

# Heritage Matters

A Study of Social Mobility Patterns Among First and Second-  
Generation Immigrants in Europe

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# Abstract

This thesis examined how the association between immigrants' occupational origin and destination varies in 33 European countries, depending on the opportunities for social mobility in the origin country. For absolute occupational mobility, the result from an LPM regression showed that first-generation female immigrants had an increased probability of upward mobility when the origin country offered more opportunities for social mobility. In contrast, first-generation male immigrants showed an increased probability of immobility when the origin country offered more opportunities for social mobility. For relative occupational mobility, a multivariate OLS regression showed that first-generation male immigrants from countries with more opportunities for social mobility were more immobile compared to origin countries with fewer opportunities. Based on the World Economic Forum's *Global Social Mobility Index*, a variable representing the opportunities for social mobility in the origin country was created. The study used four waves of the European Social Survey and the International Socio-Economic Index (ISEI) to measure the mobility patterns in absolute and relative rates over the scores of opportunities for social mobility in the origin country. Second-generation immigrants showed no significant results, and no gender differences could be established. The results were discussed in relation to first-generation immigrants' *Status Loss*.

## Keywords

Social Mobility, Immigration, Social Mobility Index, International Socio-Economic Index (ISEI), European Social Survey (ESS)

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# Introduction

For a long time, sociologists have been interested in factors related to equal opportunities in society. For example, the relationship between children and their parents' education, income, and class, denoted intergenerational mobility. Inequality in society is reproduced when the mobility rate is low, meaning that parents' advantages are transferred to their children at a high rate. Immigrants' mobility patterns are an understudied area of research, mainly due to the difficulties in collecting relevant data. However, the association between immigrants' social origin and social destination in the arrival country helps us understand what factors enable or hinder social mobility, which is essential both from a societal and individual perspective. Research has, for example, shown that immigrants experiencing downward mobility when migrating consequently have a negative self-perceived social status and mental health (Akay et al., 2017; Nicklett & Burgard, 2009).

Many sociologists have focused their research on the effect of institutional factors on intergenerational mobility, where education is one of the main mediators to increase social mobility (Jonsson, 2004; Pfeffer, 2008; Rooth & Ekberg, 2006). While cross-national mobility patterns have been studied for decades (Blanden, 2013; Breen, 2004a; DiPrete, 2020), the cross-national differences in influence on immigrants' mobility patterns have been studied far less. Because immigrants, especially first-generation immigrants, are likely to have a different institutional context than both second-generation (children to immigrants) and natives in the arrival country, it is possible that other structural patterns could affect their social mobility. This study will be focusing on immigrants' social mobility patterns based on the opportunities for social mobility in their origin country (the country of birth for the respondent's father and mother). This approach has not been used in mobility research before. By studying first and second-generation men and women separately, it is also possible to assess whether the factors influencing the mobility patterns are similar or different between the groups. From a societal perspective, this can help policymakers design policies and interventions tailored to each group's specific needs and challenges to increase integration and create equal opportunities.

This thesis will examine the absolute and relative intergenerational social mobility amongst first and second-generation immigrants in 33 European countries and whether the

opportunities for social mobility in the origin country play a role in an individual's ability to achieve a higher occupational status than their parents. The analysis in this thesis will be based on data from the European Social Survey, complemented by data for improving the measurement of social background by Ganzeboom (2013) and estimates of 82 countries' performance in creating opportunities for social mobility, created by the World Economic Forum's *Global Social Mobility Report* (2020).

## **Research Aim and Questions**

The aim of this thesis is to provide an additional understanding of immigrants' occupational mobility patterns in Europe based on the opportunities for social mobility provided in the origin country and whether the patterns differ between male and female immigrants. This thesis thus aims to answer the following research questions:

- Does immigrants' social mobility depend on the opportunities for social mobility in the origin country?
- Does the association between parents and children's occupational status differ between male and female immigrants?

# Theory and Previous Research

Social mobility is conceptualized by the relationship between an individual's social origin and destination. The parents' social position represents the social origin in intergenerational mobility research, and the destination is represented by their children's social position (Breen, 2004b). Research on mobility focuses on the relationship between opportunities and the reproduction of inequality over time. Perfect mobility thus refers to an equal opportunity scenario where social origin does not dictate one's destination. Put simply, success is determined solely by merits (meritocracy).

This section will begin with a discussion regarding previous research on social mobility and immigration, which serves as the central focus of this thesis. Next, the thesis will discuss the differences in measurements of mobility patterns, in both absolute and relative terms, as well as the differences in outcome when using education, income, or occupation as measurements of mobility. Additionally, attention will be given to prior research on cross-national variations in social mobility patterns, along with the consideration of occupational classifications for cross-national comparisons. Furthermore, the section will discuss gender differences in mobility patterns, based on previous mobility research. Lastly, this section will conclude with a summary of the key points and a formulation of hypotheses.

## **Social Mobility and Immigration**

Immigration status and the origin country are interesting aspects of social mobility research because immigrants often migrate to get better opportunities for themselves and their children (Sjaastad, 1962). Chiswick (1999) refers to this phenomenon as *favorable self-selection*, which was shown to be more common amongst highly-skilled migrants, who make rational decisions about the arrival country based on the potential for labor market success. Non-economic migrants, for example, refugees, showed lower rates of favorable self-selection. This study has no empirical possibility to control for migration reasons and is mainly based on the assumption of migration as an active choice, and thus likely to strive for upward social mobility in the arrival country. Highly skilled immigrants have also been shown to choose their destination country based on the idea that hard work leads to higher social status (i.e.,

‘The American Dream’), not influenced by the actual observed rate of social mobility in the destination country (Lumpe, 2019). The incentive for migration is thus upward social mobility, to attain a higher social position than one’s parents in the destination country compared to the origin country. The migration costs also mean that people with lower socioeconomic resources are less likely to migrate internationally.

Recent population data in the U.S. revealed that the ‘American Dream’ was experienced differently among various regions, where income mobility was affected by factors such as residential segregation, income inequality, quality of education, social capital, and family structures (Chetty et al., 2014). In line with these findings, a study conducted by Berger and Engzell (2019) revealed that regions primarily inhabited by people with descendants from Scandinavia and Germany exhibited similar mobility patterns as their ancestors. However, their research did not show similar mobility patterns among descendants from France, Italy, or Great Britain. Therefore, heritage plays a partial role in determining income mobility in America.

The social mobility of immigrants in the destination country was the focus of a study by Zuccotti, Ganzeboom, and Guveli (2017), where they examined the educational mobility of first and second-generation Turkish immigrants in Europe compared to Turks in Türkiye. Their results indicated that second-generation immigrants, whose parents came from socioeconomically lower groups, experienced better educational outcomes upon migrating to Europe compared to Turks in Türkiye, resulting in upward educational mobility. However, occupational attainments, as a return on education, were lower for both first and second-generation Turks in Europe compared to Turks in Türkiye.

The observation of first-generation immigrants’ lower return on education is what Engzell and Ichou (2020) have referred to as *status loss*. Even though immigrants typically come from socioeconomically advantaged groups, they were found to experience a decline in social status when migrating. Some studies have argued that the status loss in the destination country is due to issues transferring the human capital to a new labor market. Still, that status loss follows a U-shape and thus is followed by a status increase resulting from assimilation in the destination country (Rooth & Ekberg, 2006). On the contrary, it has been shown that immigrants in Italy, France, and Spain almost never regain status upon status loss due to

*segmented assimilation* (Fellini & Guetto, 2019; Simón et al., 2014). The more segmented the labor market in the arrival country is, the harder it is for the immigrant to experience upward occupational mobility. Although the opportunities for social mobility in the arrival country are an essential part of the immigrants' occupational success, this study will merely control for the arrival country and leave the further examination of the influence of the arrival countries to future researchers.

While more socially advantaged individuals are more likely to attain higher occupational statuses than their parents, first-generation immigrants are simultaneously more likely to experience status loss, which creates a paradox. This paradox implies that first-generation immigrants may experience a status loss due to various challenges in the arrival country, despite their previous achievements. In contrast, less advantaged immigrants may experience upward occupational mobility because they have less to lose and benefit from the opportunities in their origin country.

Immigrants' status loss and downward mobility are commonly explained by problems in human capital transformation, such as validation of educational attainments, language barriers, and discrimination. While recognized as key explanatory factors, this thesis purposely avoids a deeper discussion of these issues, acknowledging their mere existence as presented.

## **Absolute and Relative Mobility**

Measuring intergenerational mobility, meaning the structural patterns of moving upward or downward compared to one's parents, can be achieved using absolute or relative rates. Although commonly calculated based on the same data, these measures reflect different social phenomena.

Absolute mobility is commonly calculated by comparing individuals' educational-, income-, or occupational levels with their parents (Breen, 2004b). The rate of absolute mobility provides information about the extent of upward, downward, or immobility in a society. An example of absolute upward mobility is when an individual achieves a higher level of education, occupational status, or income than their parents, while an individual who achieves



lower levels experiences downward mobility. Changes in absolute mobility can be observed as a consequence of structural changes in the labor market or educational system.

Relative mobility is, in intergenerational studies, a measurement of how much an individual's educational, income, or occupational attainments are influenced by their parent's educational, income, or occupational attainments, relative to the opportunities for social mobility in each generation. In simpler terms, relative mobility shows how strongly a person's position is tied to the position of their parents (Breen, 2004b).

An increase in absolute mobility does not ensure an increase in relative mobility, and vice versa. Higher rates of relative upward mobility can potentially contribute to absolute upward mobility, but it is not a guarantee, as absolute mobility depends on several macro social factors. In some instances, there can be a simultaneous occurrence of low relative mobility in society and high rates of absolute mobility. This could happen, for example, if overall incomes increase but income inequality between groups remains the same.

## **Education, Income, or Occupation**

Measuring absolute and relative mobility can be done using different socioeconomic measurements, e.g., education, income, or occupation, with different outcomes. All three measurements of mobility share a common trait – their influence on an individual's career, where education is a determinant of the starting point, occupation is a determinant of the overall rank in the labor market, and income measures the return of both education and occupation (Hällsten & Thaning, 2022).

