends on the weather conditions, on the trend of the product's global prices and so on. Also rural workers are not certain if they will be hired for the next season, since weather and other

external factors are unpredictable. In this scenario, a member of the family might decide to migrate to urban centers, trying to provide a diverse source of income necessary to the family survival.

The *New Economics Labour Migration* has developed from the neoclassical approach to migration, but it is based on premises which are new to the neoclassical theories (Stark, 1991). The first one is that it considers the family as a decision unit. Although the individuals who engage in migration are often individual agents, their decision to do so is taken as a result of optimizing behavior of two or more people in the family. In this scenario the labour market outcome of the migrant does not depend only on his or her set of skills and endowments but also on the constrains and preferences of the family which stays behind. Presumably families are less mobile than single individuals, because family returns of migration increase less than the costs of moving for the family as a whole. Even in the presence of economies of scale of migration, costs outweigh returns. This is particularly true if there are children in schooling age in the family, because the cost of disruption for them due to geographical dislocation is very high. Whereas the presence of children in pre-school might accelerate the decision to move of the parents (Mincer, 1978). A second modification with respect to neoclassical rational choice theories is that wage differentials are not the only determinant of labour migration. As Stark points out in his book: *"migration in the absence of wage differentials, or the absence of migration in the presence of significant wage differentials, does not imply irrationality",* but new variables should be considered such as income uncertainty and relative deprivation. Stark and Taylor (1989) explain relative deprivation as, given a certain income, the impossibility for an individual or family to have more than a certain level of income compared to a reference group. The feeling of deprivation for a unit of income is an increasing function of the number of people in the reference group who have it. This explains some empirical evidence that would otherwise result as a countersense: often rural to urban migration rates are not higher in the poorest villages, migration rates are higher in those areas where the income distribution is more unequal and the poorest individuals are more prone to migrate (Stark, 1991).

Keeping in mind the limits of human capital theories, and the plausibility of critics raised to neo-classical models, it is important to point out that with the data available for

my research we cannot test empirically the effect of migration networks in migration decision-making and self-selection process. Furthermore, for the purpose of my research, the objection that emphasizes the political and legal dimension of migration are not so relevant in this case. When looking at internal geographical mobility, there are no legal barriers to individuals' movements and they all are subject to the same national laws. Also, internal migrants have the same political rights as local natives as long as they share country's nationality. It is true though that internal migrants might be international migrants who have migrated previously from another country. In my case studies I restricted the sample of individuals born in the country in order to select only those whose residence of birth is within country borders. This does not exclude however second-generation migrants, but I think that the hypothesis in terms of self-selection and occupation mobility can be valid also for this sub-group of population. This is grounded on the fact that many studies looking to migration as a human capital investment that I have already cited above are based on international migrants (Chiswick 1978, Borjas, 1987, Massey et al. 1998). It is also safe to assume that linguistic barriers do not represent a major issue when we study internal migration, since the three countries that I consider have one official language, which is taught in schools, used in public offices, and spoken on the radio and television. However, there are differences in regional dialects and accents, which even though do not create an impediment to communication, can affect the locals' perception in defining the internal migrant as a foreigner coming from a different culture. Cultural differences can also hamper the process of integration, and sometime create a clash between locals and migrants who do not share the same customs and traditions. For instance, this was particularly true in the first waves of internal migration towards the North industrial triangle in Italy, where the southern migrants would be discriminated and marginalized by the hosting communities (Panichella, 2009). With progressive decreasing of south migrant workers flows and the changes in migration composition, and in the same time with new waves on international migration in the country, the north-south cultural gap is less perceived. Furthermore, the educational system has played a crucial role in the successful assimilation of southern migrant children in the North (Ballarino et al., 2015).

In this analysis I look at the movement of individuals based on individual characteristics such as level of education, social origin, birth cohort and so on, Human capital theories are suitable as a starting point for the formulation of the research hypothesis.

2.3 Gender differences in geographical mobility selection

Utility maximization theories of migration have traditionally been focused on male migrants. This is consistent with a context of traditional societies where the division of roles in the household is based on the male as the main breadwinner and the woman as the caregiver of the family and has shaped the welfare state policies in most western industrial societies (Esping-Andersen, 1990). In these studies men are considered to be most engaged in the labour market and the decision to migrate is made based on their human capital and probability to succeed, because the expected returns are higher compared to the partner (Becker,1973). However, important socioeconomic transformation has been happening since the 1970s. As a response to the economic crisis in the 1970s and 1980s, in almost all western countries (although to various degrees) there has been a shift from the Keynesian welfare state towards more neo-liberal policies. The post-industrial labour market is more instable and segmented, and unemployment rates are volatile, following economic cycles. These changes have posed a challenge to the male breadwinner model, because a single source of income is not enough to keep the family out poverty or to guarantee a desired standard of living. Along with structural changes of the labour market, our societies have been pervaded by ideological, behavioral and demographic changes, which are both causes and consequences of family transformation patterns. Higher education for women, lower fertility, higher divorce rates and the progressive participation of women in the labour market are some of the characteristics of the post-industrial families. In most western countries the dual-earner family model is the most common arrangement, especially for younger cohorts. Migration studies have growingly taken into consideration models of household arrangements from the male breadwinner towards the dual-caregiving approach (Hardill, 2002).

As mentioned above, the New Economics Labour Migration considers the family as unit of analysis, so the decision to migrate is an optimizing behavior of two or more people in the family. Mincer (1978) builds a model of migration decision-making considering a couple instead of a single individual. The decision for the family to move will happen if the net returns of the family are positive ($R_f > 0$). This means that the individual net return of each of them might diverge, but as long as the total sum is positive the move is still the optimal choice. As long as the loss of one partner is smaller than the gain of the other in absolute value, the family will have a net gain from moving. One partner will become a tied-mover and will decide to relocate along with the other even if it is more convenient for him or her to stay. The same reasoning can be done in the case of a tied-stayer. If the total gain of the family is negative ($R_f < 0$), one of the partners will decide to stay even if it would have been more convenient to move. His or her gain is smaller than the loss of the other partner from moving. Mincer explains further that the gains or losses are larger for the individual with the "greater market earning power", and in the same way the opportunity costs of forgone earnings are also higher. Whereas the returns or losses of geographical mobility are smaller for individuals whose participation in the labour market is discontinuous. These assumptions imply that on average, given the participation and earnings in the labour market, the absolute value of the net gain *R*, is larger for husbands than for wives. Market opportunities are the major source of discord within couples, since other preferences of local amenities are supposed to be shared among partners. For this reason, it is more likely for migration ties to rise in the case of working couples than in single-earner couples (where the partner who does not work does not face opportunity costs from migration). Since women have smaller gains from migration, there is a higher probability for them to be tied-movers, whereas husbands are more likely to be tied-stayers.

Another scholar who initially focused his attention into women migration patterns was Lichter (1983). He points out that most of previous studies focus mainly on the migration of male individuals, being in line with women's very low participation in the labour market and consequently their lower power in migration decision-making. As mentioned above, transformations in society and within the family have brought an increasingly active role of women in family migration behavior, making it necessary to consider also women as a subject of migration studies. Lichter's study is focused on

married women and he questions whether women (like men) conform to the human capital model of migration or do they respond differently.

Furthermore, are there differences across female sub-groups? As already has been argued above, the partner's decision-making power is a positive function of the human resources (education level and occupational position) he or she brings into the marital unit. Women who have invested in the accumulation of personal human resources are supposed to achieve greater power in the couple decision-making process. Women with a higher education level are expected to have a greater relative power in deciding if the family moves. When considering power dynamics, apart from absolute resources, relative endowment of resources is very important. It is not the absolute acquisition of human capital that is fundamental but rather the relative stock compared to the other partner. This means that highly educated and skilled women should show a greater power in contrasting a geographical move if it is not beneficial for their careers. Highly educated women will also have greater power in initiating a move when it is beneficial for them. Lichter's analysis is based on The National Longitudinal Survey (NLS) in the US and considers 30-45 aged women who have experienced inter-county mobility in the 1966-1971 period. His findings do not support the above-mentioned hypotheses. In the short term, married migrant women experience a loss in terms of earnings compared to non-migrant women. When the absolute and relative education of married women is added to the model, it appears that the losses from migration are even bigger. This suggest that married women do not initiate migration for self-fulfillment, but are mainly tied movers. In conclusion to his analysis, Lichter states that the utility maximization of the human capital is an inappropriate explanation in the case of the migration of married women.

To similar conclusion arrives Shihadeh (1991) when analyzing a sample of 2,674 families who migrate to and from the region of Alberta in Canada. It appears that the majority of wives would leave to their husband the decision to migrate, regardless of their level of education. Although the data limits recognized by the author, the results show that the relative resources do not change the asymmetry of decision-making within the couple. The main predictor of migration is the husbands' economic opportunities and women carry a subsidiary role in the household. The results show that even when women have a higher score in education attainment compared to their

husbands, they still take a subsidiary position in decision-making. Shihadeh argues that non-conformity to the human capital model can be explained through gender role theories and socialization other than relative resources. The gender division within the household usually confer more power to the man in economic-related decision for the family. Boyle et al. in (1999) in their article argue that: "…*if the human capital model's emphasis on the economic rationality of the migration process is valid, the sex of the individual stimulating the move should be irrelevant and we would expect similar relocation decisions to be made in favour of the woman's career in families where the female partner is the major breadwinner. If, on the other hand, we demonstrate that women's employment status suffers from family migration, even in those rarer cases where her occupational status is higher than the man's, other processes, unexplained by the abstraction of the human capital model, are likely to be influencing family migration decision-making…*" (p.111).

Boyle points out that many of the studies based on family as unit are based on relatively small samples, posing a problem of generalizing the findings. He also points out that the position of women in the labour market is changing rapidly and important transformations happen also within the family. Empirical studies need to be carried out in order to test the robustness of the subsidiary position of women in decision making hypotheses. Boyle conducts a comparative study based on two rich datasets, the GB Census Sample of Anonymised Records (SAR) household file and the 1990 US Census Public Use Microdata Sample (PUMS). The conclusions of Boyle are similar to Shihade's. In both UK and US, it appears that women to not initiate migration when is beneficial for their occupation opportunities and follow the husband when deciding to migrate regardless of their relative resources. Even in this case human capital theory is not a good predictor for women behavior when migration is involved. Bielby and Bielby (1992) analyze the impact of gender-role beliefs on the reluctance to move for a better job. They argue that in traditional gender role relationships, where it is acknowledged by both partners that the man is the family provider, women are more reluctant to move for their own job improvement if the economic viability of the family is not jeopardized. In this case women are considered to be tied-stayers. However, asymmetries in the decision to move persist also in couples who do not share traditional gender role beliefs. Since the number of dual earners increases with younger cohorts it

is expected that compromise over geographic location is more likely to happen for younger cohorts.

Some recent studies show that women in non-traditional relationships have a better occupational outcome after migration than women in traditional relationships. Even when women have a better occupational outcome position than their partners, they still have a lower probability to migrate for their career (Boyle at al. 1999). More and more women have become independent breadwinner migrants, and migration studies have increased focus on the feminization of migration processes (Koser and Lutz, 1998). It is important to look at women not only in the family context but also as individual subject of migration studies. More recent studies confirm the hypothesis of tied-migration for women, since women who move alone have a better performance in the labour market than those who move as part of a family (Ballarino and Panichella, 2018). Melzer and Hinz (2019), using longitudinal data study east to west migration in Germany and find that both men and women with higher education are more likely to migrate than individuals with a lower level of education. An important factor which plays a role in the decision to migrate are the characteristics of the labour market in the origin area. When there are less occupational opportunities and a there is mismatch in education and occupational status, men will show higher propensity to inter-regional migration, whereas women are more likely to commute (Melzer and Hinz 2019).

Smits (1999) finds out that long-distance migration has a negative effect on married women participation in labour market. This effect is weaker for higher educated women and for younger cohorts. The presence of children also reduces significantly the probability of women to be employed after the move. Van Ham (2001), in a study on workplace mobility and occupational achievement in the Netherlands, finds out that workplace mobility has a positive effect on career advancement for men whereas a positive effect is found only for single women. This result confirms that for married women a tied mover effect still takes place in family migration decision making.

Taylor (2007), using BHPS data shows that the proportion of families who declare to move for job-related reason is quite low (<2%), but the majority of the moves are for the husbands' job-related motivations. The loss and gains from migration do not affect equally the two partners, so the one which loss is smaller compared to the other's gain

will be the tied mover. And for reasons explained above it is more likely for women to be in such position. Taylor also argues that when important and not frequent decisions are made, the individual with the highest bargaining power will take the lead, whereas the partner with the lowest bargaining power will be in the subsidiary position. Overall, a large number of studies suggest that women in a partnership or with children are less likely to initiate a work-related relocation (Boyle et al. 2001; Clark and Huang 2006; Cooke et al. 2009).

More recent studies focus on changes of family structure and how they affect spatial mobility. Family instability, separation and divorce have been linked to an increase in geographical mobility. However, the necessity to stay in proximity with the children after separation might push parents toward short-distance migration, instead of long-distance relocation (Mulder and Malmberg 2011; Cooke et al. 2016). Other studies show that family arrangements represent a constraint for long-distance migration and individuals prefer not to leave their home for work, choosing commuting over relocation. Commuting can also have different gender outcomes since married women are more likely to choose short-distance commuting compared to men. Furthermore, women who do not have children tend to opt for longer distance commuting compared to women with children (Hofmeister and Schneider 2010, Huinink and Feldhaus 2012). Other studies have challenged the assumption of human capital theories which consider only economic returns of the two partners in the decision to migrate. Family ties outside the household can have an impact on the probability to migrate. Strong ties to work position have a positive effect on the likelihood of migration but local and family ties act in the opposite way. The decision to migrate for a woman or a man embeds complex relations outside the nuclear family, not only the economic returns (Mulder and Malmberg, 2014). International migration patterns show us how migrant women redefine gender roles in decision-making processes. Women engaged in the care market predominantly migrate alone, leaving the rest of the family behind. They make decisions not only regarding the migration event but also re-arrange care duties and responsibilities in their family. A growing body of literature on transnational families and transnational motherhood points out that decisions about migration are taken in a context of ambivalent emotions, and multiple negotiations in the face of limited options (Boehm 2008). The global care chain literature tries to explore and explain the

processes in which feminization of migration is interlinked with gender dynamics, transnational families and cross-border care arrangement (Sorensen and Vammen, 2014).

In conclusion to this paragraph, it is important to note that migration selection and outcomes of women depend not only on their human capital in absolute and relative terms (compared to the husbands'), but also gender roles within the family dynamics have an important effect.

2.4 Empirical strategy and hypotheses

The empirical strategy of this chapter consists in three steps. The first step can be defined as the education-based hypothesis. Based on a well-established theory, as explained in the section above, it is expected that better educated individuals have a higher probability to experience migration (Chiswick 1978, Borjas, 1987, Fielding 1992, Panichella 2009, Melzer 2013). Individuals who move from one region to another looking for better career opportunities are selected in terms of education achievement compared to those who do not move. Social class of origin can affect education attainment and therefore indirectly affect the selection into migration. For that reason, the social class of origin, which is defined as the occupational class of the parents' when the individual is aged fourteen, should be accounted for.

The first research hypothesis is:

1) Better educated individuals have a higher propensity to geographical mobility (net of social class of origin).

Based on previous research, the first hypothesis is expected to be true for the three countries. Furthermore, the region of origin can have an impact in probability of GM. It is expected that being born in the South in Italy will have a positive effect. The same is expected for individuals born in East Germany. For the case of the UK the prediction is not straightforward. One of the regions with the highest mobility rate, the South-East and London, presents both large inflows and outflows of internal migrants.

The second step of the empirical research concerns the difference between men and women in the migration process. Based on the literature who considers women more likely to be tied-movers due to family dynamics and gender roles within the household women are considered less mobile than men (Taylor 2007, Melzer et al. 2019). Country characteristics in terms of labor market rigidity, welfare and childcare provisions, women participation in the labour market can incentivize or hamper women propensity to move for job opportunities (Fielding 1992, Smits 1999, Ferrera 1996). The second research hypothesis can be formulated as follows:

2) Women have a lower propensity to move compared to men.
a. Women in a partnership and with children have a lower propensity to GM compared to men
b. Women in UK have a higher propensity to GM compared to Italy and Germany.

The 2b hypothesis is based on that part of literature based in UK data that shows high mobility rates for highly educated women (Fielding 1993, Champion 2012). The third step stems from that stream of research which considers women as increasingly independent movers and less tied to family dynamics, especially when highly educated. The third research hypothesis is that:

3) There is an increase of the propensity to move for women for younger cohorts.
a. This effect is stronger for the UK
b. There is a smaller effect for Italy and Germany

Because of country dynamics as described in the section above, this interaction effect between gender and cohort can be different for the three countries. I expect a stronger effect the UK and smaller for Italy and Germany.

2.5 Data, variables and methods

2.5.1 Data

The data used in the empirical models are taken from the three national datasets described above: the Italian Household Longitudinal Survey (IHLS), the British

Household Panel Survey (BHPS) and the German Socio-Economic Panel (SOEP). As mentioned in the first chapter (section 5.2) these are three longitudinal datasets who collect information at individual and household level about demographic, housing arrangement, health, earning, occupation status, geographical residence and so on and so forth. The longest dataset is the German one with 32 waves surveyed each year and the BHPS has 18 waves with also yearly observations. The IHLS is a five-year survey where information on life events is registered retrospectively when and individual enters the study. The time unit count of events in the Italian dataset is month so a further step is need to transform the event time unit observation in year when comparison is necessary.

The sample has been restricted to those individuals born between 1945 and 1980 for each country. I decided to select the cohorts born after the Second World War, in order to avoid the disruptive effect of the conflict in the migration process and limiting it to the born until 1980 in order not to include very young individuals who have not experience a migration event yet because of age. The last year of survey data available for my study are respectively 2008 for the BHPS, 2005 for IHLS and 2016 for GSOEP. This means that individuals born after 1980 in the British and Italian sample are very young, likely to be still in tertiary education and with few experiences in the labour market. I decided to limit the sample in the same way for Germany in order to have cohort comparability in the three countries. This allows us to compare the trends of migration rates during the selected period.

I have restricted the sample to individuals born in the country. This choice is made to separate from the sample first-generation international migrants which for reasons mentioned above might have different patterns and outcomes of inter-regional mobility compared to nationals.

The analytical sample includes 11,000 individuals for Italy, 23,000 for the UK and 36,000 for Germany. In terms of age composition, the British and German surveyed population is younger (mean age respectively 38 and 41 years) compared to the Italian one (mean age is 51). The detailed summary of age variable is shown in table 1 in the appendix.

2.5.2 Variables

The dependent variable is *geographical mobility*. It is a binary variable with value zero if the individual has not changed region of residence from the first observation and it takes value one when the individual moves to another region.

The geographic area of the region is a subnational entity and is defined by each country according to administrative and territorial characteristics. In the Italian dataset there are 20 regions registered. They are defined as first-level constituent entities of the Italian Republic, which correspond to Eurostat NUTS-2 geographical regions. In the UK, the regions identified in the BHPS are the formerly known as the *government office regions*, which correspond to the EU NUTS-1. Some the regions have been divided into additional territorial units, for sample purposes (to balance the number of households participating in the survey for each region), as shown in table 3 in the appendix. In the case of Germany, the territorial unit available in the SOEP dataset is that of the federal states (Länder), sixteen region which correspond to the NUTS-1 (table 3 in the appendix). The territorial units used to categorize the geographical mobility variable are not harmonized in terms of surface area and population density between the three countries and this represents a limit in terms of comparability. For instance, Berlin and Hamburg are city-states with a large metropolitan area and a number of sub-districts, similar to inner and outer London area. They are however very densely populated metropolis, with a high level of economic growth, per capita income above the country average and a labour market which distinguishes them from the rest of the country's regions. Although I am aware of the limits of using different territorial categories, the version of the datasets that I have acquired do not allow to identify smaller territorial units. However, I believe that the comparative approach is not completely invalidated because of these limitations, since the patterns of geographical mobility, and its changes over time allow for comparisons in terms of flows rather than stocks.

The independent variable is the *level of education* which has been recoded as a categorical variable with three levels based on the classification scheme of International

Standard Classification of Education-ISCED (table 2 in the Appendix). Lower-secondary education includes those individuals who have attended until the eighth grade or concluded the middle school (ISCED 0-2). Upper-secondary education is referred to a high school degree (ISCED 3-4) and tertiary education is defined as the completion of a higher education degree (bachelor and above, ISCED 5-7).

A first control variable is *parental class of occupation*. When the effect of education is being measured, it is necessary to consider that social class of origin has an indirect effect in education achievement. Social class of origin is defined by the occupational class of the parent when the individual is fourteen years old. I have recoded the father's and the mother's occupation based on the Erikson-Goldthorpe-Portocarero (EGP) class scheme. The parental class of occupation, is registered based on the highest occupational position of one of the two parents, through the dominance criterion.

Other variables used in the models are *year of birth* and *cohort*, *gender*, *region of origin*, *marital status* and *number of children*, *region of origin*. The variable region of origin has been recoded into geo-economics macro aeras based (table 4 in the appendix), when used as control variable in the models. When possible, the variable in the three datasets are recoded in the most similar way in order to facilitate comparison of results.

2.5.3 Methods

For the first hypothesis (1) better educated individuals have a higher propensity to move the model can be formalized like the following:

M1: $y_{i,t} = \beta_1 edu_{it} + \varepsilon$

M2: $y_{i,t} = \beta_1 edu_{it} + \beta_2 par\_class_i + \beta_3 Z_{it} + \varepsilon$

The dependent variable Y is geographical mobility (GM), a time-varying variable. The independent variable is education level which can be time-varying during a long period of survey. In the second model (M2), parental class of occupation is added as an independent variable, plus a series of control variables are included and are represented

by the parameter Z (gender, marital status, number of children, year of birth, region of origin).

The third and the fourth models represent the formal specification of the second hypothesis (2) women have a lower propensity to move compared to men (for the same level of education). When the effect of marital status and presence of children is controlled for, the difference in the probability to migrate between men and women should disappear.

M3: $y_{i,t} = \beta_1 edu_{it} + \varepsilon$ (*for each gender)

M4: $y_{i,t} = \beta_1 edu_{it} + \beta_2 par\_class_i + \beta_3 Z_{it} + \varepsilon$ (*for each gender)

(M3) and (M4) are modeled separately for men and women in order to differentiate the results of the propensity to migrate for the two genders. In M4, parent's occupational class is added and other control variables (marital status, number of children, year of birth, region of origin) represented in parameter Z.

The fifth model tests the third hypothesis (3) there is an increase of the propensity to move for women for younger cohorts, by introducing an interaction term between gender and cohort.

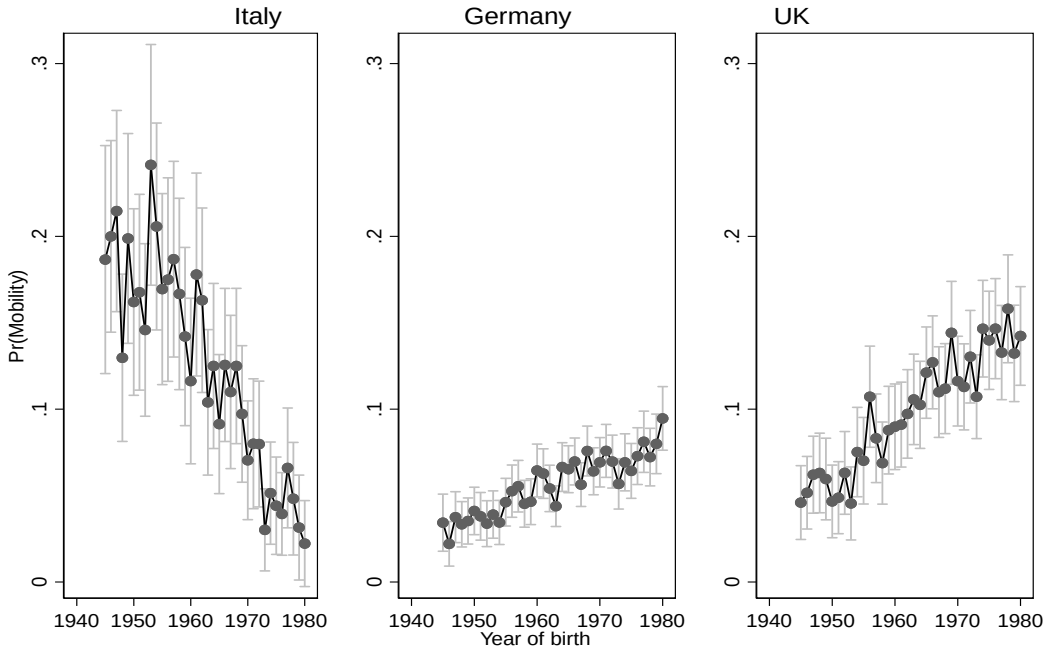
M5: $y_{i,t} = \beta_1 edu_{it} + \beta_2 (gender_i \times cohort_i) + \beta_3 Z_{it} + \varepsilon$

For the estimation of the models, I use linear probability models. Since I am comparing individuals who migrate with stayers, an estimation of between-group variance is necessary. In this case with panel can be used either *Pooled OLS with robust standard errors* or *random effect* models. Clustering standard errors in pooled OLS models helps to control for error correlation within groups over time and avoid misleading estimation results. However random-effect models are a much better refined tool to deal with panel data estimations. Random effect regressions allow to estimate the effects of both time-constant and time-varying variables, giving more efficient predictors of the independent variables. I will estimate the model with both techniques and compare coefficients' results.

2.6 Empirical results

Figure 3 describes the trend of geographical mobility over time for the three countries as estimated with the available data. The probability to migrate from one region to another has been decreasing for Italy for younger cohorts. The North to South migration that pervaded the Italian society the first decades after the second World War have slowed down as consequence of a variety of reasons such as the aging of population, the deindustrialization in the northern regions, the mitigation of the urbanization process and other factors that have been described in the first chapter. Although slightly increasing for the younger cohorts, the internal migration rate in Germany is lower compared to Italy and the UK. This result confirms that long-distance migration in Germany is not very common. A note worth mentioning here is that the East to West movement of individuals right after the reunification is not well captured by our data since those born in East Germany have entered the survey after the reunification, so the change of residence from east to west is not registered. In the UK the propensity of geographical mobility has been increasing consistently over time with some fluctuations for certain cohorts.

Figure 3: Probability of geographical mobility for year of birth



Source: own estimation from ILFI, GSOEP and BHPS

2.6.1 Education based hypothesis

The results for the first research hypothesis are summarized in the table below (table 2), which shows the probability of migrating for the three levels of education for each country. The results of the pooled regression and random effects are shown in order to compare the estimates of the two models. The estimation coefficients change slightly in size with the two methods but the direction of the effect is the same. The full results of the regressions for each country can be found in the tables in the appendix A (table 5, 6 and 7).

In the first model (M1), only the independent variable (education) is considered. In this case it appears that individuals with a secondary education in Italy have a negative propensity to move compared to those with a lower degree, whereas the effect of the tertiary education in GM is positive. When the control variables are added, the effect of both secondary and tertiary education is larger and positive compared to the reference

category. As expected, being born in the South of Italy or in the islands, has a positive effect on the probability of experiencing internal migration. So higher educated individual in the southern regions will be more likely to migrate than others born in the north or in the center of Italy (table 5 in the appendix A).

For Germany the pooled regression estimations show a positive effect of secondary and tertiary education in GM, compared to lower educated individuals. With the random-effect model this effect becomes smaller, although still positive. As predicted, the RE models shows a positive effect of being born in the eastern part of the country on GM. The southern regions show a negative effect on the probability to move. This suggests that they are destination regions of migrants from other parts of Germany.

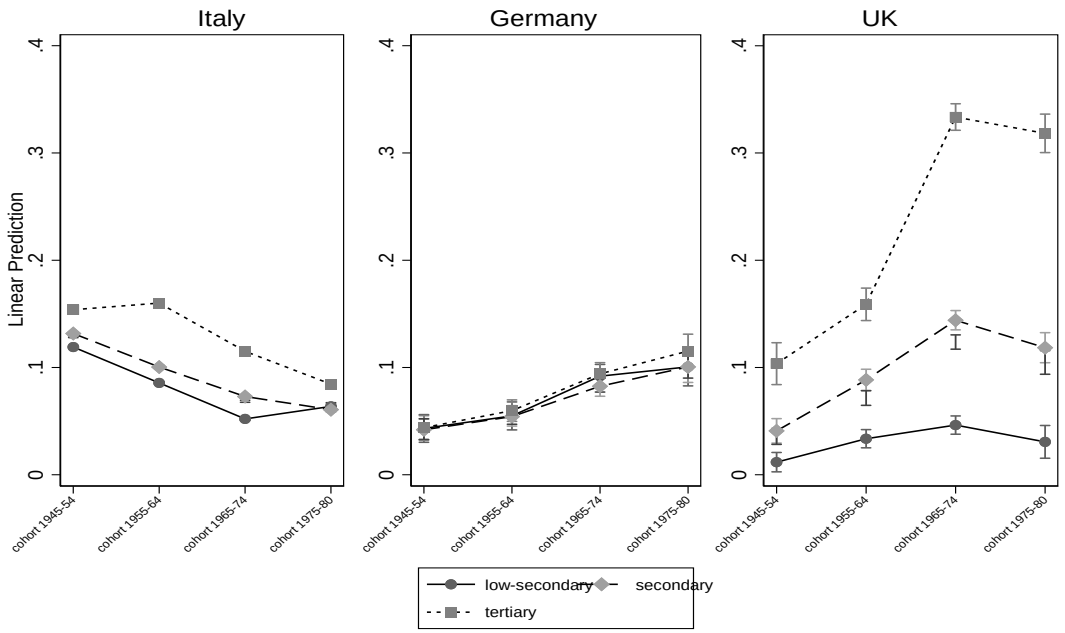
In the case of UK, the effect of holding a tertiary education degree is significantly higher compared to the other two countries. Internal migrants in the UK appear to be highly self-selected based on their human capital. Being married and separated has a positive effect on the probability of GM. This suggests, in line with previous studies, that individuals have a higher propensity to move when they get married or when they experience separation in the UK. The estimations show a positive effect on GM for individuals originating in the South-East and London area. Between the inflows and outflows of migrants in the region, the latter prevails in the BHPS sample.

Table 2: Probability of GM for level of education; pooled and random effect models

Pooled regression with rse						
	Italy		**Germany**		**UK**	
GM	M (1)	M (2)	M (1)	M (2)	M (1)	M (2)
Education						
Low-sec	-	-	-	-	-	-
Secondary	-0.02***	0.04***	0.02***	0.02***	0.06***	0.05***
Tertiary	0.02*	0.07***	0.05***	0.06***	0.17***	0.14***
Random effect						
Education						
Low	-	-	-	-	-	-
Secondary	-0.3***	0.04***	0.01***	0.00	0.06***	0.06***
Tertiary	0.02	0.08***	0.01***	0.01***	0.22***	0.20***
*** p<0.01, ** p<0.05, * p<0.1; Control variables in M (2): gender, parent's occupational class, marital status, no. children, region of origin.						

In the graphs in figure 4 it is shown an interaction effect of cohort and education in order to capture changes in the selection process into mobility over time. The probability of internal migration for tertiary educated individuals have increased for the younger cohorts only in England, confirming the high selectivity of young individuals into GM. In the case of Italy, the effect is smaller, whereas in Germany there is no distinction between the three levels of education in the probability of GM.

Figure 4: Linear prediction of GM for level of education and cohort



2.6.2 Gender differences hypothesis

In table 3 it is shown the empirical result of the second hypothesis, which aims to test the gender differences in the propensity of internal migration for level of education. The complete results of the regression can be found in tables 8, 9 and 10 in the appendix A. For Italy, when only education and parent's occupational class is considered (M3), there is an important difference in the propensity to move for men and women. It would appear that the education level does not affect the women's chance to move, confirming the tied-mover hypothesis. However, when control variables are added (M4), the better specified model shows that having a tertiary education degree has a positive effect on

the probability to move for women in Italy, confirming the positive selection hypothesis. Furthermore, the social class of origin has a positive effect on GM for women but not for men. Being married has a small negative effect on GM, for both men and women, whereas the presence of children does not show a negative effect for either gender.

In the case of Germany, when men and women are analyzed separately, there is not an important effect of education in the propensity to move. Social class of origin has a stronger positive effect than high education for both men and women. It appears the that the selection effect of education in Germany is mitigated by the parent's position in the labour market. The marital status coefficient does not show a particular effect of marriage or having kids on the probability to move. Married men, however seem more likely to move compared to unmarried men, but the effect is small in scale though statistically significant.