There are benefits and limitations to using either of the measurements. There is a small overlap between income and occupation, where class matters at a certain income level, and income matters within a certain social class (Mood, 2017). However, the dimensions are not interchangeable as they measure different advantages in the transmission from parents to their children (Breen et al., 2016). On the other hand, education has been shown to be an important determinator of both income but especially occupational outcomes (Breen, 2004b). It is therefore a commonly used control variable in occupational mobility research.

This thesis aims to examine the social position of immigrants in their origin and arrival country. Considering the differences in educational status between universities and countries (Breen, 2004b), and the challenges of converting immigrants' educational achievements in the arrival country, results may be biased. Due to convenience and data availability, occupational status will be used, in this thesis, to measure social origin and destination.

## **Cross-National Differences in Occupational Mobility**

The absolute and relative mobility rate differs across countries, and understanding why they differ has been a chief concern for several decades. It is also a key factor in understanding how and why immigrants' social mobility patterns change due to migration. However, the research on absolute and relative mobility has shown varying results and has been inconclusive. Despite thorough research, no clear consensus exists on what mechanisms determine social mobility patterns.

One of the most influential theories regarding cross-national relative mobility is the Liberal Theory of Industrialism – known as the LZ theory (Lipset & Bendix, 1959). This theory suggests a correlation between industrial expansion in Western countries and their rates of social mobility. Countries industrialize at different rates, but countries with similar levels of economic development share similar patterns of social mobility, which means that patterns of absolute and relative mobility also are likely to converge over time.

In contrast, Featherman, Lancaster Jones, and Hauser (1975) propose a different theory – the so-called FJH hypothesis. This theory suggests that similarities in socioeconomic strata are the main reason for similarities in the relative mobility patterns among Western countries rather than industrialization. The theory also implies that relative social mobility should converge and remain stable over time while at the same time allowing for absolute mobility patterns to vary between countries due to country-specific factors.

Erikson and Goldthorpe (1992) seek to test the validity of the LZ theory and the FJH hypothesis and argue that cross-national mobility patterns are more complex than previously thought. Based on extensive research across nine European countries, they state that there are

no systematic similarities in either absolute or relative mobility between different countries, and any observed stability is, therefore, random. Instead, they suggest that historical and cultural contexts likely cause variation in mobility rates.

Breen (2004a) presents a more recent study on cross-national differences in social mobility and suggests that European countries share similar rates of absolute mobility, which are gradually converging (Breen & Luijkx, 2004). Changes in absolute mobility occurred, primarily between the 1970s and 1980s, and could be explained by historical factors such as moving away from agriculture and a reduction in the working class, rather than pure economic expansion. Although relative mobility increases with economic growth, the differences in patterns between countries still contradict the LZ theory and FJH hypothesis about cross-national similarities in relative mobility.

Especially the effect of inequality on relative mobility has been studied in recent years, where the differences in inequality between countries could explain the differences in mobility patterns. More specifically, studies have shown a correlation between countries with higher social inequality rates and lower relative mobility rates (DiPrete, 2020). Although this association appears to be causal, it could also be explained by reverse causality, where high rates of relative mobility lead to less inequality (Bukodi & Goldthorpe, 2018b; DiPrete, 2020).

## **Occupational Classification**

While education and income are often seen as straightforward measures in the hierarchy of social stratification, occupational classifications can prove more complex. Some occupational mobility researchers prefer micro-classes, and others argue for theoretically ordered classifications of occupations. The classification of occupations can be viewed through two schools of thought, nominalists, and gradationalists.

Nominalist models, such as the influential Erikson-Goldthorpe-Portocarero class scheme (EGP) (Erikson & Goldthorpe, 1992), and the European Socioeconomic Classification (ESeC) (Rose & Harrison, 2007), are focused on the relationship between occupational groupings, social classes, and the labor market. Although these classifications provide a hierarchical

order of occupations, the focal point for nominalists is to highlight the social and economic characteristics of different groups in the labor market.

In contrast, gradational scales emphasize status attainment and highlight how different occupations are historically valued in society. Researchers using this approach have developed measures such as Treiman's Standard International Occupational Prestige Scale (SIOPS) (Treiman, 1977) and the International Socioeconomic Index (ISEI) (Ganzeboom et al., 1992).

Using nominal or gradational classifications to study immigrants' intergenerational mobility has benefits and limitations. Although many classifications are highly correlated, fundamental theoretical differences exist in what questions can be answered using the different classifications (Lambert & Bihagen, 2014). While nominal measures could help examine immigrants' labor market attachment, gradational scales help look at immigrants' social position in society. Both questions are essential in mobility research, as they both are indications of immigrants' mobility patterns but different aspects of it. The analysis in this thesis will be based on the gradational approach.

Occupational prestige scales are based on the idea and evidence of the symbolism of occupations, where occupations are thought to represent lower or higher prestige. Treiman (1977) argued that occupational positions have an inherited hierarchy and thus lead to social stratification, based on a collective conscience. Further, he presented results showing cross-national similarities in the occupational prestige hierarchies, which made the scale internationally comparable and thus not dependent on country-specific norms and values. However, the prestige scales have been criticized for being arbitrary and prone to systematic measurement errors (Goldthorpe & Hope, 1972). The scale was mostly rejected in favor of socioeconomic scales. One such socioeconomic scale is the ISEI scale, derived from Duncan's Socioeconomic Index (SEI) (Reiss & Duncan, 1961). It is a constructed measurement based on weighting an occupation's average education and income. The socioeconomic scale became a way to scale occupations to include the indirect effect of education on income (Ganzeboom et al., 1992). In the construction of the ISEI scale, the theoretical fundamentals of SEI were kept but instead based on the commonly used International Standard Classification of Occupations, ISCO, by the *International Labor Organizations* (ILO, 2012).

The ISEI scale is a frequently used occupational measure utilized as a socioeconomic control and outcome variable in multivariate regression analyses. Its applicability has been demonstrated in a wide range of research studies<sup>1</sup>. Because the ISEI scale has been used widely to classify occupations in mobility research, this thesis will use it to operationalize social origin and destination.

## Gender Differences in Social Mobility

Historically, women have been excluded from studies on social mobility due to their limited participation in the labor market. However, there has been a shift in the past few years, with 67.7 % of women in the EU now employed, compared to 78.5 % of men, as of 2021 (*Women's Situation in the Labour Market*, n.d.), which mean that there is available data for women as well as men. The data used in this thesis include mothers from 194 countries globally, and because female labor market participation rates show cross-national differences and differences over time in Europe (Breen & Luijkx, 2004), mothers' occupational status is likely underrepresented in the data. This means that the reported occupational status of mothers could be skewed.

The differences in female labor market participation across countries and over time have led to methodological considerations in mobility research and the operationalization of social origin. Some researchers suggest using a dominance approach in intergenerational mobility research to avoid the problems concerning the underrepresentation and discrimination of women in the labor market. This is when the social origin is based on the social position of the household rather than the father and mother individually. The individual with the most advantaged social position in the household represents the social position of the entire family (Breen & Luijkx, 2004). However, based on Swedish register data, Thaning and Hällsten (2020) found that the dominance approach had the least explanatory power over the variation

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<sup>1</sup> For example, Engzell and Ichou (2020) used ISEI, as a control variable for socioeconomic status, in their study on self-perceived social status among European immigrant based on data from the Europeans Social Survey. Barclay and Hällsten (2022) used ISEI on Swedish register data to measure the occupational origin and destination of children who lost their parents. In de Vroome and van Tubergen's (2010) study on refugees in the Netherlands, based on data from *Social Position and Use of Provision by Ethnic Minorities (SPVA)*, ISEI was used as outcome variable representing occupational status.

in the respondent's destinations when using gradational classifications of occupations. Instead, they suggest using the average between both parents, which is arguably more empirically and theoretically justified. This is also why this study will use an average parental score.

The importance of women in mobility research has been shown in several studies, as the mobility patterns are different for men and women. For example, women in Europe have been shown to be more socially mobile than men and more likely to end up in a different social class than their parents (Bukodi & Paskov, 2020). The increase in female labor market participation since the 1970s may also account for the rising absolute mobility rates among women (Breen & Luijkx, 2004). In relation to the research question in this thesis, it is essential to include both parents in the analysis and to make separate analyses for men and women since the mobility patterns are likely to differ.

The historical omission of women in mobility research has had significant consequences for mobility theories. It is, for example, evident in the construction of the ISEI scale, which is of focus in this thesis. Women are often marginalized in the labor market, leading to occupational gender segregation and lower income for the same work compared to men. As a result, the status score of female-dominated professions tends to be overestimated (Ganzeboom et al., 1992). Because the ISEI-scale is a measurement of occupational status, it means that respondents and parents who are unemployed, including housewives, will be omitted from the scale in this thesis. Although this thesis may not offer any empirical solutions to this theoretical issue, it is important to recognize this flaw for any analysis of women's social mobility.

## **Summary and Hypotheses**

This thesis aims to examine the relationship between immigrants' social mobility and the opportunities for social mobility in their origin country. It is thus an addition to the broad spectrum of previous mobility research. This thesis asks two questions, whether immigrants' social mobility depends on the opportunities for social mobility in the origin country and whether the association between parents' and children's occupational status differs between male and female immigrants.

Based on the previous research, the following methodological and theoretical decisions have been made; to use the ISEI scale as an operationalization of social origin and destination and to separately measure the influence of the origin country on first and second-generation immigrants. In addition to the main analysis, where an average of the parents' ISEI score will represent the social origin, an analysis will be done to measure the separate influence of the fathers' and mothers' occupational status on the respondents' occupational status.

Previous research has shown that women are less immobile than men, and therefore an expected result from this study. On the contrary, there is little consensus concerning cross-national patterns in social mobility, but rather more agreement concerning the within-country factors that influence the opportunities for social mobility. In general, societies with less inequality have higher rates of social mobility. However, this association is likely to be influenced by the experience of status loss in the arrival country. Socially advantaged immigrants may experience status loss despite previous achievements, while their less advantaged counterparts may gain upward occupational mobility. This is due to the availability of more opportunities in their arrival country compared to the origin country, creating a paradox in immigrants' social mobility. Several possible outcomes could be expected from this study, but the following hypotheses will be tested:

**H1:** There is a positive association between the opportunities for social mobility in the origin country and immigrants' social mobility.