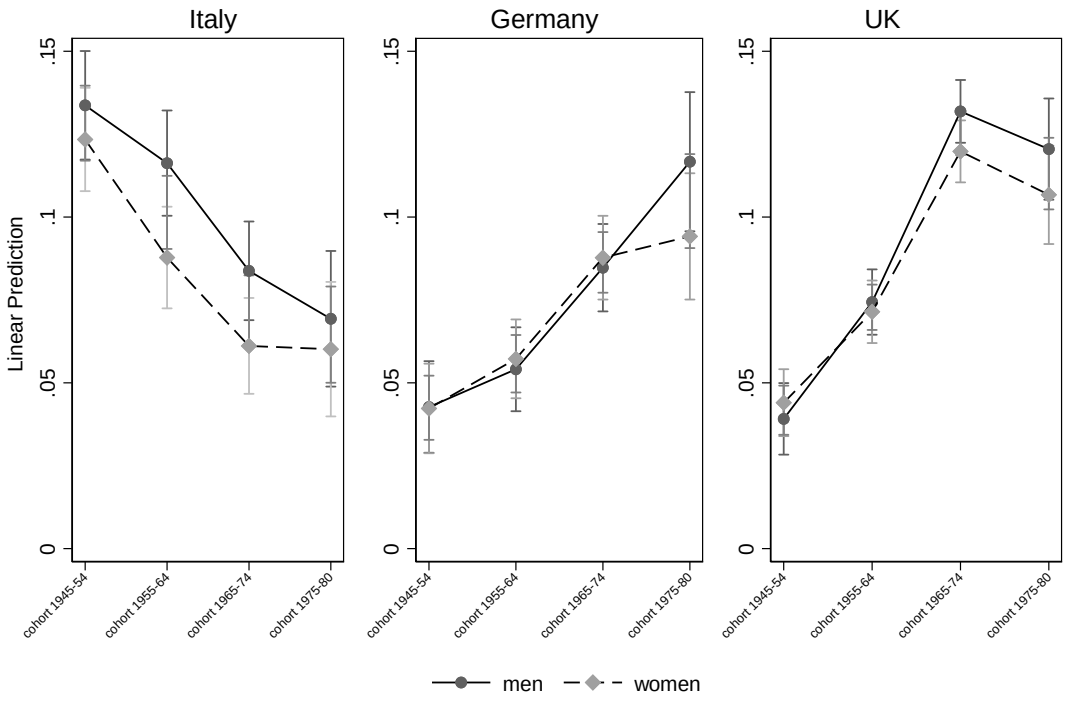
In the UK, the effect of education on the probability of geographical mobility remains high for both men and women, with no difference between the sexes. The parent's class of occupation does not have an important effect on the probability to move, suggesting that education is the most important variable in the selection process. An interesting result in the case of UK is the effect of marital status. Both being married or being divorced/separated have a positive effect on GM. The disruptive event of divorce might push individuals to move away from the residence region, the positive effect of being in partnership for both men and women is more surprising. This result might indicate the tendency of mobility of dual earning couples in the UK compared to the other two countries.

Table 3: Probability of GM for Men and Women: RE models

	Italy				**Germany**				**UK**			
	Men		Women		Men		Women		Men		Women	
GM	M (3)	M (4)	M (3)	M (4)	M (3)	M (4)	M (3)	M (4)	M (3)	M (4)	M (3)	M (4)
Education												
Low-sec (ref)	-	-	-	-	-	-	-	-	-	-		-
Upper-sec	-0.2**	0.03*	-0.03***	0.04**	0.01***	0.01*	0.00	-0.01*	0.06***	0.06**	0.07**	0.07****
Tertiary	0.05**	0.11***	-0.00	0.07**	0.01***	0.01	0.01**	-0.01	0.22***	0.20***	0.21***	0.20***
Parent's occ. class												
Low-skilled (ref)	-	-	-	-	-	-	-	-	-	-	-	-
Semi-skilled	-0.03	-0.00	0.00	0.03	0.02***	0.02	0.03***	0.03***	-0.01	-0.02	0.03***	0.01
Skilled	-0.05*	0.01	-0.00	0.04	0.01***	-0.00	0.01***	0.00	-0.01	-0.02	0.03***	0.00
Upper service	-0.07*	-0.04	0.02	0.15*	0.04***	0.04***	0.04***	0.05***	0.00	-0.01	0.04***	0.01
***** p<0.01, ** p<0.05, * p<0.1; Control variables in M (4): marital status, no. children, region of origin, cohort of birth.**												

In order to test the third and last hypotheses, in the graph below (figure 5) it is shown the interaction effect of cohort and gender. In none of the three countries there is a significant difference in the probability to migrate between the two sexes for younger cohorts. The diminishing trend of the probability to move in Italy for younger cohorts is confirmed by the regression results. In Germany and in the UK the predicted probability to migrate has been increasing for younger cohorts and only with a slight difference between men and women, being higher for men. We can argue that younger generations of women are more mobile in Germany and UK, the opposite in Italy.

Figure 5: *Linear prediction of GM for cohort and gender*



2.7 Conclusions

In this chapter I analyzed the selection process that takes place in geographical mobility within the three countries (Italy, Germany and UK). Based on three large longitudinal datasets. I tried to answer a number of questions: what are the characteristics of individuals who move? How are they different with respect to non-movers in terms of education, social class of origin, region of origin, gender, marital status etc.? It can be concluded that this analysis confirms the selection into geographical mobility for education although with some differences across the countries.

The analysis result has confirmed the first hypothesis according to which better educated individuals have a higher propensity to move compared to those with a lower level of education. For Italy the effect of having a tertiary education degree intensifies when it is controlled for class or origin and region of birth, suggesting that the there is a higher propensity towards GM for those born in higher social classes and in the south of the country. In the case of Germany, the added control variables do not change the effect of education in the propensity to migrate, but higher social class of origin have a positive effect on the probability to migrate. In the UK, tertiary-educated individuals have a much higher probability to migrate compared to the other two countries. The control variables do not affect this association. The self-selection process in terms of education is higher in the UK regardless of the social class of origin.

The second hypothesis, according to which women have a lower propensity to move for the same level of education, is partially confirmed for Italy, because the effect of higher education is smaller for women compared to men, but still positive and statistically significant. When the marital status and the number of children are controlled for, this difference reduces but does not disappear. In Germany and UK there is no substantive difference for the same level of education between men and women, confuting the gender differences hypothesis.

The last model is aimed to test whether the propensity of women to move has changed for most recent cohorts. The results show that the difference between men and women has been reducing over the decades in Italy, but also the overall propensity to move is lower. In Germany, the probability to migrate have slowly increased with time but with

no sensible difference for men and women. In the UK the propensity to move have had an overall increment. For most recent cohorts of birth (1974-80), the increment has been larger for men than for women.

The patterns of geographical mobility show the persistence of spatial disparities between macro-areas within the countries. The traditional migration flows South to North in Italy and East to South-West in Germany still persist although at a much slower pace. If in Italy and Germany the direction of internal migration is predominantly from less economically developed regions towards those with a higher growth, in UK it appears that flows are inverted. The South-East region has higher rates of mobility compared to other regions. This can be explained by those studies which argue that a large number of individuals after entering the labour market in the South-East and London leave after acquiring occupational upward mobility and have higher returns working elsewhere. This point will be addressed further in the next chapter. Considering the country characteristics, it appears from the analysis that countries with a more dynamic and flexible labour market incentivizes young individuals to move in search for occupational opportunities. It is interesting to notice that in the UK, not only do women move more compared to the other two countries, but also being married, does not lead to a lower mobility for them.

Appendix A

Tables and figures

Table 1: Age statistics and size sample					
	Size sample	Mean	St. dev	Min	Max
UK	23,000	37.8	11.4	16	64
Germany	36,000	41.17	11.8	16	71
Italy	11,000	51.1	17.3	17.4	101

Table 2: Level of education recoded		ISCED-Atteinment (ISCED-A)	
0	Low-secondary	1	Primary education
		2	Lower secondary education
1	Upper-secondary	3	Upper secondary education
		4	Post-secondary non-tertiary education
2	Tertiary	5	Short-cycle tertiary education
		6	Bachelor's or equivalent level
		7	Master's or equivalent level

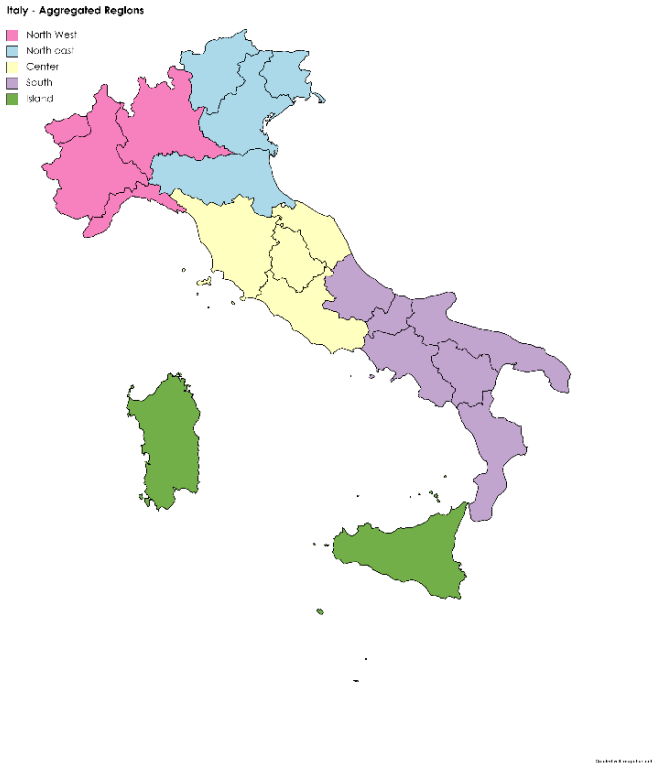
Table 3: Regions as defined in ILFI, BHPS and GSOEP			
	Italy (Regioni)	*Uk (Regions and Metropolitan areas)*	*Germany (Länder)*
	Piemonte	Inner London	Schleswig-Holstein
	Valle d'Aosta	Outer London	Hamburg
	Lombardia	Rest of South East	Lower Saxony
	Liguria	South West	Bremen
	Trentino Alto Adige	East Anglia	North-Rhine-Westfalia
	Veneto	East Midlands	Hessen
	Friuli-Venezia Giulia	West Midlands Conurbation	Rheinland-Pfalz
	Emilia Romagna	Rest of West Midlands	Baden-Wuerttemberg
	Marche	Greater Manchester	Bavaria
	Toscana	Merseyside	Saarland
	Umbria	Rest of North West	Berlin

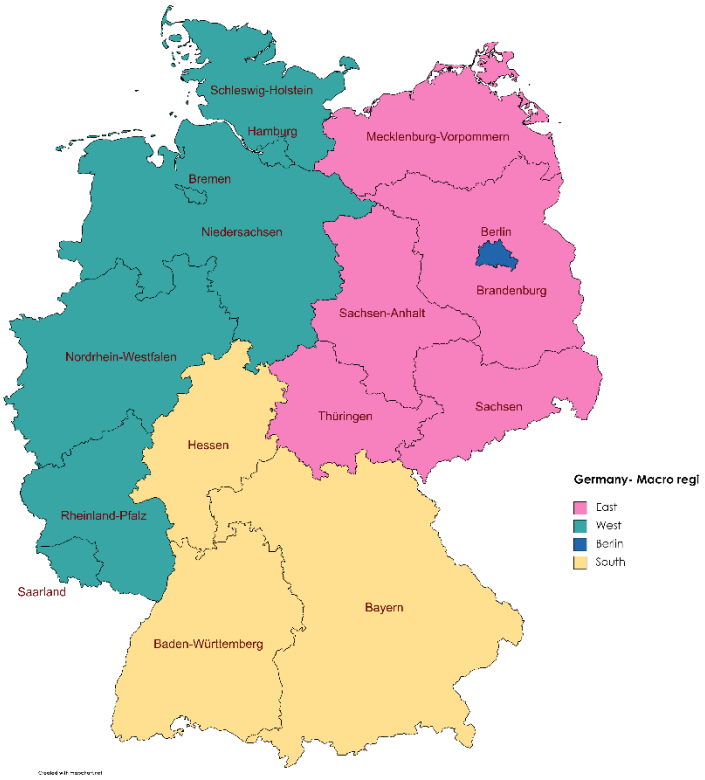
	Lazio	South Yorkshire	Brandenburg
	Campania	West Yorkshire	Mecklenburg-Vorpommern
	Abruzzo	Rest of Yorks & Humberside	Saxony
	Puglia	Tyne and Wear	Saxony-Anhalt
	Basilicata	Rest of North	Thuringia
	Calabria	Wales	
	Sicilia	Scotland	
	Sardegna		
	Molise		

Table 4: Agregated macroregions recoded		
	Italy	Regions
0	North-West	Piemonte
		Valle d'Aosta
		Lombardia
		Liguria
1	North-East	Trentino Alto Adige
		Veneto
		Friuli-Venezia Giulia
		Emilia Romagna
2	Center	Marche
		Toscana
		Umbria
		Lazio
3	South	Campania
		Abruzzo
		Molise
		Puglia
		Basilicata
		Calabria
4	Islands	Sicilia
		Sardegna
	Germany	
0	North-West	Schleswig-Holstein
		Hamburg
		Lower Saxony
		Bremen
		North-Rhine-Westfalia
		Rheinland-Pfalz
		Saarland
1	South	Hessen
		Baden-Wuerttemberg
		Bavaria
2	Berlin	Berlin
3	North-East	Brandenburg
		Mecklenburg-Vorpommern
		Saxony

		Saxony-Anhalt
		Thuringia
	UK	
0	North England	North East
		NorthWest
1	East England	Yorkshire & Humber
		East Midlands
		East of England
2	London - South East	London
		South East
3	West England	South West
		West Midlands
4	Wales	Wales
5	Scotland	Scotland

Figure 1: Aggregated regions map




Schleswig-Holstein
Hamburg
Mecklenburg-Vorpommern
Bremen
Niedersachsen
Berlin
Brandenburg
Sachsen-Anhalt
Nordrhein-Westfalen
Thüringen
Sachsen
Hessen
Rheinland-Pfalz
Saarland
Bayern
Baden-Württemberg
Germany- Macro regi
East
West
Berlin
South

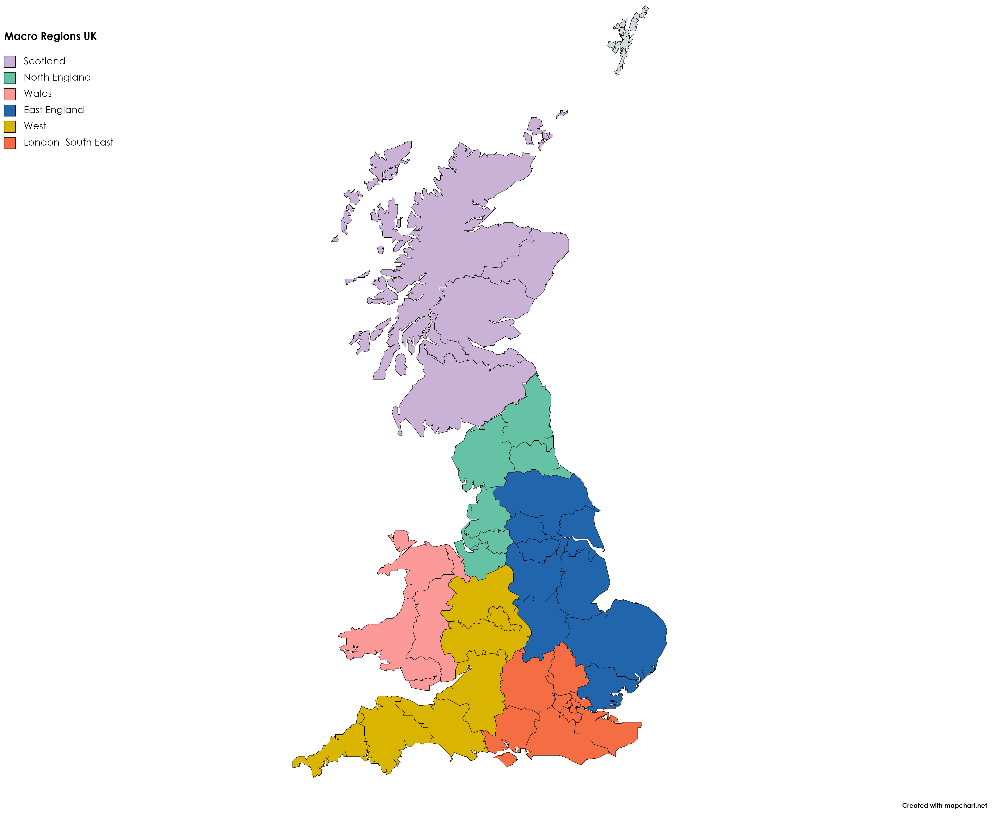

Macro Regions UK
Scotland
North England
Wales
East England
West
London South East

Table 5: Probability Model for GM (Italy)

	Pooled regression (rse)		Random Effect	
Indep. variables	(1)	(2)	(1)	(2)
Education				
Low-second. (ref)	-	-	-	-
Upper-secondary	-0.02**	0.04**	-0.03***	0.04***
	(-0.03 - -0.00)	(0.00 - 0.08)	(-0.04 - -0.01)	(0.01 - 0.06)
Tertiary	0.02*	0.07**	0.02	0.08***
	(-0.00 - 0.05)	(0.01 - 0.13)	(-0.00 - 0.03)	(0.04 - 0.13)
Occ. Class Parent				
Low-skilled		-		-
Semi skilled/artesan		0.01		0.02
		(-0.05 - 0.07)		(-0.03 - 0.06)
Skilled		0.01		0.02
		(-0.05 - 0.08)		(-0.03 - 0.07)
White collars		0.09		0.07
		(-0.08 - 0.25)		(-0.04 - 0.18)
Gender				
Women		-0.01		-0.01
		(-0.04 - 0.03)		(-0.03 - 0.01)
Civil status				
Non-married				
Married		0.04		-0.01***
		(-0.04 - 0.12)		(-0.02 - -0.00)
Separated/widowed		0.13		-0.01
		(-0.05 - 0.31)		(-0.06 - 0.05)
Nkids		-0.02**		0.01***
		(-0.04 - -0.00)		(0.00 - 0.02)
Birth macro-region				
North West		-		-
North East		-0.03		-0.02
		(-0.08 - 0.02)		(-0.05 - 0.01)

Centre		0.03		0.01
		(-0.02 - 0.08)		(-0.02 - 0.04)
South		0.09***		0.12***
		(0.04 - 0.14)		(0.09 - 0.15)
Islands		0.12***		0.13***
		(0.06 - 0.18)		(0.09 - 0.17)
Birth year		-0.00***		-0.00***
		(-0.01 - -0.00)		(-0.00 - -0.00)
Constant	0.11***	7.72***	0.10***	6.18***
	(0.10 - 0.12)	(3.65 - 11.79)	(0.08 - 0.11)	(3.64 - 8.71)
Observations	1,861,349	177,760	1,861,349	177,760
R-squared	0.00	0.03		
Number of id			6,249	3,677
(Robust ci iparentheses *** p<0.01, ** p<0.05, * p<0.1)				

Table 6: Probability Model for GM (Germany)

	Pooled Regression (rse)		Random effect	
Indep. variables	(1)	(2)	(1)	(2)
Education				
Low-secondary (ref)	-	-	-	-
Upper secondary	0.02***	0.02***	0.01***	0.00
	(0.02 - 0.03)	(0.01 - 0.03)	(0.00 - 0.01)	(-0.00 - 0.01)
Tertiary	0.05***	0.06***	0.01***	0.01**
	(0.05 - 0.06)	(0.04 - 0.07)	(0.01 - 0.02)	(0.00 - 0.01)
Occ. Class Parent				
Low-skilled (ref)		-		-
Semi-skilled		0.02***		0.03***
		(0.01 - 0.04)		(0.02 - 0.04)
Skilled		0.01		0.01**

		(-0.01 - 0.02)		(0.00 - 0.02)
White collars		0.04***		0.05***
		(0.02 - 0.06)		(0.04 - 0.07)
Gender				
Women		0.01		0.00
		(-0.01 - 0.02)		(-0.00 - 0.01)
Civil status				
Non-married (ref)				
Married		-0.06***		-0.01***
		(-0.06 - -0.04)		(-0.01 - -0.00)
Separated/widowed		-0.02***		-0.01***
		(-0.04 - -0.01)		(-0.01 - -0.00)
Nkids		0.00		-0.00
		(-0.00 - 0.01)		(-0.00 - 0.00)
Birth macro-region				
North -West				
Berlin		0.03		0.02
		(-0.02 - 0.08)		(-0.02 - 0.06)
South		-0.04***		-0.03***
		(-0.05 - -0.02)		(-0.04 - -0.02)
North- East		0.01		0.02**
		(-0.00 - 0.03)		(0.00 - 0.03)
Year of birth		0.00***		0.00***
		(0.00 - 0.00)		(0.00 - 0.00)
Constant	0.06***	-5.23***	0.05***	-5.07***
	(0.06 - 0.07)	(-6.79 - -3.67)	(0.04 - 0.05)	(-6.10 - -4.03)
Observations	298,298	130,831	298,298	130,831
R-squared	0.00	0.03		
Number of pid			33,468	8,904

Robust ci in parentheses*** p<0.01, ** p<0.05, * p<0.1

Table 7: Probability Model for GM (UK)

	Pooled regression (rse)		Random-effects	
Indep. variables	(1)	(2)	(1)	(2)
Education				
Low-second (ref.)	-	-	-	-
Upper-secondary	0.06***	0.05***	0.06***	0.06***
	(0.05 - 0.07)	(0.03 - 0.06)	(0.05 - 0.08)	(0.05 - 0.07)
Tertiary	0.17***	0.14***	0.22***	0.20***
	(0.15 - 0.19)	(0.12 - 0.17)	(0.19 - 0.24)	(0.18 - 0.22)
Occup. Class Parent				
Farmers/agric (ref)		-		-
Low service		-0.02		-0.02
		(-0.06 - 0.01)		(-0.05 - 0.01)
Working/manual		-0.01		-0.01
		(-0.04 - 0.02)		(-0.03 - 0.02)
Small prop.		-0.01		-0.01
		(-0.05 - 0.02)		(-0.04 - 0.01)
White collars		0.02		-0.00
		(-0.02 - 0.05)		(-0.03 - 0.02)
Gender				
Women		-0.01		-0.01
		(-0.02 - 0.01)		(-0.01 - 0.00)
Civil status				
Non-married (ref)		-		-
Married/cohabit		0.03***		0.11***
		(0.02 - 0.05)		(0.09 - 0.12)
Separated/widowed		0.05***		0.13***
		(0.03 - 0.07)		(0.11 - 0.15)
Nchild		-0.01***		0.00
		(-0.01 - -0.00)		(-0.00 - 0.01)
First region				
London-SE (ref)				
North		-0.05***		-0.03***

		(-0.07 - -0.03)		(-0.05 - -0.02)
East		-0.06***		-0.04***
		(-0.08 - -0.04)		(-0.06 - -0.03)
West		-0.13***		-0.10***
		(-0.15 - -0.11)		(-0.11 - -0.08)
Wales		-0.13***		-0.10***
		(-0.15 - -0.11)		(-0.12 - -0.09)
Scotland		-0.06***		-0.03***
		(-0.08 - -0.03)		(-0.05 - -0.01)
Year of birth		0.00***		0.00***
		(0.00 - 0.01)		(0.00 - 0.00)
Constant	0.06***	-8.98***	0.02***	-6.89***
	(0.05 - 0.07)	(-10.19 - -7.77)	(0.02 - 0.03)	(-7.82 - -5.96)
Observations	101,522	101,467	101,522	101,467
R-squared	0.04	0.08		
Number of pid			11,492	11,489
(*** p<0.01, ** p<0.05, * p<0.1)				

Table 8: Probability Model for GM for Men and Women in Italy; RE

	Men		Women	
Indep. variables	(3)	(4)	(3)	(4)
Education				
Low-secondary (ref)	-	-	-	-
Upper secondary	-0.02*	0.03*	-0.03***	0.04**

	(-0.04 - 0.00)	(-0.00 - 0.07)	(-0.05 - -0.01)	(0.01 - 0.07)
Tertiary	0.05***	0.11***	-0.00	0.07**
	(0.02 - 0.08)	(0.04 - 0.17)	(-0.03 - 0.02)	(0.01 - 0.12)
Occ. Class Parent				
Low-skilled (ref)	-	-	-	-
Semi-skilled	-0.03	-0.00	0.00	0.03
	(-0.08 - 0.01)	(-0.08 - 0.07)	(-0.04 - 0.04)	(-0.03 - 0.09)
Skilled	-0.05*	0.01	-0.00	0.04
	(-0.09 - 0.00)	(-0.07 - 0.09)	(-0.05 - 0.04)	(-0.03 - 0.10)
White collars	-0.07**	-0.04	0.02	0.15*
	(-0.13 - -0.00)	(-0.19 - 0.11)	(-0.05 - 0.09)	(-0.00 - 0.30)
Civil status				
Non-married (ref)				
Married		-0.01*		-0.01**
		(-0.01 - 0.00)		(-0.03 - -0.00)
Separated/widowed		-0.01*		-0.00
		(-0.03 - 0.00)		(-0.09 - 0.08)
Nkids		0.01**		0.01***
		(0.00 - 0.02)		(0.00 - 0.02)
Birth macro-region				
North West				
North East		-0.01		-0.03*
		(-0.05 - 0.03)		(-0.07 - 0.01)
Centre		0.04		-0.01
		(-0.01 - 0.08)		(-0.05 - 0.03)
South		0.16***		0.08***
		(0.12 - 0.21)		(0.04 - 0.12)
Islands		0.17***		0.10***
		(0.11 - 0.23)		(0.04 - 0.15)
Cohort				
1945-54		-		-
1955-64		-0.01		-0.03*
1965-74		(-0.05 - 0.03)		(-0.07 - 0.00)
1975-80		-0.06***		-0.08***

		(-0.10 - -0.02)		(-0.11 - -0.04)
Constant	0.12***	0.06	0.09***	0.08**
	(0.08 - 0.17)	(-0.02 - 0.13)	(0.05 - 0.13)	(0.01 - 0.15)
Observations	891,712	78,343	971,344	99,417
Number of pid	3,020	1,635	3,234	2,042

Robust ci in parentheses*** p<0.01, ** p<0.05, * p<0.1

Table 9: Probability Model for GM for Men and Women in Germany; RE

	Men		Women	
Indep. variables	(3)	(4)	(3)	(4)
Education				
Low-secondary (ref)	-	-	-	-
Upper secondary	0.01***	0.01*	0.00	-0.01*
	(0.00 - 0.01)	(-0.00 - 0.02)	(-0.00 - 0.00)	(-0.01 - 0.00)
Tertiary	0.01***	0.01	0.01**	-0.01
	(0.00 - 0.01)	(-0.01 - 0.02)	(0.00 - 0.01)	(-0.01 - 0.00)
Occ. Class Parent				
Low-skilled (ref)	-	-	-	-
Semi-skilled	0.02***	0.02	0.03***	0.03***
	(0.02 - 0.03)	(-0.00 - 0.04)	(0.02 - 0.03)	(0.01 - 0.05)
Skilled	0.01***	-0.00	0.01***	0.00
	(0.01 - 0.02)	(-0.02 - 0.02)	(0.01 - 0.02)	(-0.02 - 0.02)
White collars	0.04***	0.04***	0.04***	0.05***
	(0.03 - 0.05)	(0.01 - 0.06)	(0.04 - 0.05)	(0.02 - 0.07)
Civil status				
Non-married (ref)				

Married		-0.01***		-0.00
		(-0.02 - -0.00)		(-0.01 - 0.00)
Separated/widowed		-0.01		-0.01**
		(-0.02 - 0.00)		(-0.02 - -0.00)
Nkids		0.00**		0.00
		(0.00 - 0.00)		(-0.00 - 0.00)
Birth macro-region				
North -West				
Berlin		0.04		-0.01
		(-0.02 - 0.09)		(-0.06 - 0.04)
South		-0.02**		-0.03***
		(-0.04 - -0.00)		(-0.05 - -0.02)
North- East		0.01		0.01
		(-0.01 - 0.03)		(-0.01 - 0.02)
Cohort				
1945-54		-		-
1955-64		0.01		0.02**
1965-74		(-0.01 - 0.03)		(0.00 - 0.03)
1975-80		0.04***		0.05***
		(0.02 - 0.06)		(0.03 - 0.07)
Constant	0.03***	0.04***	0.04***	0.04***
	(0.02 - 0.04)	(0.02 - 0.06)	(0.03 - 0.04)	(0.02 - 0.06)
Observations	123,388	55,845	136,440	62,385
Number of pid	13,512	3,792	14,710	4,170

Robust ci in parentheses*** p<0.01, ** p<0.05, * p<0.1

Table 10: Probability Model for GM for Men and Women in UK; RE

	Men		Women	
Indep. variables	(3)	(4)	(3)	(4)
Education				
Low-secondary (ref)	-	-	-	-
Upper secondary	0.06***	0.06***	0.07***	0.07***
	(0.04 - 0.08)	(0.04 - 0.07)	(0.05 - 0.08)	(0.05 - 0.08)
Tertiary	0.21***	0.20***	0.21***	0.20***
	(0.18 - 0.25)	(0.17 - 0.23)	(0.18 - 0.24)	(0.17 - 0.23)
Occ. Class Parent				
Low-skilled (ref)	-	-	-	-
Semi-skilled	-0.01	-0.02	0.03***	0.01
	(-0.04 - 0.02)	(-0.06 - 0.01)	(0.01 - 0.06)	(-0.01 - 0.04)
Skilled	-0.01	-0.03	0.04**	0.00
	(-0.04 - 0.03)	(-0.07 - 0.01)	(0.01 - 0.07)	(-0.02 - 0.03)
White collars	0.00	-0.01	0.04***	0.01
	(-0.03 - 0.04)	(-0.05 - 0.02)	(0.01 - 0.07)	(-0.02 - 0.04)
Civil status				
Non-married (ref)				
Married		0.11***		0.09***
		(0.09 - 0.13)		(0.07 - 0.11)
Separated/widowed		0.14***		0.12***
		(0.11 - 0.16)		(0.09 - 0.14)
Nkids		0.00		0.00
		(-0.00 - 0.01)		(-0.00 - 0.01)
Birth macro-region				
London-SE		-		-
North		-0.02		-0.05***
		(-0.04 - 0.01)		(-0.08 - -0.02)
East		-0.03**		-0.05***
		(-0.05 - -0.00)		(-0.08 - -0.03)
West		-0.03**		-0.04***
		(-0.05 - -0.00)		(-0.07 - -0.02)

Wales		-0.09***		-0.10***
		(-0.11 - -0.07)		(-0.12 - -0.08)
Scotland		-0.09***		-0.11***
		(-0.11 - -0.06)		(-0.13 - -0.09)
Cohort				
1945-54		-		-
1955-64		0.03***		0.02***
1965-74		(0.02 - 0.05)		(0.01 - 0.04)
1975-80		0.10***		0.07***
		(0.08 - 0.11)		(0.06 - 0.09)
Constant	0.03*	-0.05**	-0.01	-0.04**
	(-0.00 - 0.06)	(-0.09 - -0.01)	(-0.03 - 0.01)	(-0.08 - -0.00)
Observations	47,351	47,096	54,661	54,371
Number of pid	5,619	5,561	5,995	5,928

Robust ci in parentheses*** p<0.01, ** p<0.05, * p<0.1

Chapter 3

Geographical mobility and social mobility

Introduction

The third chapter of my thesis is focused on the relation between geographical mobility and social mobility. Both migration studies and social stratification research are concerned with social and economic inequalities, their reproduction and impact on life chances and opportunities. As argued also in the previous chapter, the relation between migration and social mobility was central to classic stratification studies (Sorokin 1927, Lipset and Bendix 1959, Blau and Duncan 1968) but more recent studies have lost focus with regard to this relation. According to a main stream of migration literature, geographical mobility is an investment in human capital, whose returns should positively affect the occupational outcome of individuals that make the decision to move (Chiswick 1978, Borjas 1994 etc.). Another stream of migration studies argues that migration can be disruptive and the outcomes might not depend only on the human capital of the migrant, but also on the labour market institutions in the destination country, and its flexibility (Simon et al 2004, Ballarino and Panichella 2015, Fellini et al. 2018 etc.). For that reason, my research is focused on exploring how geographical mobility affects the chances of upward social mobility in three European countries with different labour market characteristics: UK, Italy and Germany. I use three longitudinal datasets for each country (BHPS, IHLS and GSOEP) and try to harmonize the variables used in the analysis in order to maintain a comparative approach and have comparable results. In the first part of the chapter, I try to define social mobility based on the concept of social class theorized by Goldthorpe. I continue with an overview of the literature and studies that explore the relation between migration and occupational outcomes. The third part of the chapter is focused on the literature on gender differences in the outcomes of migration. Traditionally, women have lower labor market participation rates compared to men and their earnings can fluctuate more during the life course. As a result, when migration decisions are made in the family, women are more

likely to be followers than leaders. For a tied-mover the returns to geographical mobility will be lower and she will experience less upward mobility compared to men.