**H2:** The association between social origin and destination is stronger for male than female immigrants.

# Data and Methodology

## Data and Variables

### European Social Survey

The results in this thesis are based on pooled data from the European Social Survey (ESS), a biannually conducted cross-national survey. Data collection for the European Social Survey is performed nationally through face-to-face interviews. It follows specific requirements, such as the respondent being over 15 years old and being selected from private households. The data obtained is based on random probability methods in every stage of the gathering process (*Sampling | European Social Survey (ESS)*, n.d.).

Previous research has shown that men and women reach occupational maturity at around the age of 30, meaning that their career and occupational status stabilize. However, in a more recent study on Swedish longitudinal data, there was no clear evidence of ever reaching occupational maturity during a lifetime, especially when looking at younger cohorts (Bihagen et al., 2022). Instead, when looking at the distribution of classes, the relative rates of the classes stabilize from about the age of 25 to 35. For the sake of the research aim in this thesis, stabilization of the career is an important assumption, and the analysis will thus be based on an age limitation between 30 and 65.

Additional data were obtained from the ESS-Developmental Project (ESS-DEVO) (Ganzeboom, Harry B.G., 2013), which includes the five first waves of the ESS data. The ESS-DEVO project aimed to provide improved measurements of social background in the ESS data. Raw data (verbatim strings, such as open-ended questions) were recoded on a national level, according to the International Classification of Occupation 1988 (ISCO-88). This recoding is essential for social mobility research since the respondent's occupations are already coded into ISCO-88, and the additional data makes it possible to make intergenerational comparisons. Since the aim of this thesis regards the parent's country of birth, the first wave had to be excluded due to missing information on the father and mother's birth country. This thesis thus covers the survey years 2004, 2006, 2008, and 2010.



The European countries for analysis in this thesis are based on survey availability, maximizing the number of countries with data to attain greater statistical power. The countries included are Austria, Belgium, Bulgaria, Switzerland, Cyprus, Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, United Kingdom, Greece, Croatia, Hungary, Ireland, Israel, Iceland, Lithuania, Luxembourg, Latvia, Netherlands, Norway, Poland, Portugal, Romania, Russia, Sweden, Slovenia, Slovakia, Turkey, and Ukraine.

<i><b>Table 3.1 Number of Observations after Exclusion of Irrelevant Cases</b></i>	<i><b>Total Number of Observations</b></i>
<b>Waves 2002-2010</b>	242 106
<b>Including additional data from ESS-DEVO</b>	227 779
<b>Excluding the first wave (year 2002)</b>	187 556
<b>Only including ages 30-65</b>	112 267

## **Occupational Status**

This thesis will use the International Socioeconomic Index (ISEI) to examine intergenerational social mobility through the association between the respondent's and their parents' occupational status. This means coding respondents' and their parents' occupations into the same scale, allowing for comparison.

The ISEI variable is hierarchically ordered, ranging from 16 to 90. Higher values on the ISEI scale represent higher occupational status, and lower values represent lower occupational status. The simplicity and multidimensionality of the ISEI-scale as a measurement for occupational status is beneficial for this thesis as it focuses on the multivariate, non-linear relationship between origin and destination, influenced by the opportunity for social mobility in the origin country. An average score approach will be used for fathers' and mothers' occupational status. For observations where there is no recorded occupation for one of the respondents' parents, the average score will be represented by the employed parent.

The ESS data already contained a variable for respondent's occupations coded into ISCO-88, and by using Jann's (2019) Stata package, *Iscogen*, a computational conversion from ISCO-88 to Ganzeboom, De Graaf, and Treiman's (1992) ISEI scale could be done, which is beneficial

for reducing the risk of human error. The comparability between the respondents and their parents is possible due to the additional data set from Ganzeboom (2013), where the variable for parents' occupation had already been recoded from ISCO-88 to ISEI. The variable also measures the parents' occupation when the respondent was 14 years old, which is conventional in intergenerational mobility research.

## **Opportunities for Social Mobility in the Origin Country**

One of the significant obstacles in this thesis is regarding the social mobility in the origin country, as the operationalization demands cross-national comparability. Researchers have produced estimates for social mobility in several countries over decades. Because there are several ways of measuring social mobility, estimates are often not comparable (Blanden, 2013). Various studies have reported estimates from regressions rather than true values, and a put-together index based on estimates would also likely, be error-prone (Mogstad et al., 2020). In addition to non-comparable estimates, previous research has shown inconsistent mobility patterns between countries over time. However, World Economic Forum presented a *Social Mobility Report* in 2020 (World Economic Forum, 2020), estimating and ranking 82 countries based on their performance in creating opportunities for social mobility. The report presents an index of 82 countries' performance based on ten key pillars, 1. Health<sup>2</sup>, 2. Education Access<sup>3</sup>, 3. Education Equality and Equity<sup>4</sup>, 4. Lifelong Learning<sup>5</sup>, 5. Technology Access<sup>6</sup>, 6.

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<sup>2</sup> Based on the following indicators: Adolescent birth rate per 1,000 women, Prevalence of malnourishment (% of 5-19 year olds), Health Access and Quality Index (0-100 best), Inequality-adjusted healthy life expectancy index (0-100 best).

<sup>3</sup> Based on the following indicators: Pre-primary enrolment (%), Quality of vocational training (1-7), NEET ratio (% of 15-24 year olds), Out-of-school children (%), Inequality-adjusted education index (0-100 best).

<sup>4</sup> Based on the following indicators: Children below minimum proficiency (%), Pupils per teacher in pre-primary education, Pupils per teacher in primary education, Pupils per teacher in secondary education, Harmonized learning outcomes (score), Social diversity in schools (score), Percentage of disadvantaged students in schools which report a lack of education material.

<sup>5</sup> Based on the following indicators: Extent of staff training (1-7), Active labour market policies (1-7), Impact of ICTs on access to basic services, 1-7, Percentage of firms offering formal training, Digital skills among active population (1-7).

<sup>6</sup> Based on the following indicators: Internet users (% of adult population), Fixed-broadband internet subscriptions (per 100 pop.), Mobile-broadband subscriptions (per 100 pop.), Population covered by at least a 3G mobile network (%), Rural population with electricity access (%), Internet access in schools, 1-7 (best).

Work Opportunities<sup>7</sup>, 7. Fair Wage Distribution<sup>8</sup>, 8. Working Conditions<sup>9</sup>, 9. Social Protection<sup>10</sup>, 10. Inclusive Institutions<sup>11</sup>. Each of the ten pillars is chosen in the report as *".../crucial determinants of social mobility."* (World Economic Forum, 2020, p. 15).

Various research fields have addressed the link between social mobility and education, health, technological advancements, labor market conditions, and governmental inclusion. While the reports fail to present any supporting studies for its indicators, research has demonstrated the significance of each of the ten pillars in relation to social mobility. Below is a brief selection of such study findings.

Research has revealed a correlation between socioeconomic inequalities in childhood and long-term health and life expectancy (Hayward & Gorman, 2004). This, in turn, can hinder opportunities for accessing different professions, thereby influencing social mobility.

Likewise, Elo (2009) argues for the reversed correlation where long-term health affects socioeconomic outcomes, which is the correlation suggested in the Social Mobility Report. This correlation stands in both developed and developing countries.

Educational attainment is another essential factor in determining social mobility. The level of education attained by parents influences their children's educational success, which then indirectly affects their occupational status, making education an important mediator (Beller &

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<sup>7</sup> Based on the following indicators: Unemployment among labor force with basic education (%), Unemployment among labor force with intermediate education (%), Unemployment among labor force with advanced education (%), Unemployment in rural areas (%), Ratio of female to male labour force participation rate, Workers in vulnerable employment (%).

<sup>8</sup> Based on the following indicators: Low pay incidence (% of workers), Ratio of bottom 40% to top 10% labour income share, Ratio of bottom 50% to top 50% labour income share, Mean income of bottom 40% (% of national mean income), Adjusted labour income share (%).

<sup>9</sup> Based on the following indicators: Workers' Rights Index (0–100, best), Cooperation in labour-employer relations (1–7), Pay and productivity (1–7), Employees working more than 48 hours per week (%), Collective bargaining coverage ratio (%).

<sup>10</sup> Based on the following indicators: Guaranteed min. income benefits (% of median income), Social protection coverage (% of population), Social protection spending (% of GDP), Social safety net protection, 1–7.

<sup>11</sup> Based on the following indicators: Corruption Perceptions Index (0=highly corrupt; 100=very clean), Government and public services efficiency (score), Inclusiveness of institutions (score), Political stability and protection from violence (score).

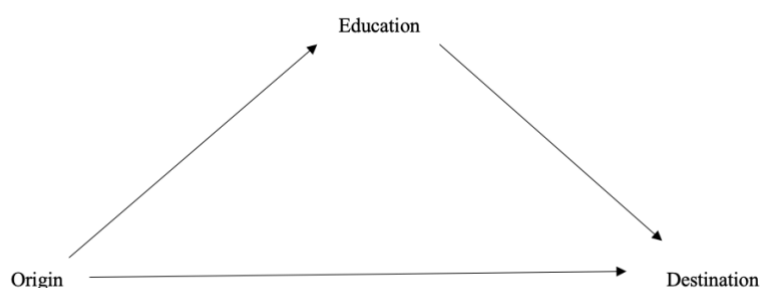
Hout, 2006). Therefore, measuring cross-national opportunity for social mobility through educational indicators is also valid, as proved by previous research.

As represented by indicators in the Social Mobility Index, access to technology is another important factor that can significantly affect social mobility. While technological development is likely to change the occupational structure in the labor market, the accessibility of technology could also lead to larger higher-educated groups, fewer blue-collar workers, and an increase in social mobility (Schnore, 1961). For instance, underprivileged groups not ordinarily seeking further education may benefit from specific online courses (van de Oudeweetering & Agirdag, 2018).

The OED model is widely used in social mobility research and is built on the association between social origin (O) and education (E) and how these factors directly or indirectly influence destination (D) (Bukodi & Goldthorpe, 2018a). The destination can be measured by status, prestige, or income. Increased social mobility can be achieved through access to labor, fair wages, and working conditions, three pillars in the Social Mobility Index. To simplify, if there are no available jobs, the status return on education can be zero, preventing upward social mobility.

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*Figure 3.1 OED-model*



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Source of replication: (Bukodi & Goldthorpe, 2018a)

Lastly, the Social Mobility Index pillars regarding social protection and inclusive institutions are relevant in shaping social welfare policies, the redistribution of taxes, and labor market

incentives in a country, which could increase the mobility rate (Svallfors, 2007). Additionally, a study on educational mobility by van der Weide et al. (2021) discovered that higher taxes and government expenditures are explanatory factors of mobility rates.

In summary, all the studies mentioned above provide evidence of the correlation between the pillars and change in social mobility. The Social Mobility Index also shares similarities with, for example, the UNs Human Development Index (HDI), a calculated index of life expectancy at birth, expected years of schooling, mean years of schooling, and GNI per capita (Nations, n.d.). The Social Mobility Index is thus a more extensive measurement and, for the sake of this thesis, a reliable tool for measuring cross-national opportunities for social mobility.

It is important to remember that the social mobility index is based on self-participation, where all countries have been able to submit relevant data. This could cause measurement bias, as many developing countries have weaker statistical systems and problems delivering reliable data (*Statistics in Development Cooperation - Data Availability*, n.d.). However, because this thesis focuses on general social mobility, a comprehensive representation of countries worldwide is not necessary.

There is an additional limitation in this study concerning how the opportunity for social mobility was measured in the origin country. This is due to the discrepancy in time points between when the social mobility index was created and when the respondent's social origin was measured. The ESS data includes the oldest participant from the 2004 wave, born in 1939, and the youngest from the 2010 wave, born in 1980. As a result, an index from 2020 with data collection in 2019 (World Economic Forum, 2020) may not represent each country's performance during the respondent's childhood. Previous research is inconclusive regarding cross-national consistency in relative social mobility, and no empirical solutions are proposed in this thesis to ensure consistency over time in the variable representing opportunities for social mobility in the origin country.

Table 3.1 displays the calculated score for each country in the index, with ten countries sharing the same score.

**Table 3.1 Social Mobility Index 2020 (World Economic Forum, 2020)**

<i>Rank</i>	<i>Country</i>	<i>Score</i>	<i>Rank</i>	<i>Country</i>	<i>Score</i>	<i>Rank</i>	<i>Country</i>	<i>Score</i>
1	Denmark	85.2	25	Cyprus	69.4	50	Armenia	53.9
2	Norway	83.6	26	Poland	69.1	51	Mexico	52.6
2	Finland	83.6	27	Latvia	69.0	52	Sri Lanka	52.3
3	Sweden	83.5	28	Slovak Republic	68.5	53	Brazil	52.1
4	Iceland	82.7	29	Israel	68.1	54	Philippines	51.7
5	Netherlands	82.4	30	Italy	67.4	54	Tunisia	51.7
6	Switzerland	82.1	31	Uruguay	67.1	55	Panama	51.4
7	Belgium	80.1	32	Croatia	66.7	56	Turkey	51.3
7	Austria	80.1	33	Hungary	65.8	57	Colombia	50.3
8	Luxembourg	79.8	34	Kazakhstan	64.8	58	Peru	49.9
9	Germany	78.8	35	Russian Federation	64.7	59	Indonesia	49.3
10	France	76.7	36	Bulgaria	63.8	60	El Salvador	47.4
11	Slovenia	76.4	36	Serbia	63.8	61	Paraguay	46.8
12	Canada	76.1	37	Romania	63.1	62	Ghana	45.5
12	Japan	76.1	38	Malaysia	62.0	63	Egypt	44.8
13	Australia	75.1	39	Costa Rica	61.6	64	Lao PDR	43.8
14	Malta	75.0	40	China	61.5	65	Honduras	43.7
14	Ireland	75.0	41	Ukraine	61.2	66	Morocco	43.5
15	Czech Republic	74.7	42	Chile	60.3	66	Guatemala	43.5
16	Singapore	74.6	43	Greece	59.8	67	India	42.7
17	United Kingdom	74.4	44	Moldova	59.6	68	South Africa	41.4
18	New Zealand	74.3	45	Viet Nam	57.8	69	Bangladesh	40.2
19	Estonia	73.5	46	Argentina	57.3	70	Pakistan	36.7
20	Portugal	72.0	47	Saudi Arabia	57.1	71	Cameroon	36.0
21	Korea. Rep.	71.4	48	Georgia	55.6	71	Senegal	36.0
22	Lithuania	70.5	48	Albania	55.6	72	Côte d'Ivoire	34.5
23	United States	70.4	49	Thailand	55.4			
24	Spain	70.0	50	Ecuador	53.9			

## Control Variables

The regression analysis will control for the following individual characteristics; age, gender, and if the respondent is native, first or second-generation immigrant. All models in the regression analysis will also be controlled for ESS waves and survey countries. First-generation immigrants are in this thesis operationalized as the respondent not being born in the country where the survey is conducted. Second-generation immigrants are operationalized as the respondent being born in the country where the survey is conducted, but neither of the respondent's parents. The variable for opportunities for social mobility in the origin country is coded to include only observations where both parents originate from the same country. To prevent measurement errors in cases where one parent is native and the other is not, this operationalization is used. The goal is to enhance the quality of measurement and maintain accuracy. Table 3.2 shows all variables in the regression analysis, including the rate and frequency of each variable.<sup>12</sup>

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<sup>12</sup> This thesis focuses on occupational mobility, and since education lies on the causal path between origin and destination and is a potential mediator, it will not be included as a control variable. Instead, some of the effects of the respondent's educational attainments are theoretically included in the ISEI classification of occupation.

<i>Table 3.2 Descriptive Statistics of all Included Variables</i>	<i>Number of observations</i>	<i>Rate of non-missing observations</i>
<b>Respondent's ISEI-score <sup>a</sup></b>	105 534	94.0 %
<b>Parent's ISEI-score</b>	108 118	96.3 %
<b>Father's ISEI-score</b>	100 804	89.8 %
<b>Mother's ISEI-score</b>	62 192	55.4 %
<b>Gender</b>	112 232	99.97 %
- <b>Female</b>	51 364	45.8 %
- <b>Male</b>	60 868	54.2 %
<b>Age 30--65</b>	112 267	100 %
<b>Opportunities for Social Mobility in the Parents' Origin Country <sup>b</sup></b>	7 413	6.6 %
<b>Opportunities for Social Mobility in the Fathers' Origin Country</b>	11 231	10.0 %
<b>Opportunities for Social Mobility in the Mothers' Origin Country</b>	11 044	9.8 %
<b>5-point change in ISEI-score</b>	112 267	100.0 %
<b>Generation</b>	112 125	99.8 %
- <b>Native</b>	99 169	88.5 %
- <b>First-generation</b>	10 225	9.1 %
- <b>Second-generation</b>	2 731	2.4 %
<b>ESS wave and Survey country</b>	112 267	100 %

**Note:** <sup>a</sup> Lower rates of female labor market participation could lead to biased results (Breen and Luijkx, 2004b), but when looking at the distribution of ISEI-score, meaning respondents in employment, between gender, the male rate is 46.8 %, and the female rate is 53.2 % of the total number of observations.

**Note:** <sup>b</sup> Only first and second-generation immigrants from countries included in the social mobility index are included in the variable. Additionally, the social mobility-score variable for the parent's origin country is restricted as it only contains observations where both father and mother come from the same country in the index. Therefore, the number of observations is lower for the parent's mobility score than for the father and mother separately.

## Analytical Strategies

The analysis in this thesis contains three parts—the first concerns absolute intergenerational mobility between natives, first and second-generation immigrants, and men and women. The second part concerns the probability of downward, immobility, and upward mobility in absolute terms. The third part concerns relative intergenerational mobility. To examine absolute mobility, the ISEI scale of respondents and their parents will be recoded into a variable that indicates downward, immobility, and upward mobility. The variable will represent a substantial change in ISEI-score between the respondents and their parents, where



5 points increase in the ISEI scale will be the cutoff between upward mobility and immobility, and 5 points decrease will be the cutoff between downward mobility and immobility. The cross-tabulation will show the absolute mobility rate for men and women and be separated by whether the respondent is native, first, or second-generation immigrant. A Linear Probability Model (LPM) is then used to calculate the probability of being downward, immobile, or upwardly mobile.

Relative mobility will be analyzed with Ordinary Least Square (OLS)-regression, where the children's ISEI score will be regressed on the average of parents' ISEI scores. The second step will also include sensitivity analysis, where the relationship between the father and mother and the son and daughter will be tested separately.

To measure the impact of social mobility in the origin country, parents' occupational status will be interacted with social mobility in the origin country, but also with gender, to detect any differences in the association between men and women. The analysis will also include differences between first and second-generation immigrants. As seen in Table 3.2, second-generation immigrants only contain 2 731 observations, which is substantially less than first-generation and natives, and this could be an issue in the analysis. The main regression analysis will be conducted in separate models for native, first, and second-generation immigrants to analyze differences in the influence of opportunities for social mobility in the origin country.

## **OLS**

To perform a multivariate, multiplicative regression analysis, measuring the association between the respondent's and their parent's ISEI-score (continuous variables), with the interaction of social mobility in the origin country (continuous), and gender (categorical), Ordinary Least Square (OLS) is the most appropriate method.