The fourth part of the chapter focuses on the empirical analysis. I start by developing mobility tables to describe the mobility between social classes after migration. I proceed with fixed-effect and random-effect probability models to test the propensity to upward mobility of individuals who move. The last section of the empirical analysis is dedicated to gender differences and how changes in the life course such as getting married and having children affect the probability of entering the upper service class for migrants. A summary of the results is made in the conclusions clarifying the main findings.

3.1 Social mobility and social class

Since the end of the second World War, social mobility has become an important object of sociological research in Western countries. The definition of social mobility is based on the concept of social class, where classes can be defined as "*…aggregates of individuals or families, identifiable in the extent to which they occupy similar locations in the social division of labour over time"* (Goldthorpe1980: 28-29). The division of labour will be reflected in different outcomes in terms of earnings, power and social prestige. The inequalities in the distribution of wealth tend to reproduce within the society because classes are resistant to change. Those who occupy the superior classes, with more privileges and power, will use the available resources to preserve their position. Social mobility refers to the vertical movement from one class to another and is different from changing jobs between firms or sectors within the same market or with the same work situation. Social stratification studies are mainly concerned with two types of mobility. The first is intra-generational social mobility, which refers to the changes in the social status during one's life course. The second is inter-generational mobility which refers to changes in the social status from one generation to the other, usually comparing the status achieved at a point in life to that of the parents'. Lipset and Zetterberg's (1959) theory sustains that the patterns of social mobility are very similar in most of the industrial societies of the western countries. Social mobility tends to

increase especially in the first stages of economic growth or when it reaches a certain (minimum) threshold. The advent of industrialization has intensified geographical mobility of workers, which along with a progressive expansion of education, enables individuals to move upward or downward over the hierarchy of social stratification.

One of the most popular class schemes is the one formalized by Erickson, Goldthorpe and Portocarero in 1979 in a comparative study for England, Sweden and France. They have grouped occupations which share similar market and work situation. Market situation of a certain occupation is related to the source and level of income, which is connected to the conditions of employment, economic security and job stability and also with the possibility to have career advancement. Work situation concerns occupations' location within systems of authority and control governing the production's processes in which they are engaged (Goldthorpe 1980: 40). The seven occupational classes identified by Goldthorpe and the other authors are summarized in table 4. These class categories can be further aggregated in larger groups, as I have done for my empirical analysis and will explain in the next section.

Table 4: EGP class categories

	Class typologies developed by Erikson, Goldthorpe and Portocarero
I	Higher-grade professionals, administrators, and officials; managers in large industrial establishments; large proprietors
II	Lower-grade professionals, administrators, and officials, higher-grade technicians; managers in small industrial establishments; supervisors of non-manual employees
IIIa	Routine non-manual employees, higher grade (administration and commerce)
IIIb	Routine non-manual employees, lower grade (sales and services)
IVa	Small proprietors, artisans, etc., with employees
IVb	Small proprietors, artisans, etc., without employees
IVc	Farmers and smallholders; other self-employed workers in primary production
V	Lower-grade technicians; supervisors of manual workers
VI	Skilled manual workers
VIIa	Semi-skilled and unskilled manual workers (not in agriculture, etc.)
VIIb	Agricultural and other workers in primary production

Source: Erikson et al. (1979)

The distinction between the different classes in not neat and unproblematic. The occupational structure can be different from one country to another reflecting the national economy. The Goldthorpe class scheme can be adapted and modified to better capture the country characteristics. This is the case of Pisati and Schizzerotto's work (2004) when studying the Italian mobility regime. Muller and Pollack (2004) point out the necessity to make changes in order to fit the German data when analyzing social mobility in West Germany. A consistent and similar class scheme is important in order to maintain a comparative perspective for cross-country analysis.

3.2 Geographical mobility and social mobility

An individual's social class can be determined either by ascribed or achieved factors. Parents' social class and/or their level of education, gender etc. are ascribed characteristics that will affect the occupational status of an individual later in life. Another important ascribed factor is place of birth. It is straightforward to imagine that the chances for career opportunities and occupation status can be different from one country to another even if we account for human capital stock. For instance, the occupational structure in an industrialized country is different from that of an agrarian one. Furthermore, the returns to education might vary across countries depending on the political-economic system and the institutional arrangements that regulate the labor market. For instance, in liberal market economies, a higher flexibility is expected from the workers in terms productivity but also in terms of being hired and fired. In this context, individuals will be more prone to invest in more general skills and education which facilitates changing occupations. In countries where industrial relations are built on the cooperation between the stake holders, the highly unionized employment relations give workers higher job security. In this context individuals will be more likely to invest in vocational training and firm-specific skills. The flexibility in labor market is lower and so is occupational mobility (Thelen, 2001).

Important territorial inequalities in terms of occupational achievements exists also within countries. An individual's chances to improve his or her labour market position will depend on whether they live in a big or small town, rural area or industrialized centers, peripherical or metropolitan areas. The differences between geographical origin and other ascribed factors is that geographical mobility is not completely immutable, since people can move in search of better work and life opportunities.

As explained also in the previous chapters, migration represents a regulatory mechanism through which the division of labor and occupational opportunities are redistributed in the society (Blau and Duncan, 1957). According to these authors, the need for redistribution of labor stems from geographical differences in economic development and fertility rates. It is clear that migration as an adjustive mechanism has its limitations, the movement of people is not always a fluid process with no barriers.

Furthermore, the disparities between geographic areas still persist even after massive migration flows take place. Blau and Duncan (1967) find evidence in their study that men who live outside their region of birth have achieved a higher occupational status compared to those who have not moved, despite their ethnicity or the region of origin. Leaving parental home can free the individual from social and economic restrictions in the native community, but in the same time they lose parental support and network. The authors test whether migrants experience also more downward mobility compared to non-movers and the finding show that this is not the case. Internal mobility has a positive effect on intra-generational social mobility even when race and ethnicity are controlled for.

According to a consolidated stream of international migration literature, the occupational mobility of immigrants has a U shape; they first experience a downgrade when arriving in the destination country or region and then they catch-up. After adapting to the local labor market, learning the language or some vocational training, the occupational position of the migrants substantially improves over time. This is called the *assimilation* theory. Chiswick (1978) compares the earnings of foreign-born and native-born American men using a human capital earnings function. Based on the 1970 US census, Chiswick analysis shows that foreign-born immigrants have lower earnings (around 20% less) than the natives when first entering the country and the local labour market. However, immigrants show a faster increasing wage rate and they surpass the native wage after 11 years from the migration event. Thirty years after migration their earnings are significantly higher compared the same type of native worker. This can be explained by two factors, the first one is the already discussed selection process that takes place for immigrant workers. The second factor that explains the higher wage of foreign-born workers according to Chiswick model is that their human capital stock grows faster compared to natives once they have overcome the initial cultural and/or linguistic barriers. Other authors (Borjas 1994) point out that Chiswick analysis is based on the 1970 cross-sectional data making the assumption that migrants entering the US have the same characteristics and the same market experience over time. The wage of immigrants arrived twenty years before cannot be an accurate prediction of future wages of the newly arrived. The cohort effect can affect the average level of migrants' wage over time. These cohort effects can derive for instance, from

immigration policies adopted in the hosting countries which may favour a certain category of migrants and hinder others. Furthermore, different macro-economic and political conditions in both sending and hosting countries can affect migration flows over time. Borjas also points out the effect of returning migration on earnings comparability after a long period of time. If less productive workers return back to their country because are not earning enough, only the immigrants with very high productivity will remain and be compared with natives.

More recent data considered by Borjas (1994), suggest an important cohort effect in the migrants' population and that the wage of more recent migrants is lower compared to earlier cohorts. Since the wage is a measure of relative skills, it can be argued that more recent foreign-born workers are less skilled than the nationals. Furthermore, migrants' wage does increase at a lower rate over time, so it is unlikely their earnings will overtake the natives'. The U shape migrants' occupational mobility hypothesis is corroborated mainly by studies focused on the Anglo-Saxon countries, such as US and Australia (McAllister 1995, Chiswick et al.2005).

Another stream of international migration literature is that of the *segmented assimilation theory*, according to which the downward mobility and the disadvantages experienced by migrants when entering the destination country do not improve overtime or improve less compared to natives. Migrants can be trapped in the secondary labor market where there are less opportunities for upward social mobility (Piore, 1979). Various studies concentrated in Europe show that the occupational outcome of migrants varies depending on the hosting country and on the country of origin. For instance, in European countries with a more recent migration tradition such as Spain or Italy, migrants experience a downgrade in the occupational status compared to that before migration. In Spain migrants face a considerable worsening of their socio-economic status when they enter the country and the recovery is very slow (Simon et al., 2014). In Italy there is an important difference in terms of occupational downgrading between those migrants who come from a developed country and those who come from other less developed geographical areas. Migrants from high developed country experience an improvement in their occupational status right after migration. Those coming from less developed countries experience a downgrade and remain trapped in worse-off occupations compared to their country of origin. For women the downgrade is steeper

compared to men, because they are mainly relegated to low-paid jobs such as care-taking or cleaning services (Fellini et al. 2018).

Other studies show that in European countries with more rigid labour market regulations, such as France, Germany and Sweden, migrants are penalized in terms of unemployment. The high firing costs act as disincentive for employers to hire them. In more flexible labour markets such as UK, Italy and Spain, migrants are hired more easily. In Italy and Spain there is a quite extensive informal market, where migrants can get hired and fired very easily and so the unemployment rates are low (Ballarino and Panichella 2015). On the long-term however, the migrant penalties decrease substantially in the case of Sweden and UK, but persist in continental Europe countries (Ibid.).

At a country level, there are important disparities of geographical regions in terms of economic growth and well-being. In a globalized world and with the growth of the knowledge economy, the areas that thrive and experience a rapid and sustained growth are those who most attract human capital. University graduates and young talented workers will move from one place to another in search for career opportunities. One of these areas was identified by Fielding (1992) in the South-East and London region. Studying inter-regional migration and social mobility in the South-East of England and London in 1971-1981, Fielding defined it as the "Escalator region". His findings suggest that geographical mobility and social mobility are positively correlated: those who have changed their social class position are more likely to have changed geographical location. A male in the white-collar class who owns a house has a 55% more chances to enter the upper service class once migrated to the South-Est. The association is valid for women too, although smaller in value. Inter-regional migrants have an overall higher probability to enter the service class compared to non-migrants, regardless the occupational class they start from. Another important characteristic of the Escalator region is that, after reaching a higher-class status, many managers and professional leave the region in their mid-career path or towards retirement. So, there is an outflow towards other regions of England and Wales where they may choose to open their own smaller business and other activities or retiring in a sub-urban area.

Further studies with data from the 1981-1991 censuses confirmed the trends in the association between social mobility and migration in the region, confirming the escalator conditions of the South East and London area (Fielding 1993, Fielding and Halford 1999). It is worth to point out that the South-East region attracts mainly the service class professionals who work in the financial sector, information technology etc., and the high rents and very high real estate prices make it difficult for middle-class families to move there. Inter-regional migration concerning other than service class happens also in other regions within Britain where the industrial or agricultural sectors predominate.

Findlay et al (2009) find that the majority of individuals born in Scotland who move to the South East and London do so right after finishing education and training. Others move mid-career improving their occupational status after the move. Overall, the Scottish migrants do better in upward social mobility compared to the native-born in the South East region.

Champion (2012) focuses on the so called "stepping of" the escalator i.e., individuals who leave the South East and London after having benefited from the occupational opportunities offered in region. His findings partially contradict those of Fielding's, in that two third of the out-migrants are 35 or less, and not near retirement or at the end of their careers. Most of them go back to their origin region where they deploy the experience and skills gained in London and the South East. The drain of human capital of the other regions of Britain is not irreversible and they actually benefit from in and out migration in the South East.

Van Ham et al. (2012) use the Scottish Longitudinal Study to examine the effect of migration on occupational mobility and if cities in Scotland can provide a favorable environment for social mobility. They find that individuals who move over long distances within Scotland are more likely to experience upward social mobility compared to those who move over short-distance or non-movers. Important regional differences exist within Scotland in terms of economic development and labour market opportunities. The workers who invest in long distance migration, however, can benefit from these disparities. Edinburgh and to some extant Glasgow can be considered escalator cities, since individuals who move there are more likely to experience upward

occupational mobility compared to other cities or regions. The authors define the positive effect of migration on occupational mobility similar to that of having a higher degree in education.

In the case of Italy, the literature shows mixed results. Southern immigrant workers in Northen Italy do not appear to have an advantage compared to natives in terms of social mobility. The probability of entering the service class or even the petty bourgeoisie are not higher compared to natives even when education and social class of origin is controlled for. Southern internal immigrants are more likely to enter the working class in the destination region (Panichella 2014, 2018). Furthermore, southern migrants appear to be less mobile in their career path after migration compared to natives (Ibid.). The author explains this disadvantage as a consequence of southern workers entering migration network composed by strong ties. These strong networks can be beneficial at the beginning because they provide the migrant with resources useful to enter the labour market but in the long run might limit the career opportunities and prevent occupational mobility. Dense network dynamics can concentrate migrants in specific job categories because priority is given to family members, friends from the country of origin, cousins etc. limiting the opportunities to search for jobs outside the network (Massey et al. 1987). Another explanation can be found in the lack of vocational training of migrants. Employees might choose not to invest in training of southern workers because their engagement in the factory or firm is perceived as temporary (Panichella 2018).

Other studies show that geographical mobility has a positive effect on social mobility in the case of temporary internal migrants. Individuals who work in the North for a certain period of time are more likely to experience an upward social mobility after returning back in the South (Impicciatore and Panichella, 2019). Here we can find some similarities between the South East region in England and Lombardy in Italy which might point out an escalator effect also in the Italian region. This positive effect however is smaller, and limited to the probability of avoiding working class and agriculture. Another category of internal migrants in Italy who benefit from geographical mobility are those who move early, to go to university and do not have an own family before moving (Ibid.). With regard to educational achievement of children of migrants in Italy, studies confirm that there is not a penalty for students attending the upper secondary education. There can however be an indirect effect of geographical

mobility of children born in the South whose families move in the North. This negative effect is due to the disruptive effect of the relocation: children can face difficulties when changing schools or because their parents are more concerned with their new job and adapting to a new life right after the move (Ballarino and Panichella, 2015).

The positive effect of geographical mobility on career advancement is confirmed by longitudinal studies in the Netherlands, especially for men (Van Ham 2001, Mulder and Van Ham 2005). Men with a partner who accept a long-distance job have the highest probability of career advancement. That is also true for single women but not for those with a partner (Ibid.). Individuals who live in large cities, where greater job opportunities are provided, are less mobile compared to those who leave in smaller areas. This confirms the attraction characteristic of developed metropolitan areas for workers looking for better occupational opportunities. Men who live outside large cities and haven't experience migration in the Netherlands have a lower socio-economic status compared to movers or non-movers that live in a large city (Mulder and Van Ham 2005).

The destination of migrants plays an important role in the achievement of a higher occupational status. Wagner (1989) had previously arrived in similar conclusions when analyzing regional differences and social mobility in West Germany. It makes a difference for an individual's occupational opportunities whether he or she lives in a big city or region or in a mining area. The differences between core cities and rural areas with respect to upward social mobility become evident with the cohorts born after 1939, whereas for the previous cohorts the rural labour market and urban labour market have similar dynamics (Wagner, 1989). Migration becomes a determinant of social mobility when economic disparities between geographical areas increase.