The OLS regression is a method for making linear predictions about the dependent variable (Y) based on estimates for the independent variable (X). The method has many advantages but also limitations. Based on BLUE (Best Linear Unbiased Estimates), several assumptions must be met to get unbiased, reliable results in an OLS regression (Wolf & Best, 2014). There are three main assumptions about the error term, which must be addressed; first, the OLS

regression assumes that the variance of the residuals is constant across values of the independent variable (homoscedastic); second, the residuals must be normally distributed (conditional normality); third, the observations must be independent of each other (independence) (Wolf & Best, 2014).

Heteroskedasticity can occur in a regression model if it, for example, is missing relevant explanatory variables (omitted variable bias) or by outlier and non-linearity in the data (Breusch & Pagan, 1979). Because this analysis includes variables with high non-response rates, this could cause skewness in the data, and thus the regression result could become heteroskedastic. Robust standard errors (Gordon, 2015) are used in both main regression and sensitivity analyses to avoid problems with heteroskedasticity, such as false inference.

## **LPM**

In addition to the regression analysis of the relative mobility, a Linear Probability Model regression (LPM) on the absolute mobility will be performed. The result from an LPM regression will show the probability of downward, immobility, and upward mobility changes between first-generation men and women and second-generation men and women. By transforming each mobility pattern into three different dichotomous variables, this thesis will test the probability of downward, immobility, and upward mobility with separate regressions. LPM is a suitable method for this thesis since it will use it as a supplementary analysis to the absolute mobility rates, looking for significant associations and average linear effect (Mood, 2010). However, the LPM has its limitations, as it cannot predict probability outside the range of 0 and  $\pm 1$ . The method also has problems with standard errors, which are easily corrected using robust standard errors.

## Ethical considerations

This thesis is based on anonymized survey data from the European Social Survey (ESS). It is worth noting that the ESS follows the Declaration on Professional Ethics, ensuring that the utilization of their data does not intrude upon the privacy of the survey respondents

*(Declaration on Professional Ethics 2010 | ISI, n.d.; Research Ethics | European Social Survey (ESS), n.d.).*

The Swedish Research Council has stated eight recommendations for good research practice.

Among these recommendations, one stands out as particularly relevant to this thesis: *"You shall strive to conduct your research without doing harm to people, animals, or the environment"* (Swedish Research Council, 2017, p. 10). It is crucial to acknowledge that immigrants may often be subject to stigmatization within public and political debates.

Consequently, it is essential to avoid unfair or unwarranted assumptions based on the findings in this thesis.

To reduce the risk of misinterpretation and misrepresentation, this thesis explicitly states its theoretical and methodological assumptions. Furthermore, the thesis refrains from making interpretations about non-statistically significant results and solely focuses on significant findings.

# Results

This section will first be presenting some descriptive statistics. Absolute social mobility will then be analyzed based on a cross-tabulation and LPM regression. After that, a section with the results and analysis of the relative social mobility will be presented, followed by a sensitivity analysis based on the separate ISEI score and country of origin separately. All analysis in this thesis is restrained to a 0.05 statistical significance level.

The descriptive statistics in Table 4.1 show that the respondents' ISEI scores, on average, are lower for first-generation immigrants, both for men and women, compared to natives and second-generation. Still, parents to first-generation respondents have higher mean ISEI scores than natives and second generations. This result is inconsistent with previous research (Engzell & Ichou, 2020; Zuccotti et al., 2017), where parents of immigrants have significantly lower mean ISEI-score than natives. The inconsistency between these results and previous studies could be a measurement error caused by the high rates of missing observations in the data for first and second-generation immigrants.

The table also shows that fathers overall have a higher mean ISEI score than mothers, but native and second-generation female respondents have higher mean scores than men. The discrepancy between parents and respondents is more significant for natives and second-generation immigrants, but only first-generation women do not exceed the mean ISEI score of both their parents, as fathers have higher means than first-generation females.

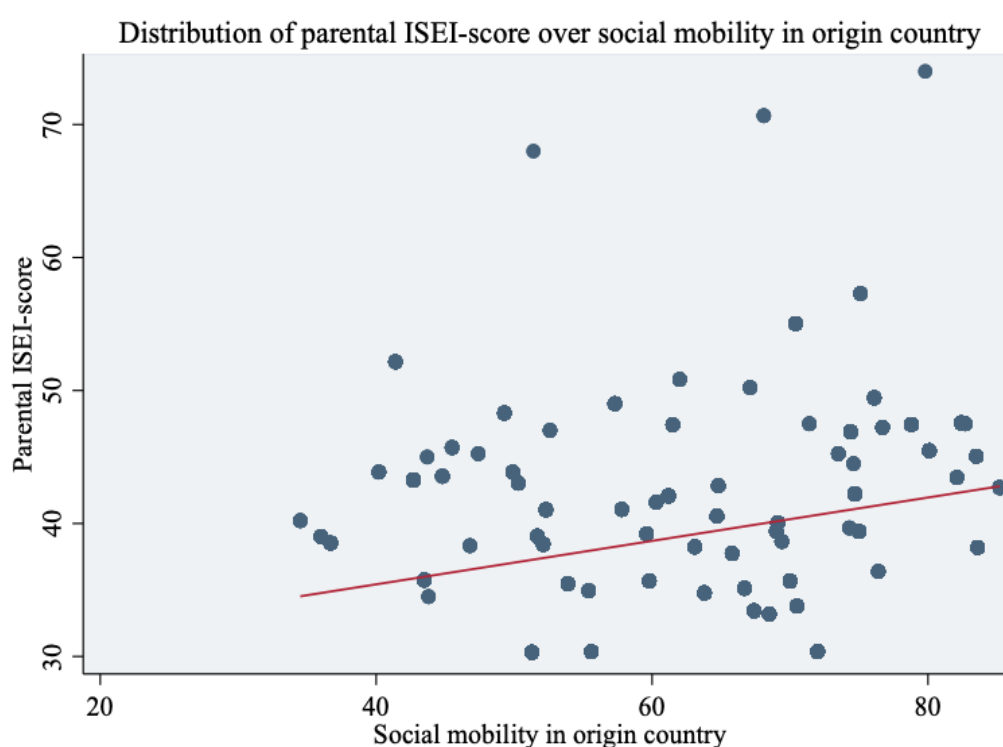
<i>Table 4.1 Mean ISEI Score</i>	<i>Male</i>			<i>Female</i>		
<b>Variable</b>	Native	First	Second	Native	First	Second
<b>Respondent's ISEI-score</b>	43.3 (3.9 %)	42.4 (3.5 %)	43.5 (4.8 %)	43.5 (7.9 %)	42.1 (7.3 %)	45.4 (4.9 %)
<b>Parent's ISEI-score</b>	37.6 (3.2 %)	40.5 (5.8 %)	37.6 (4.3 %)	37.3 (3.7 %)	41.5 (5.1 %)	38.4 (4.1 %)
<b>Father's ISEI-score</b>	38.2 (8.9 %)	41.2 (11.8 %)	38.4 (12.1 %)	37.9 (10.7 %)	42.1 (13.0 %)	39.7 (11.6 %)
<b>Mother's ISEI-score</b>	37.1 (45.3 %)	40.8 (53.7 %)	36.1 (45.6 %)	36.8 (43.1 %)	41.6 (46.2 %)	36.4 (41.0 %)

**Note:** Missing observations in parentheses (%)

Figure 4.1 shows the distribution of the average parental ISEI score of first and second-generation immigrants, over the values of opportunities for social mobility in the origin country. The figure shows a weak positive correlation between the variables. Higher scores on the scale over opportunities for social mobility in the origin country are associated with higher parental ISEI scores. This correlation is aligned with findings in previous research, showing the positive correlation between less inequality and more social mobility.

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**Figure 4.1** Scatterplot of the Distribution of Mean-Parental ISEI Score for each Origin Country, First and Second-Generation with Fitted Line.




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**Note:** The three outliers in the top of the figures represents Panama (left), Israel (middle), and Luxembourg (right).

## Absolute Mobility

Table 4.2 shows the calculated absolute mobility rates for men and women, separated by natives, first and second-generation. Since the ISEI scale is hierarchically ordered, a 5-point difference compared to the parent's score represents a substantial difference in occupational status. The table shows that upward mobility is the most frequently occurring category,

independent of immigration status. Overall, women are slightly more mobile than men, upward and downward, but the most substantial differences are between immigration status rather than between gender. First-generation immigrants are more downwardly mobile, and natives and second-generation immigrants are more upwardly mobile. This is a reasonable result based on the differences in mean scores between parents and children in Table 4.1.

<i>Table 4.2 Absolute Mobility Rates</i>	<i>Natives</i>			<i>First generation</i>			<i>Second generation</i>		
	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>
<b>Downward mobility</b>	24.1 %	25.8 %	25.1 %	32.7 %	37.4 %	35.3 %	24.4 %	25.4 %	24.9 %
<b>Immobility</b>	28.0 %	22.7 %	25.1 %	26.5 %	21.7 %	23.8 %	26.1 %	21.9 %	23.7 %
<b>Upward mobility</b>	47.9 %	51.5 %	49.8 %	40.8 %	40.9 %	40.8 %	49.5 %	52.7 %	51.3 %
<b>Total</b>	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %

**Note:** A 5-point change in ISEI-score represents absolute mobility.

When instead looking at the probability for downward, immobility and upward mobility in Table 4.3, it shows an increased probability for first-generation women to be upwardly mobile with increased opportunities for social mobility score in the origin country, by the statistically significant coefficient of 0.00246, while controlling for the negative main effect of being an immigrant woman. This means that first-generation women have a 0.25 % -point increased probability of upward mobility with each score increase in the opportunities for social mobility in the origin country.