Another German study using sequence analysis shows mixed results about the association of internal mobility and social mobility (Viry et al, 2014). The authors' results show that once the social class or origin and education are accounted for, the effect of geographical mobility on career achievement is not strong. An interesting result is that highly educated individuals who experienced a migration event early in their careers, achieve a higher occupational standard compared to non-movers. Non-mobility is negatively correlated with holding a managerial position. Highly educated

people who have never experienced geographical mobility are less likely to have managerial position compared to less-educated movers. Individuals who experience many mobility episodes during their life-course, however, have more job insecurity and lower occupational status compared to non-movers. This is more evident for older cohorts in the sample. In the case of Germany, it appears that individuals in stable partnerships and with children prefer long distance commuting to permanent change of residence (Viry et al, 2014). This confirms results of previous studies in Germany, which show that younger workers, with less than ten-year work experience, benefit more from regional mobility than older workers, in terms of earnings and career advancement. With regard to regional differences, the improvements of earnings are bigger for those who move to highly urbanized districts in regions with large agglomerations (Lehmer and Ludsteck, 2011).

3.3 Gender differences in migration and occupational mobility

Spatial mobility represents an opportunity for workers to broaden their occupational possibilities and maximize the return of their human capital. Being in a relationship with a working partner, with a traditional division of household responsibilities and childcaring can hinder the freedom of women to move in search for better job opportunities. This can translate into a less optimal occupational outcome for women in terms of career achievement (Van Ham, 2001). The human capital model of family migration, as theorized by Mincer (1978) and Sandel (1977), considers the utility of migration for the family as a unit and not for each individual. The person with higher actual or potential earnings in the couple will be the one with more decision power, traditionally represented by men. Based on this assumption, according to the human capital model of family migration women are more likely to become tied-mover compared to men (Cooke, 2003). Women in stable partnerships are more likely to move following the partner's career advancement instead of their own. The beneficial effect of geographical mobility will be smaller or negative for women compared to men (Mincer 1978, Bielby and Bielby 1992). This theory has been corroborated by different studies in different countries. Women are less likely to accept a long-distance job than men according to a study in the Netherlands (Van Ham, 2001). However the marital

status has an important effect in occupational outcome, as shown in the same study single women's career benefit from spatial mobility, but not for women in a partnership. These results are in line with the tied-mover hypothesis.

Married women's participation to the labour market is negatively affected by long-distance migration (Smits, 1999). This negative effect of migration on women's occupation is stronger if they are married with a high educated man, suggesting that the decision to move is often made considering the husband's returns to human capital. An interesting finding of Smit's work is that for married women which are younger and highly educated the negative effect of migration on occupation weakens (Smits, 1999). Women who have invested in their education and are at the early stages of their career are less willing to sacrifice their occupation in order to follow their husbands. Mincer also predicted in his model that dual-earner couples are less likely to move compared to more traditional one-bread-winner families (Mincer, 1978).

A 1978 survey of PhDs couples show that, although highly educated individuals define their partnership as egalitarian, when the final decision to move for job searching are made, men will put themselves in a "leading" position, whereas most of women express that they are willing to follow their husbands (Wallston et al., 1978). Cooke (2003) studies the return to migration for husbands and wives based on the human capital model of family migration in the US. The author concludes that migration has definitely a positive effect on husband's earning and there is not such effect on wife's earnings (Cooke, 2003). Wallston and Cooke findings evidence that even in dual earner couples, when migration decisions are made there are gender-role dynamics which cannot be completely explained by human capital mechanisms. With regard to migration decisions, women tend to be more followers than leaders even when they have the same level of education and qualifications of their husbands. A further study in the Netherlands show that while migration is positively correlated with a higher occupational status for men, for women the positive effect appears after at least three migration episodes (Mulder and Van Ham 2005). This effect can also be due to the fact that women who move often are more independent and career driven, or even because tied-movers can benefit from the work experience accumulated from changing jobs. Wagner's study (1989) shows that only men's social mobility is affected positively by migration in Germany. Women experience a downward mobility after moving. These

results might however reflect the cohort effect of very low women's participation in the labour market, since the sample includes German native-born individuals in the cohorts 1929-31, 1939-41 and 1949-51. It is safe to assume a strong tied-mover effect for women in this case. The probability of being a trailing partner for women increases when they become mothers. Childcaring is an additional but important factor which reinforces the traditional gender roles in the family, where women are more likely to sacrifice participation in the labour market and follow their husbands (Cook, 2001).

Ballarino and Panichella (2017) look into the occupational integration of international migrant women in Western European countries. The results show that although the migration penalty with regard to occupational integration for women persists, there are important differences from one country to another. These cross-country differences are mainly due to the national labour market structure. In countries where the labour market is more segmented such as in Italy and Spain or more fluid like in the case of UK, the migration penalty in terms of unemployment for women is lower, compared to other countries with stricter labour market regulations such as Germany, France or the Netherlands. In the latter countries the barriers to enter the labour market are higher. When the occupational status is considered, the situation is inverted. The probability to avoid unskilled jobs is higher in Germany and France and lower in Italy and Spain. The UK makes an exception among the western European countries, because the penalty for migrant women is very low for both employment possibilities and the probability to escape the unskilled manual jobs (Ibid.). Although Ballarino and Panichella (2017) research focus on international migrants, it points out how institutional differences in the labour market might affect occupational mobility for women.

Other researches have pointed out that returns to migration for women can be similar to men, especially when younger cohorts are considered. Women experience upward social mobility similar to men in the escalator region in the UK. And for the period 1981-1991, after migration women were promoted to managerial positions more often than men in the South East (Fielding and Halford, 1993). These findings go against the theories explained above, according to which women are less mobile and mainly tied-migrant, who follow their partner and do not move for own career opportunities.

Bruegel (1999) investigates gender differences in inter-regional migration in the South East and London in order to understand better whether the tied migration theory is outdated. She finds out that during the period considered (1981-91) female migration is dominated by single women without children and so the negative effects of tied migration are not stringent in most cases. Furthermore, another characteristic of the interregional migration in the South East is the increase of dual earners families where both partners can benefit from a dynamic labour market in the region. In the same study however, it is pointed out that for the women who move to follow their partner's career are more likely to experience a downward mobility (Bruegel 1999).

3.4 Empirical strategy and research hypothesis

The first step of the empirical analysis consists in understanding the relation between migration and social mobility. Does the occupational status of migrants change after geographical mobility? Individuals move from their geographical area of origin into a destination region where the labour market provides more opportunities and chances for a better job. The increased opportunities provided in the destination area will positively affect the occupational position of the individual in the labour market. Comparing the social class of individuals before and after migration will inform us on how the occupational structure is affected by geographical mobility. Based on the literature cited in the section above, differences in terms of occupational mobility are expected between the countries. The first research hypothesis can be defined as follows:

1) Geographical mobility has a positive effect on social class of destination of migrants. Upward social mobility is expected to be observed after migration.

    a. Occupational class mobility after migration will be higher in the UK, compared to Italy and Germany

Country difference expected in the hypothesis 2a, are also corroborated by the results of the second chapter, which showed a higher selectivity in terms of education for the UK compared to the other two countries. In turn we expect that these individuals also experience higher occupational class mobility. As described above, geographical

mobility is an investment in human capital and its returns should reflect changes in the occupational outcome and earnings. Highly educated people are those who benefit the most from geographical mobility because it allows to access new job opportunities and career advancement. In the second step of the analysis, I focus on the social mobility from a life course perspective and the question I try to answer is whether migration increases the chances to upward mobility. Considering entering the upper-service class as an upward mobility because of the privileges enjoyed in the labour market, in terms of earning, job security and benefits. The second research hypothesis can be defined:

2) Migration positively affects the probability of entering the service class.

    a. The effect of geographical mobility will be weaker for Italy and Germany compared to the UK
    b. The region of destintion can have a positive or negative effect on the probability of entering the service class after migration. We expect the effect to be positive for areas such as the North-West in Italy, S-E and London in the UK, Berlin in Germany

The third step of the empirical research consist in exploring the differences between men and women in the outcomes of geographical mobility. As mentioned above, previous research agrees that women are penalized or do not benefit as much as men from migration, because they are more likely to follow their partners and become tied movers. There is however evidence from different studies showing that there are heterogeneities with respect to marital and parental status, age, or type of labour market. Two additional research hypotheses can be analyzed in this phase:

3) The propensity to enter the service class after geographical mobility is lower for women compared to men
    a. Marriage and becoming a parent have a negative effect on the probability of entering the service class after migration for women compared to men with differences within countries.

In the next section the data, variables and the methodology used to answer the research questions will be explained.

3.5 Data, variables and methods

3.5.1 Data

The data for the empirical models will be drawn from the three longitudinal datasets, also used in the previous chapter, the Italian Household Longitudinal Survey (IHLS), the British Household Panel Survey (BHPS) and the German Socio-Economic Panel (SOEP). In the three longitudinal surveys are registered and tracked information on demographics, employment, education, parents' social class and education, residence and so on and so forth. The sample has been restricted to men and women born between 1945 and 1980. The choice in restricting the sample to the cohorts born after the second world war has been made in order to avoid the disruptive effects of the wars on migration decision-making dynamics. Individuals born after 1980 are very likely to be still in education and not to have experienced geographical mobility because they are very young when the survey was taking place, for that reason have been left out the empirical sample.

The BHPS has been conducted for 18 waves, from 1991-2009, and the sample considered in the models is about 23000 individuals. The IHLS is a retrospective longitudinal survey conducted between 1997 and 2005 and the number of individuals considered in models' sample is about 11000. The GSOEP provides 33 waves from 1984 until 2016 with a sample about 36000. In terms of age composition, the British and German surveyed population is younger (mean age respectively 38 and 41 years) compared to the Italian one (mean age is 51). The detailed summary of age variable is shown in table 1 in the appendix B.

3.5.2 Variables

The first variable considered is social class, which has been defined based on the EGP scheme described above. In the three datasets information on occupation is provided with different classification schemes. I have chosen the EGP classification because it

provides a more homogenous hierarchical classification allowing country comparisons. The seven categories used in the EGP has been further aggregated into four larger group class. The categorization has been made following the model of other studies analyzing occupational achievements (Impicciatore and Panichella, 2019). The aggregation in larger classes is helpful because the small number of cases in some occupational classes as defined in the original would not provide a useful information in the model. Another advantage of aggregating the classes is that the representation of results is easier and clearer with a less detailed occupational scheme. In table 5 it is shown the how the EGP social classes have been grouped and recoded.

Table 5: Grouped occupational classes

Aggregation of EGP social classes			
Service class	**Middle class**	**Working class (Skilled)**	**Agriculture and low-skilled**
Higher grade professionals	(II) Lower-grade professionals	(IVb) Small proprietors without employees	(IVc) Farmers and smallholders
	(IIIa) Routine non-manual employees, higher grade	(VI) Skilled manual workers	(VIIa) Semi-skilled and unskilled manual workers
	(IVa)Small proprietors with employees	(V) Technicians, supervisors	(VIIb) Agricultural and primary production workers
		(IIIb) routine non-manual employees (sales and service)	

The dependent variable in the regression model is defined as the probability of entering the service class. It is a binary variable which takes value 1 if the individual belongs to the service class and 0 if they belong to the other three social classes.

The independent variable is geographical mobility (GM). It is a binary variable which has value 0 if the individual does not change region of residence during the surveyed period and value 1 when he or she moves to another region. As explained in the previous chapter, the definition of region refers to a subnational entity defined in each country according to its own administrative and geographical characteristics. There are 20 regions in Italy, 18 in the UK and 16 in Germany as reported in the appendix B (table 3).

A first control variable is the level of education which has been recoded in a categorial variable with three categories based on the ISCED variable: low-secondary (ISCED 1-2), upper-secondary (ISCED 3-4) and tertiary level of education (ISCED 5-7), see table 2 in appendix B.

The control variable macro area of residence has been constructed aggregating the region of residence into geoeconomics macro aeras as shown in table 4 in the appendix B.

Some of the controls entering the models are ascribed characteristics variables, such as birth cohort, gender, parental social class. Other control variables describe the status of an individual which can change during life-course such as marital status and parental status.

3.5.3 Methods

In the first part I look at the transition of social classes after the migration event takes place. I build mobility tables for each country, where each cell shows the probability to transition to another social class five years after regional mobility. It can be formalized with the following equation where SC represents the EGP social class.

1) $$p_{ij} = Pr(SC_t = j | SC_{t-1} = i)$$

In the second part of the analysis, the models estimate the probability of entering the service class and can be formalized as follows:

M1: $$Y_{i,t} = \beta_1 GM_{it} + \varepsilon$$

M2: $$Y_{i,t} = \beta_1 GM_{it} + \beta_2 educ\_lev_i + Z_{it} + \varepsilon$$

In the models 1 and 2, the dependent variable Y is time varying an represents the probability of entering the service class. The independent variable (GM) is also time varying and takes value 0 when regional migration is absent and 1 when there is a change in the region of residence. Z is a general parameter which includes variables such as gender, age, parental social class, marital status, presence of children, region of residence etc. and the error term. For better exploiting the information of the longitudinal data I estimate both fixed-effect (FE) and random-effect (RE) probability models. The FE models estimate the *within* individual variance and only time-varying variables are included in the estimation, all the constant-time variables will be dropped and do not appear in the results. RE estimates the *between* and part of the *within* group variance too. As can be noticed in M2, the level of education in this case will be considered as a time-constant variable (highest level of education achieved).

In the third part of the analysis the probability of entering the service class will be estimated separately for men and women in order to assess the gender difference in the effect of GM on social mobility. Theoretically, M3 and M4 are the same as M1 and M2, but will be tested on a sample divided by sex. Both models will be tested with RE and FE method.

M3: $Y_{i,t} = \beta_1 GM_{it} + \varepsilon$

M4: $Y_{i,t} = \beta_1 GM_{it} + \beta_2 educ\_lev_i + Z_{it} + \varepsilon$

The division of the sample by gender my create loss of information and the parameters' estimation can be smaller. Another way to test the gender differences is to keep the sample together and introduce an interaction term between gender and the dependent variable in the model as shown in model 5

M5: $Y_{i,t} = \beta_1 GM_{it} + \beta_2 educ\_lev_i + \beta_3 (gndr * GM) + \varepsilon$

In the next section the results of the estimation will be discussed.

3.6 Empirical results

3.6.1 Overall occupational mobility for migrants

For the first part of the analysis mobility tables for each country are represented below. In the mobility tables it is shown the probability to transition from one social class to another five years after the individual has experienced inter-regional geographical mobility. In tables 6 to 8 only the percentage of the transition probabilities are shown for simplicity of reading. In tables 5 to 7 in the appendix can be found both the frequencies and the row percentages. It is important to keep in mind that these mobility tables are a descriptive tool and no causal inference can be drawn from them. However, through the transition probabilities we can have a grasp of the extent of social mobility of the subpopulation of internal migrants. The table 6 represents social class mobility after GM for the UK. The UK shows the highest rate of class mobility of the three countries for the migrant population. The percentages in the diagonal of the table reflect the stability of each occupational class, i.e. the percentages of individuals who do not change occupational class at least 5 years after migration. The values in rows and columns show the contribution that each class gives to the others. For the UK there is in general a tendence for upward mobility for individuals who migrate, for instance 18.1 percent of those in low-skilled or agricultural occupation end up in the working class and 35 percent of those in the working class are classified as middle class 5 years after GM. Interesting to notice that 24 percent of the service class experience a downward social mobility to the middle class in the migrants' population.

Table 6

Occupational class before and after GM for UK (percentages)

occ_class	**Low-skilled/Agr**	**Working class**	**Middle class**	**Service class**	**Total**
Low-skilled/Agr	**40.6**	18.1	29.5	11.8	100.0
Working class	10.0	**40.6**	35.0	14.4	100.0
Middle class	2.3	5.9	**64.8**	26.9	100.0
Service class	0.7	3.5	24.0	**71.7**	100.0
Total	6.9	11.8	45.4	35.9	**100.0**

According to the mobility tables built with my data (tab 7), Italy has the lowest probability for social mobility after migration. This result suggests that overall internal migration does not represent a major factor for social mobility in Italy. Here it can be mentioned that 11.3 percent of the low-skilled and agriculture workers upgrade to the middle class.