<i>Table 4.3 LPM Regression over Absolute Mobility</i>	<i>Downward</i>		<i>Immobility</i>		<i>Upward</i>	
	<i>First- Generation</i>	<i>Second- Generation</i>	<i>First- Generation</i>	<i>Second- Generation</i>	<i>First- Generation</i>	<i>Second- Generation</i>
<b>Opportunities for Social Mobility Score</b>	-0.000955 (0.000832)	-0.00217 (0.00168)	0.00140* (0.000735)	0.000157 (0.00190)	-0.000442 (0.000867)	0.00201 (0.00205)
<b>Female (ref: Male)</b>	0.134* (0.0725)	-0.110 (0.131)	0.0348 (0.0634)	-0.107 (0.134)	-0.169** (0.0747)	0.216 (0.153)
<b>Female # Opportunities for Social Mobility Score</b>	-0.00120 (0.00111)	0.00232 (0.00204)	-0.00126 (0.000978)	0.000521 (0.00209)	0.00246** (0.00115)	-0.00284 (0.00239)
<b>Age</b>	0.000135 (0.00624)	-0.0120 (0.0115)	0.00163 (0.00563)	0.0140 (0.0108)	-0.00177 (0.00645)	-0.00200 (0.0131)
<b>Squared Age</b>	-1.64e-06 (6.60e-05)	0.000110 (0.000122)	-2.34e-05 (5.94e-05)	-0.000128 (0.000116)	2.51e-05 (6.83e-05)	1.86e-05 (0.000140)
<b>Constant</b>	0.310** (0.157)	0.807*** (0.303)	0.221 (0.146)	-0.0758 (0.290)	0.469*** (0.165)	0.269 (0.344)
<b>Observations</b>	5 837	1 571	5 837	1 571	5 837	1 571
<b>R-squared</b>	0.018	0.037	0.012	0.037	0.014	0.043

**Note:** All models are controlled for ESS wave and survey country

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Figures 4.2, 4.3, and 4.4 shows the linear probability of downward, immobility, and upward mobility, based on the results from the LPM regression in Table 4.3. The linear probability is calculated over the scores for opportunities for social mobility in the origin country. There is a statistically significant difference in the estimated probability of being downwardly mobile for first-generation female immigrants. T-tests were performed on the estimated probability between the first quantile and the third quantile, to see if there is a statistically different estimated probability between the two data points. When measuring the difference between, for example, mobility scores 56 and 71, score 56 shows an estimated probability of 0.39, and score 71 an estimate of 0.36<sup>13</sup>. This means that first-generation female immigrants from origin

<sup>13</sup> T-tests for first and second-generation immigrants showed significant difference in association between quantile 1 and quantile 3, which was datapoint 56 and 71, p<0.05.

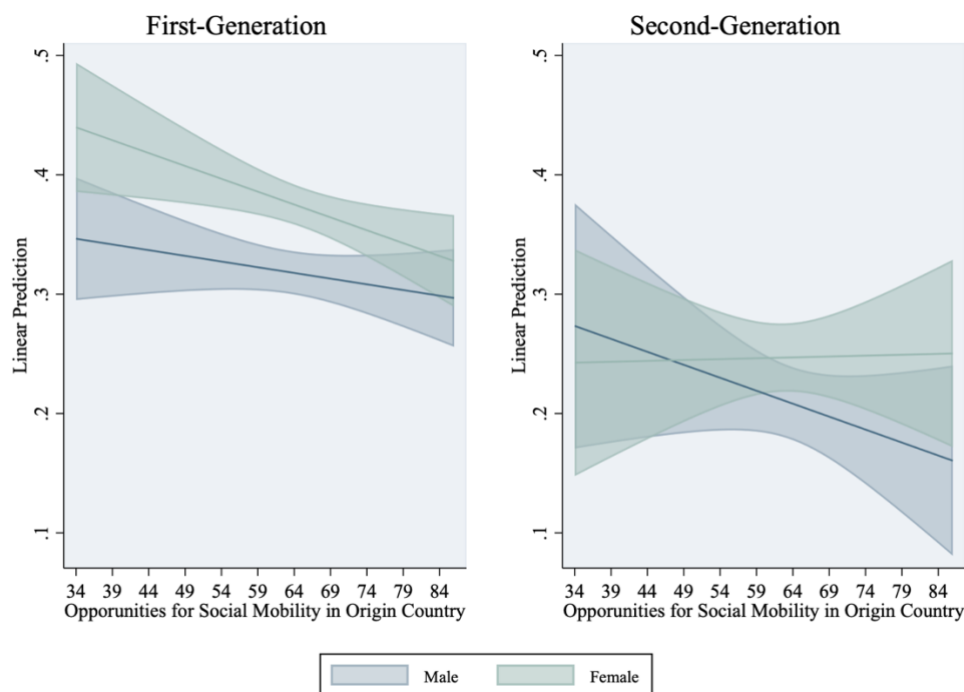
countries offering more opportunities for social mobility are less likely to be downwardly mobile. The linear prediction in Figure 4.3 shows that first-generation men have a positive gradient over the values of social mobility score. More specifically, there is a statistical difference in estimated probability between mobility scores 56, 0.25, and 71, 0.28. This means that the probability of immobility is higher for first-generation men from origin countries, offering more social mobility opportunities compared to fewer opportunities.

Figure 4.4, in relation to Figure 4.2, shows an increase in the probability of upward mobility for first-generation women. There is a statistically different probability for first-generation women from origin countries with fewer opportunities for social mobility than more opportunities. For example, the estimated probability at social mobility score 56 is 0.39 compared to 0.42 at score 71.

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***Figure 4.2 Linear Probability of Downward Mobility***

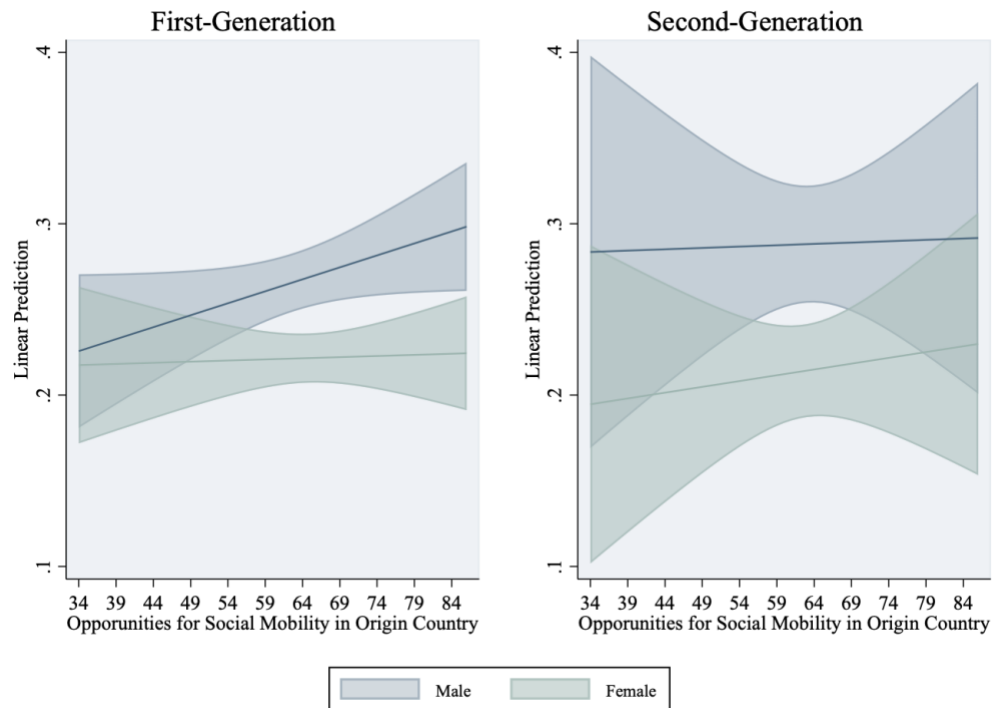
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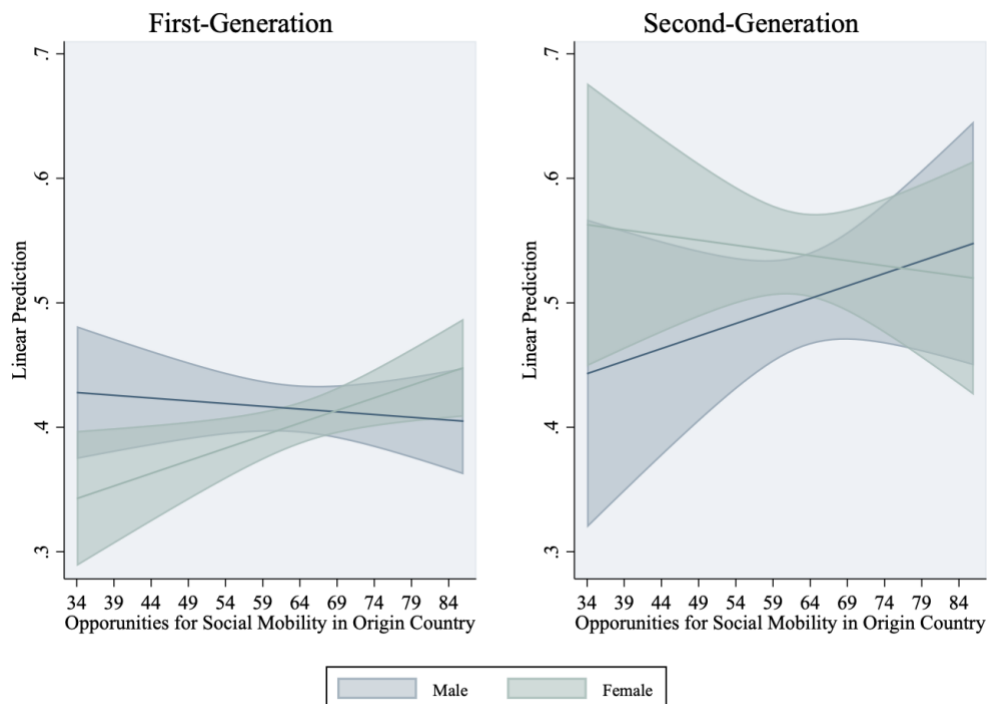
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**Figure 4.3 Linear Probability of Immobility**



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**Figure 4.4 Linear Probability of Upward Mobility**



## Relative Mobility

The association between respondents' and parents' occupational status over the values of opportunities for social mobility in the origin country is visualized in Figure 4.5. The association is differentiated by gender and first and second-generation immigrants. When comparing the association of parents' ISEI-score for first and second-generation, the most interesting result is shown by first-generation men. The figure shows that more opportunities for social mobility in the origin country increase the immobility of first-generation men. This small yet significant association of 0.00706 is also shown in Table 4.4 (model 4) through the interaction between the origin country and the parental ISEI scale, which means that countries of origin with more opportunities for social mobility decrease social mobility (i.e., increase the association of the parent's occupational status on the respondent's occupational status). The interactions may appear numerically small but reveal some substantial variation in mobility between origin countries<sup>14</sup>.

First-generation male immigrants show a significant and substantial increase in the average marginal effect of parental ISEI score in Figure 4.5. The association increases over the scores of opportunities for social mobility in their country of origin, whereas there is no significant change for women. This increase represents a stronger association between the respondents and their parent's ISEI-score, meaning that they become more immobile with each score increase in opportunities for social mobility in the origin country. The association shown in Figure 4.5 means, for example, that when the social mobility score is set at 56, the estimate of immobility for first-generation men is about 0.32. In contrast, the estimate of immobility when the social mobility score is set at 71 is about 0.43. The difference in the association between social mobility scores 56 and 71 is statistically significant for first-generation men<sup>15</sup>.

On the other hand, first-generation women show no significantly different association over different scores of opportunities for social mobility. For second-generation immigrants,

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<sup>14</sup> A sensitivity analysis was performed for first and second-generation immigrants where the social mobility ranking was replaced with dummy variables for each country in the index. The analysis showed no patterns in social mobility. This could be explained by low statistical power since each origin country is small.

<sup>15</sup> T-tests for first and second-generation immigrants showed a significant difference in the association for first-generation, between quantile 1 and quantile 3, which was datapoint 56 and 71,  $p < 0.05$ . When testing separately for men and women, only first-generation male immigrants show a statistically significant difference.

Figure 4.5 does not show a significant difference in the association over the values of social mobility in the country of origin. With 95 % confidence, there is no gender difference in the association of the parent's ISEI score.

**Figure 4.5 Average Marginal Effect of Parental ISEI Score**

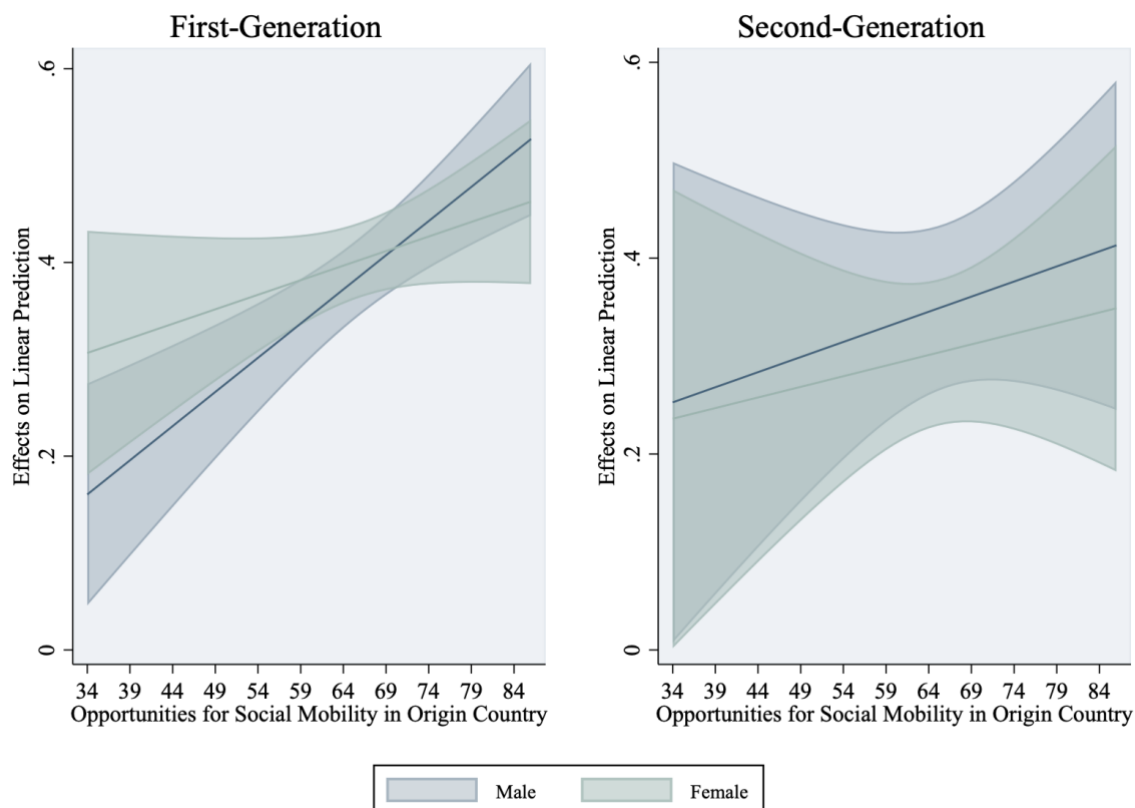


Table 4.4 shows the result of the regression models, differentiated by native respondents and first and second-generation immigrants. All models control for survey years and country, which is not shown in the table. The table shows no statistically significant interaction for second-generation immigrants (on a 95 %- significance level). This indicates that the rate of social mobility for second-generation immigrants' is not influenced by the opportunity for social mobility in the origin country. However, it could also be explained by the low respondent rate for second-generation immigrants. As shown in the four models for second-generation, gender is only significant in model 2 before controlling for opportunities for social mobility in the origin country. The significant association of being female compared to male for natives and second-generation shows a positive coefficient (model 4 for natives and model 2 for second-generation), which indicates that women, on average, have higher occupational status than men when keeping all other variables constant, which was shown in Table 4.1.

<i>Table 4.4 Regression Table over Respondents' ISEI-score</i>	<i>Native</i>				<i>First-generation</i>				<i>Second-generation</i>			
	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
<b>Parental ISEI</b>	0.384*** (0.00365)	0.379*** (0.00371)	0.379*** (0.00371)	0.392*** (0.00527)	0.375*** (0.0108)	0.376*** (0.0108)	0.388*** (0.0145)	-0.0795 (0.115)	0.334*** (0.0223)	0.327*** (0.0225)	0.324*** (0.0295)	0.148 (0.247)
<b>Opportunities for Social Mobility Score</b>							0.236*** (0.0243)	-0.112 (0.0730)			0.128** (0.0526)	0.0912 (0.153)
<b>Female (ref: Male)</b>		0.132 (0.104)	0.132 (0.104)	1.060*** (0.279)		-1.022*** (0.343)	-1.395*** (0.446)	-20.00*** (6.981)		1.590** (0.621)	1.344* (0.789)	9.819 (13.56)
<b>Parental ISEI # Opportunities for Social Mobility Score</b>								0.00706*** (0.00172)				0.00308 (0.00369)
<b>Female # Parental ISEI</b>				-0.0246*** (0.00708)				0.284* (0.171)				0.0144 (0.338)
<b>Female # Opportunities for Social Mobility Score</b>								0.276*** (0.107)				-0.108 (0.207)
<b>Female # Parental ISEI # Opportunities for Social Mobility Score</b>								-0.00405 (0.00256)				-0.000915 (0.00509)
<b>Age</b>		-0.169*** (0.0523)	-0.169*** (0.0523)	-0.168*** (0.0523)		-0.118 (0.173)	-0.0901 (0.224)	-0.0957 (0.223)		-0.579* (0.331)	-0.300 (0.440)	-0.207 (0.442)
<b>Squared Age</b>		0.00131** (0.000550)	0.00131** (0.000550)	0.00131** (0.000550)		0.00137 (0.00183)	0.000525 (0.00237)	0.000603 (0.00236)		0.00533 (0.00356)	0.00206 (0.00472)	0.00111 (0.00474)
<b>Constant</b>	29.40*** (0.359)	34.42*** (1.268)	34.42*** (1.268)	33.91*** (1.275)	27.82*** (1.228)	30.71*** (4.150)	16.11*** (5.576)	38.48*** (7.074)	32.86*** (2.789)	46.86*** (7.966)	34.23*** (10.82)	34.67** (14.49)
<b>Observations</b>	90 401	90 373	90 373	90 373	9 178	9 176	5 248	5 248	2 500	2 500	1 456	1 456
<b>R-squared</b>	0.140	0.141	0.141	0.141	0.161	0.161	0.219	0.224	0.135	0.140	0.157	0.159

**Note:** All models controlled for ESS wave and survey country, but are not reported in the table

Robust Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Next, this thesis will analyze whether the transfer of occupational advantages is gender specific. Figure 4.6 shows the effects of the parent's ISEI score, separated by father and mother, on the respondent's ISEI score, divided by son and daughter, and how the association varies over the scores of opportunities for social mobility in the origin country, with a 95 % confidence interval. The analysis is restricted to first and second-generation immigrants, including the variables from model 4 in Table 4.4, with an origin country in either of the 82 countries included in the social mobility index.