Table 7

Occupational class before and five years after GM for Italy (freq. and row percentages

Occ. class	**Low-skilled/Agr**	**Working class**	**Middle class**	**Service class**	**Total**
Low-skilled/Agr	**84.5**	3.7	11.3	0.5	100.0
Working class	0.2	**89.8**	9.6	0.5	100.0
Middle class	0.2	4.4	**92.7**	2.7	100.0
Service class	0.00	1.7	9.5	**88.8**	100.0
Total	1.3	42.6	47.7	8.5	100.0

The results of the mobility table (tab 8), show an intermediate position of Germany compared to the UK and Italy. The class that benefits most after GM in terms of upward mobility is the low skilled and agriculture, 24.6 percent of which end up in the working class. An interesting result in the case of Germany is the transition from the service class to the working class (around 19 percent) for internal migrants. The direction of mobility is not very clear in the case of Germany, both upward and downward mobility happen after migration.

Table 8

Occupational class before and after GM for Germany (percentages)

occ_class	**Low-skill/agr**	**Working class**	**Middle class**	**Service class**	**Total**
Low-skill/agr	**68.2**	24.6	4.4	2.8	100.00
Working class	4.8	**79.7**	7.3	8.3	100.00
Middle class	2.2	24.4	**68.8**	4.6	100.00
Service class	1.33	18.95	3.28	**76.4**	100.00
Total	11.7	54.4	15.6	18.3	100.00

3.6.2 Estimation results for social mobility

For the second part of the analysis table 9 shows the result of the probability regression for random-effect and fixed-effect models, where only GM is considered as dependent variable. The fixed-effect model which estimates the within-individual variance over time tells us at what extent the inter-regional mobility affects the probability of entering the upper-service class. The results show that the probability to enter the service class is higher in the UK. The coefficient of the FE regression is higher than RE, so it can be argued that in the UK geographical mobility has a direct effect in upward social mobility. In the case of Germany the effect of GM is positive and significant for both

the models, meaning that apart from the selection effect, individuals who move do have higher chances for upward social mobility. In Italy the geographical mobility does not show a direct effect of the probability to upgrade to the service class.

Table 9

Probability to enter service class after GM

	UK		**Italy**		**Germany**	
	RE	FE	RE	FE	RE	FE
Variables	Service class	Service class	Service class	Service class	Service class	Service class
Mobility	0.06***	0.09***	-0.01***	-0.01***	0.03***	0.02***
	(0.06 - 0.07)	(0.08 - 0.10)	(-0.01 - 0.00)	(-0.01 - 0.00)	(0.02 - 0.03)	(0.01 - 0.03)
Constant	0.05***	0.16***	0.08***	0.07***	0.14***	0.13***
	(0.04 - 0.06)	(0.16 - 0.16)	(0.08 - 0.09)	(0.07 - 0.07)	(0.13 - 0.14)	(0.13 - 0.13)
ci in parentheses *** p<0.01, ** p<0.05, * p<0.1						

When control variables are added, the coefficients of GM for Italy become positive and significant, similar to Germany. For Germany and the UK other two cpefficients do not change much when the controls are added. Results can be seen in the table 8 in the appendix B. Education has an important effect in the probability to enter the service class in UK and Italy (0.34*** and 0.35*** respectively for tertiary education), whereas in the case of Germany is smaller (0.05***).

Now looking at the macro-region of residence as predicted, the effect of GM on upward mobility is stronger (positive and significant) for those residing in the South-East and London in England, in The North-West in Italy, and in Berlin in Germany.

Another factor affecting the occupational status is the social class of origin. Having a parent belonging in the service class has a positive effect for the individual to be in the

same class. In this case the effect is stronger in Germany compared to the other countries. The result for the cohort variable shows the youngest cohorts (1965-1974 and 1975-1980) have a smaller probability for upward mobility. The gender coefficient shows that being a woman has a smaller effect compared to men to enter the service class.

3.6.3 Gender differences estimations results

The third and last part of the analysis concerns the differences between men and women for the propensity to enter the service class after migration. The random-effect and fixed-effect models are estimated separately for men and women with all the control variables. The results of the regressions are represented in the tables 9 to 11 in the appendix B.

Let's start by looking at the results for UK which show that the propensity to enter the service class after migration is positive and statistically significant for both men and women. The effect however is stronger for men compared to women in the RE and FE model (with coefficients 0.09*** vs 0.07***). Getting married has a positive effect on the probability to enter the service class after migration for both men and women with similar and statistically significant coefficients. Being separated also has a stronger effect than being non married. Having children shows a statistically significant effect on social mobility for men and no effect in a life-course perspective for women. The RE model show similar the results to the FE. Having a tertiary degree in education increases the chances of upward mobility but the effect is stronger for men compared to women. The penalty for women with children persists even when the *between* variance is considered.

When the sample is divided for men and women the results for Italy are not very satisfactory. It appears that the FE and RE model do not capture well the effect of the GM variable. It does not show an effect for men but a small negative one for women (-0.1***). When control variable for the marital status and the number of children is considered, it appears that being married has a positive effect on the propensity to enter the service class after migration for both men and women. Being divorced has a strong

positive effect for men more than women. The result of having children for Italian women is not that strong and appears that having more than two children penalizes men more. The importance of being highly educated is also confirmed with a stronger effect for men compared to women (0.40*** vs 0.27***). Having a parent in the service class appears to be strong and significant for men but not for women's propensity to upward mobility.

In Germany, the effect of GM on the probability to enter the service class is positive and significant for men and women, stronger for men (0.04*** vs 0.1***). This result suggests that, those who benefit more from GM in terms of social mobility are men, and the tied-mover hypothesis holds for the case of Germany. The RE effect model confirms the positive effect of being highly educated in the propensity to enter the service class. This effect is stronger for men compared to women (0.11*** vs 0.05***). Also, the social class of origin has a significant positive effect on upward social mobility for both genders. The effect of marital status and the presence of children are almost irrelevant for men and women according to the estimation results. Again, younger cohorts do not have a higher propensity to enter the service class compared to older cohorts.

To test the robustness of the estimation with regard to the gender differences a model with gender as an interaction term with geographical mobility is estimated. For the three countries the interaction coefficient is negative and statistically significant. The results are shown in table 12 in the appendix B. We can say that being a women and experiencing migration will have a negative effect on upward occupational mobility compared to men.

3.7 Conclusions

With regard to the first hypothesis which theorized an *overall upward mobility for migrants (1)*, the result are heterogenous among the three countries. The mobility tables for the occupational class transition for migrants within the country show an overall staticity of social mobility in Italy where only a small proportion of the working-class upgrades to the middle class after GM. The UK appears to be the country with the highest rate of social mobility after migration. In the UK can be found both downward

and upward social mobility for those who migrate but the entity of upward mobility is greater. Germany has an intermediate situation in terms of overall mobility compared to the other two countries, for instance one fourth of the middle class experience downward mobility after migration but one third of the low-skilled and agricultural improve their position.

The second hypothesis *(2) migration positively affects the probability of entering the service class*. is confirmed for the three countries. The migration population on average benefits from geographical mobility in terms of occupational opportunities and improvement of occupational status. Also hypothesis (2.a) *the effect of geographical mobility will be weaker for Italy and Germany compared to the UK* is confirmed. Although positive, the effect is not the same between the three countries. This resonates with previous findings and studies which argue that labour market, welfare state and other political economy and social institutions can provide a context for individuals to achieve more easily or not social mobility.

Hypothesis (2b) is also confirmed. As it was expected, in the three countries predominate certain areas, where the opportunities for occupational mobility are higher compared to other regions. The South-east and London area in the UK, the North-West in Italy, and the Berlin metropolitan area in Germany show higher rates of upward social mobility. An additional future work could be done to test whether the two latter regions satisfy the Fielding's (1992) criteria to be defined as proper escalator regions.

Marriage and becoming a parent have a negative effect on the probability of entering the service class after migration for women compared to men with differences within countries.

The third hypothesis *(3) the propensity to enter the service class after geographical mobility is lower for women compared to men* is confirmed for the three countries. Women are penalized compared to men in the probability of upward occupational mobility. There are small country differences, the gap between men and women is smaller in the UK compared to Italy and Germany. Also, the last model confirms that there is a negative interaction effect of gender and migration in the probability of upward social mobility. It can be interpreted a negative effect of being a woman and a migrant on upward occupational mobility.

The estimation results show that the fourth hypothesis *(iv) marriage and becoming a parent has a negative effect on the probability of entering the service class after migration for women but not for men,* is not confirmed by our data. Being married shows a positive effect for men and women on upward mobility in Italy and UK. The effect of the presence of children is not captured very strongly in the estimated models, except for the case of Italy, where it appears that men with more than two children are penalized compared to women for upward mobility.

Final conclusions and remarks

Individuals, in various stages of their life move in search for better job opportunities, better living conditions, for educational purposes, family reasons, personal ambitions or preferences and many other reasons. Migration is an investment in human capital and individuals who undertake its cost expect higher returns in the future. However, these returns can be different, depending on the individual's characteristics, the labour market institutions, the type of economy and so on and so forth. The aim of my research is to understand the relation between geographical mobility and social mobility. Does migration affect the occupational outcome of movers? With my work I wish to bring some new contribution to the field of migration studies. The first one is that my work is a comparative analysis in internal migration. As I explained in the first chapter there are not many studies who take a comparative approach on internal migration for many issues, some of them I have faced myself in my work. First and for all, difficulties in defining internal migration and regional areas, sub-national territories, to make them comparable between well establish national entities. Part of this problem is tackled by the use of longitudinal data, which allow to compare trends over time of migration and not only stocks.

Another novelty in my work is that I try to adopt an integrated approach of internal and international migration literature to build my theoretical framework. In last decades migration studies has been mainly concentrated on international migration, however the internal migrants outnumber by far the international ones. Furthermore, the push and pull factors and the mechanism underlying the decision process of both types of migrants are very similar. The two phenomena are also intrinsically connected, because people often travel within countries before crossing borders and the other way around. International migrants have a higher propensity to move within the country of destination. Another point that I want to stress out in my work is the importance of studying migration from a stratification point of view. This relation has been very clear for classic stratification studies which consider migration a regulatory mechanism for supply and demand in the labour market, but overlooked in recent mainstream migration literature. Through migration individuals can escape the constrains of the social class of

origin and exploit new opportunities in other markets. I try to explore the relation of migration and social mobility with newer data in European countries.

I started my dissertation thesis with a literature review on geographical mobility and its importance for stratification studies. Although the object of my study is internal migration, I also draw from international migration literature, under the assumption that the drivers of migration, the decision-making involved and the returns in occupational outcomes are similar for internal and international migrants. I adopt a comparative approach considering three European countries with different labor market characteristics and different migration pattern history, Italy, UK and Germany. Each country provides a quite rich longitudinal datasets, which has enabled me to consider a life-course perspective. Furthermore, from a statistical point of view the panel datasets present some advantages compared to cross-sectional data. It is not possible to include in the analysis all the unobserved variables that might affect the dependent variable, but longitudinal data allow to control for part of this unobserved heterogeneity. The events considered are ordered in time and the results of the models with panel data can be interpreted as a stronger causal effect compared to cross-sectional data.

The second chapter of the analysis focuses on the selection process that takes place in migration events. The neoclassical theory of migration and most of recent theories which stem from it, argue that migrants are a selected group of the population. They have some observed and unobserved characteristics which make them more likely to have higher returns compared to stayers or the native population. Traditionally, the initiators of the migration experience are men, and women are more likely to move in order to follow their partner than to maximize their own human capital. This might lead to some gender difference in the selection process of migrants. So, the questions I try to answer here is whether better educated individuals are more likely to migrate compared to less educated and whether women are different compared to men for the propensity to migrate. The results show an overall positive selection of movers compared to stayers; they are better educated. In Italy it appears that women are less likely to migrate compared to men, when the level of education is controlled for. In Germany and in the UK, there is no substantive difference for men and women. This result might reflect the lower participation of women to the labour market in Italy compared to the other countries and a more traditional division of household responsibilities.

The third chapter explores the relation between geographical mobility and social mobility. As argued above, migration is a mechanism which enables individuals to search for career advancement and opportunities which wouldn't be available in the geographical area of origin. Studies show that individuals who move can improve their occupational position, independently from the social class of parents. The question that I try to answer here are whether geographical mobility has an overall effect on social mobility in the society and further if whether individuals who move are more likely to enter the high-service class. As describe above, the effect of migration on social mobility can be different for women. The results show the UK is the more mobile. Young highly educated people can improve their occupational status by moving to geographical areas with a dynamic labour market and plenty of opportunities in global firms. One of these regions is the South-East and London metropolitan area which for this reason has been defined as an escalator region. In Germany and Italy, the role of geographical mobility, net of other factors is smaller in relation with upward social mobility. The main factors that have a positive effect here are the level of education and the parental social class.

In terms of contribution to existing literature this thesis connects with social stratification studies (Lipset 1959 and Blau and Duncan 1967) as it points out the regulatory mechanism of migration in the presence of spatial inequalities within countries. My analysis evidenced that in three countries considered exists regional inequalities in promoting social mobility. Living in Berlin, Milan or London improve the chances of upward mobility for young individuals compared to other regional areas.

With respect to human capital migration theories my work confirms that although migration rates have been decreasing from the first two postwar decades, education is still a predictor in self-selection processes of internal migrants. Higher educated individuals are more willing to move for better life-opportunities even though with country differences as discussed above.

In the scope of gender migration studies this work is in line with existing literature (Cooke 2003, Van Ham 2001, Bielby and Bielby 1992), it confirms that gender difference between migrant men and women still persist. However it is important to

notice that there are country difference in terms on the entity of the gender penalty, it appears to be smaller in the UK compared to the other countries.

A future continuation of my research I believe would be improve the causal explanations of these phenomena. For instance, to study separately the individuals who migrate for educational reasons first and then find a job in the destination region and distinguish them from those who migrate being already in the labour market. Another interesting point would be to look more deeply at gender differences in the analysis above. Sequence analysis in order to define the timing of life events can give insightful information how these events are intertwined in family dynamics. A qualitative research study can be a useful means to better understand the decision-making process within the family and the division of household work in dual-earning couples.

Appendix B

Table 1: Age statistics and size sample					
	Size sample	Mean	St. dev	Min	Max
UK	23,000	37.8	11.4	16	64
Germany	36,000	41.17	11.8	16	71
Italy	11,000	51.1	17.3	17.4	101

Table 2: Level of education recoded		ISCED-Atteinment (ISCED-A)	
0	Low-secondary	1	Primary education
		2	Lower secondary education
1	Upper-secondary	3	Upper secondary education
		4	Post-secondary non-tertiary education
2	Tertiary	5	Short-cycle tertiary education
		6	Bachelor's or equivalent level
		7	Master's or equivalent level

Table 3: Regions as defined in ILFI, BHPS and GSOEP			
	Italy (Regioni)	*Uk (Regions and Metropolitan areas)*	*Germany (Länder)*
	Piemonte	Inner London	Schleswig-Holstein
	Valle d'Aosta	Outer London	Hamburg
	Lombardia	Rest of South East	Lower Saxony
	Liguria	South West	Bremen
	Trentino Alto Adige	East Anglia	North-Rhine-Westfalia
	Veneto	East Midlands	Hessen
	Friuli-Venezia Giulia	West Midlands Conurbation	Rheinland-Pfalz
	Emilia Romagna	Rest of West Midlands	Baden-Wuerttemberg
	Marche	Greater Manchester	Bavaria
	Toscana	Merseyside	Saarland
	Umbria	Rest of North West	Berlin
	Lazio	South Yorkshire	Brandenburg
	Campania	West Yorkshire	Mecklenburg-Vorpommern
	Abruzzo	Rest of Yorks & Humberside	Saxony

	Puglia	Tyne and Wear	Saxony-Anhalt
	Basilicata	Rest of North	Thuringia
	Calabria	Wales	
	Sicilia	Scotland	
	Sardegna		
	Molise		

Table 4: Aggregated macroregions recoded		
	Italy	Regions
0	North-West	Piemonte
		Valle d'Aosta
		Lombardia
		Liguria
1	North-East	Trentino Alto Adige
		Veneto
		Friuli-Venezia Giulia
		Emilia Romagna
2	Center	Marche
		Toscana
		Umbria
		Lazio
3	South	Campania
		Abruzzo
		Molise
		Puglia
		Basilicata
		Calabria
4	Islands	Sicilia
		Sardegna
	Germany	
0	North-West	Schleswig-Holstein
		Hamburg
		Lower Saxony
		Bremen
		North-Rhine-Westfalia
		Rheinland-Pfalz
		Saarland
1	South	Hessen
		Baden-Wuerttemberg
		Bavaria
2	Berlin	Berlin
3	North-East	Brandenburg
		Mecklenburg-Vorpommern
		Saxony
		Saxony-Anhalt
		Thuringia
	UK	
0	North England	North East

		North West
1	East England	Yorkshire & Humber
		East Midlands
		East of England
2	London - South East	London
		South East
3	West England	South West
		West Midlands
4	Wales	Wales
5	Scotland	Scotland

Table 5: Occupational class before and after GM for UK (frequencies and percentages)

occ_class	Low-skilled/Agr	Working class	Middle class	Service class	Total
Low-skilled/Agr	179	80	130	52	441
	40.59	18.14	29.48	11.79	100.00
Working class	67	271	234	96	668
	10.03	40.57	35.03	14.37	100.00
Middle class	48	121	1331	554	2054
	2.34	5.89	64.80	26.97	100.00
Service class	9	43	292	870	1214
	0.74	3.54	24.05	71.66	100.00
Total	303	515	1987	1572	4377
	6.92	11.77	45.40	35.92	100.00

Table 6: Occupational class before and after GM for Italy (frequencies and percentages)

Occ_class	Low skill/agr	Working class	Middle class	Service	Total

Low skill/agr	1068	47	143	6	1264
	84.49	3.72	11.31	0.47	100.00
Working class	67	35508	3812	166	39553
	0.17	89.77	9.64	0.42	100.00
Middle class	78	1798	39026	1169	42071
	0.19	4.27	92.76	2.78	100.00
Service	0	72	697	6660	7429
	0.00	0.97	9.38	89.65	100.00
Total	1213	37425	43678	8001	90317
	1.34	41.44	48.36	8.86	100.00

Table 7: Occupational class before and after GM for Germany (frequencies and percentages)

occ_class	Low-skill/agr	Working class	Middle class	Service class	Total
Low-skill/agr	1595	574	103	66	2338
	68.22	24.55	4.41	2.82	100.00
Working class	501	8345	760	871	10477
	4.78	79.65	7.25	8.31	100.00
Middle class	63	694	1954	131	2842
	2.22	24.42	68.75	4.61	100.00
Service class	41	583	101	2351	3076
	1.33	18.95	3.28	76.43	100.00
Total	2200	10196	2918	3419	18733
	11.74	54.43	15.58	18.25	100.00

Table 8 Probability of entering the upper service class after mobility

	UK		**Italy**			**Germany**		
	RE	FE		RE	FE		RE	FE
Variables	Service class	Service class		Service class	Service class		Service class	Service class

Mobility	0.06***	0.09***		0.02***	0.02***		0.03***	0.02***
	(0.06 - 0.07)	(0.08 - 0.10)		(0.01 - - 0.02)	(0.01 - - 0.03)		(0.02 - 0.04)	(0.01 - 0.03)
Education level								
Primary (ref.)								
Secondary	0.12***			0.05***			0.00	
	(0.11 - 0.13)			(0.03 - 0.07)			(-0.01 - 0.01)	
Tertiary	0.34***			0.35***			0.05***	
	(0.33 - 0.35)			(0.32 - 0.38)			(0.04 - 0.06)	
Gender								
Men (ref.)								
Women	-0.08***			-0.06***			-0.11***	
	(-0.09 - - 0.07)			(-0.08 - - 0.04)			(-0.12 - - 0.09)	
Cohort								
1945-1954 (ref.)								
1955-1964	-0.02***			0.02**			-0.02**	
	(-0.03 - - 0.01)			(0.00 - 0.04)			(-0.04 - - 0.01)	
1965-1974	-0.07***			0.03**			-0.02***	
	(-0.08 - - 0.06)			(0.00 - 0.05)			(-0.04 - - 0.01)	
1975-1980	-0.12***			0.00			-0.02*	
	(-0.13 - - 0.10)			(-0.06 - 0.06)			(-0.05 - 0.00)	
Parent's soc class								
Low-skill/agr								
Working class	0.02***			0.01			0.04***	
	(0.01 - 0.03)			(-0.02 - 0.04)			(0.02 - 0.06)	
Middle class	0.05***			0.03**			0.08***	
	(0.03 - 0.06)			(0.00 - 0.06)			(0.06 - 0.11)	
Service	0.09***			0.11***			0.18***	
	(0.07 - 0.11)			(0.07 -			(0.16 -	

				0.15)			0.21)	
Civil status								
Non-married (ref.)								
Married/cohabitat.	0.05***	0.06***		0.00	0.00		-0.01**	-0.00
	(0.04 - 0.06)	(0.05 - 0.07)		(-0.00 - 0.01)	(-0.00 - 0.01)		(-0.01 - - 0.00)	(-0.01 - 0.01)
Separated/wid	0.04***	0.05***		0.10***	0.10***		-0.01**	0.00
	(0.02 - 0.05)	(0.03 - 0.06)		(0.09 - 0.11)	(0.09 - 0.11)		-0.01**	-0.00
No. of children	-0.00***	-0.00**		-0.00***	-0.00**		-0.00***	-0.00**
Macro reg.residence								
London-SE ref			N-W (IT)			N-W		
North	-0.02***		N-E	-0.05***		Berlin	0.02**	
	(-0.04 - - 0.01)			(-0.07 - - 0.04)			(0.00 - 0.04)	
East	-0.02**		Center	-0.04***		South	-0.02*	
	(-0.03 - - 0.00)			(-0.05 - - 0.03)			(-0.04 - 0.00)	
West	-0.03***		South	-0.04***		N-E	0.02*	
	(-0.05 - - 0.02)			(-0.05 - - 0.03)				
Wales	-0.02***		Ilands	-0.06***				
	(-0.04 - - 0.01)			(-0.07 - - 0.04)				
Scotland	-0.03***							
	(-0.05 - - 0.02)							
Constant	0.10***	0.16***		0.01	0.07***		0.15***	0.14***
	(0.09 - 0.12)	(0.16 - 0.16)		(-0.01 - 0.04)	(0.07 - 0.07)		(0.13 - 0.18)	(0.13 - 0.15)
Observations	81,194	100,614		1,080,473	1,133,066		103,727	103,727
Number of pid	10,335	13,568		5,227	5,497		7,163	7,163

ci in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 9 Gender differences in the probability to enter the upper-service class in the UK				
	Men		Women	
	RE	FE	RE	FE
Variables	Service	Service	Service	Service
Mobility	0.07***	0.09***	0.04***	0.07***
	(0.05 - 0.08)	(0.08 - 0.10)	(0.03 - 0.06)	(0.05 - 0.08)
Education level				
Primary (ref.)				
Secondary	0.14***		0.09***	
	(0.13 - 0.16)		(0.08 - 0.11)	
Tertiary	0.40***		0.27***	
	(0.38 - 0.42)		(0.25 - 0.28)	
Cohort				
1945-1954 (ref.)				
1955-1964	-0.06***		0.01*	
	(-0.08 - -0.03)		(-0.00 - 0.03)	
1965-1974	-0.11***		-0.01	
	(-0.13 - -0.09)		(-0.03 - 0.01)	
1975-1980	-0.15***		-0.06***	
	(-0.18 - -0.12)		(-0.08 - -0.04)	
Parent's occ. class				
Low-skill/agr				
Working class	0.03***		0.01	
	(0.01 - 0.05)		(-0.01 - 0.03)	
Middle class	0.06***		0.04***	
	(0.03 - 0.08)		(0.02 - 0.05)	
Service	0.11***		0.08***	
	(0.09 - 0.14)		(0.05 - 0.10)	
Civil status				
Non-married (ref.)				
Married/cohabitat.	0.05***	0.06***	0.04***	0.06***
	(0.04 - 0.07)	(0.05 - 0.08)	(0.02 - 0.05)	(0.05 - 0.07)
Separated/wid	0.02*	0.04***	0.04***	0.07***

	(-0.00 - 0.04)	(0.02 - 0.06)	(0.02 - 0.05)	(0.05 - 0.08)
No. of children				
0 (ref.)				
1	0.01*	0.01*	-0.01**	-0.01
	(-0.00 - 0.02)	(-0.00 - 0.02)	(-0.02 - -0.00)	(-0.01 - 0.00)
2	0.01*	0.01**	-0.03***	-0.03***
	(-0.00 - 0.02)	(0.00 - 0.02)	(-0.04 - -0.02)	(-0.04 - -0.02)
3	-0.00	0.00	-0.05***	-0.05***
	(-0.02 - 0.01)	(-0.01 - 0.02)	(-0.07 - -0.03)	(-0.07 - -0.04)
4	0.02	0.02	-0.04*	-0.03*
	(-0.01 - 0.06)	(-0.01 - 0.06)	(-0.07 - 0.00)	(-0.07 - 0.00)
Constant	0.06***	0.15***	-0.00	0.08***
	(0.03 - 0.08)	(0.14 - 0.16)	(-0.02 - 0.02)	(0.07 - 0.09)
Observations	40,837	50,692	40,307	49,836
R-squared		0.01		0.01
Number of pid	5,122	6,757	5,209	6,805
ci in parenthesis; *** p<0.01, ** p<0.05, * p<0.1				

Table 10 Gender differences in the probability to enter the upper-service class in the Italy

	Men		Women	
	RE	FE	RE	FE
Variables				
Mobility	0.00***	-0.00	-0.01***	-0.01***
	(0.00 - 0.01)	(-0.01 - 0.01)	(-0.01 - -0.01)	(-0.01 - -0.01)
Education level				
Primary (ref.)				
Secondary	0.06***		0.02*	0.06***

	(0.04 - 0.08)		(-0.00 - 0.04)	(0.04 - 0.08)
Tertiary	0.46***		0.28***	0.46***
	(0.43 - 0.49)		(0.26 - 0.31)	(0.43 - 0.49)
Cohort				
1945-1954 (ref.)				
1955-1964	0.00		0.02*	
	(-0.02 - 0.03)		(-0.00 - 0.04)	
1965-1974	-0.01		0.02**	
	(-0.04 - 0.01)		(0.00 - 0.04)	
1975-1980	-0.04**		0.03*	
	(-0.07 - -0.01)		(-0.00 - 0.06)	
Parent's occ. class				
Low-skill/agr				
Working class	0.02		-0.00	0.02
	(-0.01 - 0.06)		(-0.04 - 0.04)	(-0.01 - 0.06)
Middle class	0.05**		0.01	0.05**
	(0.01 - 0.09)		(-0.03 - 0.05)	(0.01 - 0.09)
Service	0.16***		0.06**	0.16***
	(0.11 - 0.21)		(0.01 - 0.11)	(0.11 - 0.21)
Civil status				
Non-married (ref.)				
Married/cohabitat.	0.03***	0.01	0.02***	0.02***
	(0.03 - 0.03)	(-0.00 - 0.01)	(0.02 - 0.02)	(0.02 - 0.02)
Separated/wid	0.06***	0.16***	0.01***	0.01***
	(0.06 - 0.07)	(0.15 - 0.17)	(0.01 - 0.02)	(0.01 - 0.02)
No. of children				
0				
1	-0.01***	-0.01***	-0.00***	-0.00***
	(-0.02 - -0.01)	(-0.02 - -0.01)	(-0.01 - -0.00)	(-0.01 - -0.00)
2	-0.02***	-0.02***	-0.00	-0.00
	(-0.02 - -0.02)	(-0.02 - -0.02)	(-0.00 - 0.00)	(-0.00 - 0.00)
3	-0.01**	-0.01**	0.01***	0.01***
	(-0.01 - -0.00)	(-0.01 - -0.00)	(0.01 - 0.02)	(0.01 - 0.02)
4	-0.09***	-0.09***	0.00	0.00

	(-0.10 - -0.08)	(-0.10 - -0.08)	(-0.01 - 0.01)	(-0.01 - 0.01)
Constant	-0.03	0.06***	-0.02	0.04***
	(-0.06 - 0.01)	(0.06 - 0.07)	(-0.05 - 0.02)	(0.04 - 0.04)
Observations	624,940	72,740	454,191	454,191
Number of pid	2,700	1,565	2,523	2,523
CI in parenthesis *** p<0.01, ** p<0.05, * p<0.1				

Table 11 Gender differences in the probability to enter the upper-service class in Germany

	Men		Women	
	RE	FE	RE	FE
Variables	Service	Service	Service	Service
Mobility	0.04***	0.04***	0.01***	0.01*
	(0.03 - 0.05)	(0.02 - 0.05)	(0.01 - 0.02)	(-0.00 - 0.02)
Education level				
Primary (ref.)				
Secondary	0.01		0.00	
	(-0.00 - 0.02)		(-0.00 - 0.01)	
Tertiary	0.11***		0.05***	
	(0.10 - 0.12)		(0.05 - 0.06)	
Cohort				
1945-1954 (ref.)				
1955-1964	-0.04***		0.01*	
	(-0.05 - -0.02)		(-0.00 - 0.03)	
1965-1974	-0.06***		0.01	
	(-0.08 - -0.05)		(-0.01 - 0.02)	
1975-1980	-0.10***		0.02**	
	(-0.12 - -0.08)		(0.00 - 0.03)	
Parent's occ. class				
Low-skill/agr				
Working class	0.06***		0.03***	

	(0.04 - 0.08)		(0.02 - 0.04)	
Middle class	0.08***		0.06***	
	(0.06 - 0.11)		(0.04 - 0.07)	
Service	0.22***		0.13***	
	(0.20 - 0.24)		(0.12 - 0.15)	
Civil status				
Non-married (ref.)				
Married/cohabitat.	-0.00	-0.00	-0.00	0.00
	(-0.01 - 0.01)	(-0.01 - 0.01)	(-0.01 - 0.00)	(-0.00 - 0.01)
Separated/wid	-0.01**	-0.00	0.00	0.01**
	(-0.02 - -0.00)	(-0.01 - 0.01)	(-0.01 - 0.01)	(0.00 - 0.01)
No. of children	0.00***	-0.00	0.00	0.00
	(0.00 - 0.01)	(-0.00 - 0.00)	(-0.00 - 0.00)	(-0.00 - 0.00)
Constant	0.13***	0.19***	0.03***	0.09***
	(0.11 - 0.15)	(0.18 - 0.20)	(0.02 - 0.05)	(0.08 - 0.10)
Observations	96,048	131,748	102,740	133,172
R-squared		0.00		0.00
Number of pid	10,426	14,489	11,045	14,613
ci in parenthesis; *** p<0.01, ** p<0.05, * p<0.1				

Table 12 Gender differences in the probability to enter the upper-service class , pooled sample with interaction effect (gender*GM)						
	Italy		**Germany**		**UK**	
	RE	FE	RE	FE	RE	FE
Mobility	0.02***	0.02***	0.04***	0.03***	0.08***	0.08***
	(0.02 - 0.02)	(0.02 - 0.02)	(0.03 - 0.05)	(0.02 - 0.04)	(0.07 - 0.09)	(0.07 - 0.10)
Education level						
Primary (ref.)	-					

Secondary	0.05***		0.00		0.12***	0.07***
	(0.04 - 0.06)		(-0.00 - 0.01)		(0.11 - 0.12)	(0.06 - 0.08)
Tertiary	0.39***		0.09***		0.33***	0.23***
	(0.37 - 0.41)		(0.08 - 0.10)		(0.32 - 0.34)	(0.21 - 0.25)
Gender						
Men						
Women	-0.05***		-0.10***		-0.07***	
	(-0.06 - -0.04)		(-0.10 - -0.09)		(-0.08 - -0.06)	
Woman*GM	-0.02***	-0.02***	-0.03***	-0.03***	-0.04***	-0.03***
	(-0.02 - -0.01)	(-0.02 - -0.01)	(-0.04 - -0.02)	(-0.05 - -0.02)	(-0.06 - -0.02)	(-0.05 - -0.02)
Constant	0.03***	0.07***	0.16***	0.14***	0.08***	0.10***
	(0.02 - 0.04)	(0.07 - 0.07)	(0.16 - 0.17)	(0.13 - 0.14)	(0.08 - 0.09)	(0.09 - 0.11)
Observations	1,079,480	1,079,480	263,038	263,038	99,725	99,725
Number of id	5,223	5,223	29,285	29,285	13,453	13,453
CI in parenthesis *** p<0.01, ** p<0.05, * p<0.1						

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