Figure 4.6 shows that the results for first-generation male immigrants, found in the main regression, are robust, as there still is a significantly positive slope over the scores of opportunities for social mobility in the origin country. For example, when the score of opportunities for social mobility is 61, in the association between father and first-generation sons, the estimate of around 0.34 differs from the estimated association when the social mobility score is 72, with an estimate of about 0.38 ( $p < 0.05$ ).<sup>16</sup>

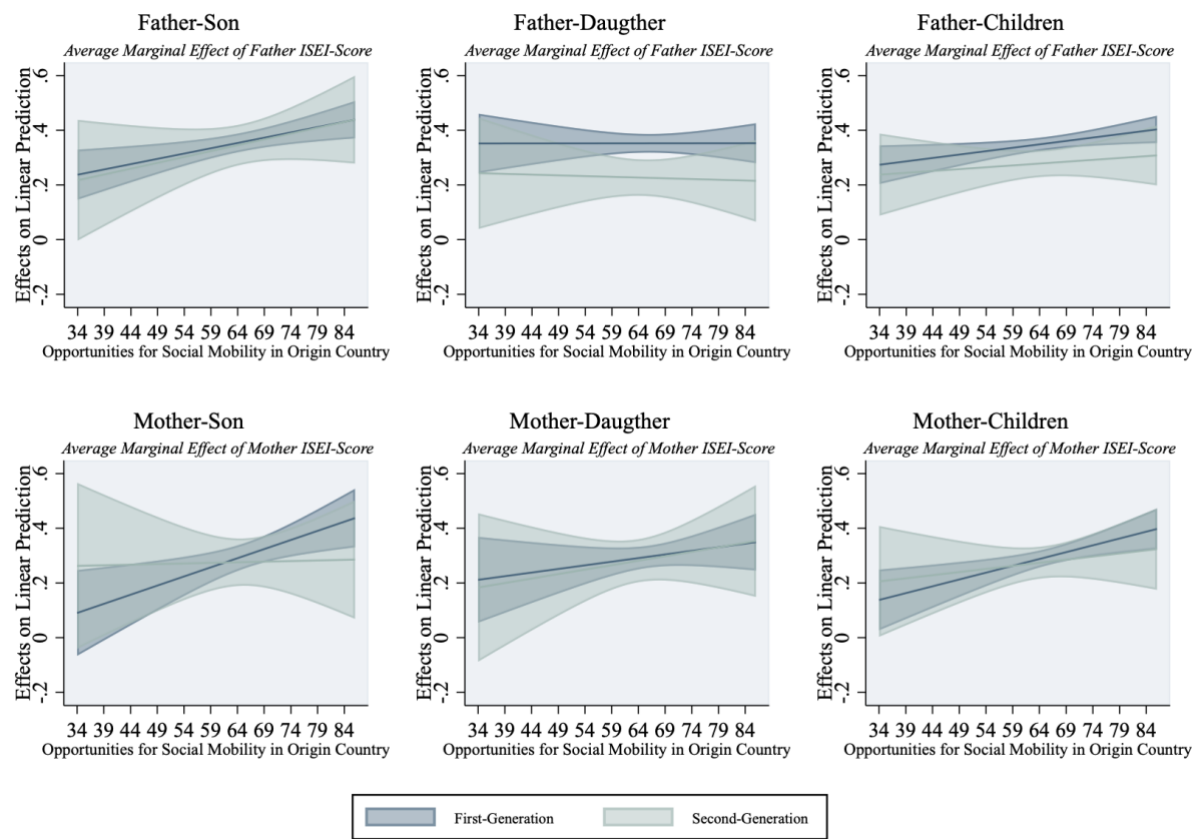
For the association between mother and first-generation sons, when the social mobility score is set at 61, the estimate is around 0.27, which is significantly different from the estimated association of 0.36 ( $p < 0.05$ ), when the score is set at 74 on the scale of opportunity for social mobility in the origin country.

Neither of the associations, including only first-generation daughters or second-generation, is statistically different at the different scores. However, the gradient between mother and son likely seeps over to the association between mother and children since this association is also statistically different ( $p < 0.05$ ) between scores 61 and 74, for which the estimates are around 0.27 and 0.34.

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<sup>16</sup> T-tests for first and second-generation immigrants, between fathers, mother, sons, daughters and both genders together were performed. The tests measured the difference in effect between quantile 1 and quantile 3, which was datapoint 61 and 72 for fathers and between datapoint 61 and 74 for mothers,  $p < 0.05$ ,

**Figure 4.6** *Average Marginal Effect of Fathers' and Mothers' ISEI Score*



# Discussion

This study aimed to examine differences in male and female immigrants' social mobility patterns in Europe based on the influence of the opportunities for social mobility in the origin country. The hypotheses and main findings from the OLS and LPM regression are presented in Table 5.1.

<i>Table 5.1 Summary of Hypotheses</i>	<i>Main findings</i>
<b>H1:</b> There is a positive association between the opportunities for social mobility in the origin country and immigrants' social mobility.	For absolute mobility, the results from this study have shown a positive association between first-generation female immigrants and the probability of being upwardly mobile when the opportunities for social mobility in the origin country increase, in line with H1. The same association was not found for first-generation male immigrants or second-generation immigrants.
	For relative mobility, the results presented in this study show that first-generation male immigrants from countries with more opportunities for social mobility are more immobile than their counterparts from origin countries with less opportunities for social mobility. This result contradicts the first hypothesis.
<b>H2:</b> The association between social origin and destination is stronger for male than female immigrants.	For absolute mobility, the results in this study have shown differences in mobility rates, where first and second-generation male immigrants have higher frequencies of immobility than female immigrants. However, this study could not show statistically significant differences between male and female immigrants' probability for downward, immobility, or upward mobility, influenced by the opportunities for social mobility in the origin country.

For relative mobility, despite the results of first-generation male immigrants being more immobile when the origin country has more opportunities for social mobility, this association could not be statistically differentiated from women.

## Absolute Mobility

This study has shown the differences in absolute social mobility between first and second-generation male and female immigrants (Table 4.2) and the probability for those groups to be either downward, immobile, or upwardly mobile (Table 4.3). The most important results were presented in figures 4.2, 4.3, and 4.4, where women showed less probability of being downwardly mobile when increasing the opportunities for social mobility in the origin country. Conversely, they had an increased probability of being upwardly mobile when increasing the mobility score in the origin country. However, first-generation men showed an increased probability of immobility when increasing the mobility score in the origin country.

As hypothesis 2 states, first-generation female immigrants are less dependent on their parents' occupational status for occupational success, as shown in this study. In contrast, first-generation male immigrants are more likely to depend more on their parents' occupational status when originating from countries offering more opportunities for social mobility.

Based on immigration status, the results of this study (Table 4.2) showed that first-generation immigrants had the highest frequency of downward mobility. In contrast, the highest frequency of second-generation immigrants was recorded as upwardly mobile. This can be explained by status loss for the first generation, as Engzell and Ichou (2020) theorized, and the assimilation of second-generation immigrants. However, this study has shown that the origin country influences first-generation male immigrants' absolute mobility, thus, their status loss. The status loss for first-generation male immigrants could explain the increased probability of immobility experienced by more advantaged immigrants.

Sjaastad (1962) stated that migration is a personal economic investment, and immigrants have strong incentives for success in their arrival country. This study has shown that first-generation female immigrants are more likely to experience higher occupational status, in



absolute rates, than their parents if the origin country offers more opportunities for social mobility. That women are more mobile than men has been shown in previous studies (Bukodi & Paskov, 2020). Still, the linear probability of first-generation male immigrants being more immobile with more advantages from their country of origin is a new addition to the mobility research. These findings shed light on migration as a personal economic investment, revealing that male migration is not necessarily an investment.

## **Relative Mobility**

Hypothesis 1 concerns the first research question in this thesis, whether the opportunities for social mobility in the origin country influence immigrants' social mobility. The answer to this is yes. However, as expected based on the previous research, first and second-generation immigrants show significantly different results. Whether or not the null result from second-generation immigrants is due to assimilation to the arrival country's social mobility patterns or the insufficient number of observations will be left unanswered. The social mobility of second-generation immigrants is an essential factor in understanding immigrants' mobility patterns, and future studies will hopefully continue in this line of research.

The results for first-generation immigrants show significant and interesting results. Immigrants from countries with fewer opportunities for social mobility are more socially mobile in their arrival country. This means they are less dependent on their parents' occupational status for their attainments. Although previous research has been unable to establish causality, studies have shown an association between inequality and social mobility, where countries with less inequality have higher mobility rates (Bukodi & Goldthorpe, 2018b; DiPrete, 2020). With the addition of this study, we now know that male immigrants from countries that perform better at creating equality have lower relative rates of social mobility when migrating, as well as an increased probability of absolute immobility.

The increasing rates of relative immobility, with more opportunities for social mobility in the origin country, could be explained by the status loss for first-generation immigrants, which is likely eased with increasing advantages and more resources (Engzell & Ichou, 2020).

It is safe to say, based on previous research and this study, that the field of social mobility research needs more standardization to get more comparability in cross-national mobility

estimates. Despite historical disparities in theoretical fundamentals, more and more studies are focused on creating comparable results between countries over time. This means that we likely will know more about immigrants' social mobility in the future and get social mobility indexes with observed mobility rates.

Overall, this study contributes to our understanding of the influence of cross-national social mobility patterns on immigrants' occupational success in their arrival country. Apparent from this study is the need for interventions focused on first-generation immigrants, as they experience a status loss in the arrival country based on higher rates of absolute downward mobility compared to second-generation immigrants and natives. However, because first-generation women, and less advantaged men, are more likely to experience less immobility, increased investments could simultaneously increase the societal return. Together with previous research, the status loss has been apparent, and by better utilizing the human capital of immigrants, society would experience more significant gains.

The results from this study have shown an interesting paradox between inequality and social mobility in the arrival country, which needs to be examined further by social mobility researchers. More specifically, it is essential to examine how larger immigrant groups, dominated by people with the same origin country, share mobility patterns. Berger and Engzell (2019) found that these patterns were partly due to the residential segregation in the U.S. However, there is residential segregation in Europe as well. With the right data, examining differences between immigrants' nationalities on a meso-level in the arrival country would be possible.

To sum up, the findings in this thesis could potentially be of great importance for policymakers in creating equal opportunities in European countries and for future researchers aiming to deepen our understanding of immigrants' social mobility patterns.

## **Limitations**

This thesis provides insights into social mobility among immigrants in Europe but faces several limitations. Data scarcity, especially for second-generation immigrants, limits the ability to draw certain conclusions, such as patterns of assimilation. The study's statistical power is also affected by data limitations, including the lack of comparability between

respondents' and their parents' occupational status, and the availability of only certain years of data. The World Economic Forum's *Social Mobility Index*, used in the study, only measures institutional opportunities and covers a limited number of countries, which may not accurately reflect the actual social mobility or the full range of respondents' origin countries. The study also faces issues due to historical male bias in research and the assumption of immigration as an active choice. While it acknowledges issues like human capital transformation problems and discrimination, these are not deeply discussed. Lastly, the study focuses on immigrants' occupational status without considering educational attainments, which could be a limitation.

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