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"HOW SOCIO-CULTURAL FACTORS MERGE INTO CAREER PATHS: AN EMPIRICAL INVESTIGATION OF INTERGENERATIONAL MOBILITY"

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EXECUTIVE SUMMARY

Intergenerational mobility represents one of the most critical topics for outlining equal opportunity as well as efficiency in a country (Narayan & Van der Weide, 2018). Indeed, it constitutes one of the main challenges that institutions must deal with, since mobility has significant political and economic consequences on income inequality. Moreover, policy makers have to take into account that the socio-economic status of individuals is partly caused by their family origins and backgrounds for which they are not responsible. As a matter of fact, educational attainments, occupational career and perceived income are often affected by individuals' provenience. These aspects underline the importance of identifying the key determinants and the most effective measures to reduce some of the imbalances associated with different birth allocations (D'Addio, 2007). The interest in this topic arose following various motivations: first of all, I am interested in understanding, under a theoretical lens, the dissertation of intergenerational mobility. Secondly, given my studies in the economic field, I often questioned myself around it. Curiosity was born because having a family business I have often asked questions about my future, about how I will experience mobility. Personally, I thought that deepening this issue, I thought it could become the fertile ground for gaining knowledge and acquiring skills that can allow me to have more positive prospects for my future. In fact, studying the phenomenon of social mobility is also interesting because the comparison between generations can become a source of inequality if there is a significant discrepancy between the two generations. This discrepancy can derive from factors of different nature that sometimes may not be caused by the individual himself, as much as a set of fortuitous events. A careful look at intergenerational mobility can stimulate a reflection on the factors contributing to positive social mobility, in order to continue investigating in this direction.

Precisely, I divided the discussion in four main chapters. The first chapter introduces and defines intergenerational mobility, as well as explains the distinction between absolute and relative mobility. The latter is useful to recognise the degree of openness of a society, since it

reveals the presence of disparities in the chances of achieving a certain socioeconomic status among individuals from different social origins. Subsequently, the main indicators that can be used to measure mobility are described along with their critical aspects. Moreover, the chapter gathers the most significant theoretical and empirical researches on a cross-country comparison. Thereafter, in the second chapter, the focus is on a literature review of research that deal with the major determinants of intergenerational mobility. In particular, the analysis focuses on identifying those factors, belonging to the family background, as well as individual characteristics (e.g. personalities and aspirations), which influence future development decisions. The third chapter examines how the social, institutional and cultural context can affect the correlation between parents and children. The literature overview allowed me to theoretically study the role that moderators, at individual and national level, can have on the relationship between parents and children. The final goal was to apply them into the empirical proposed model. Therefore, in the fourth chapter, I articulated the three main research questions for two frameworks, to which I performed multilevel regression analysis. Finally, I discussed the results obtained from this analysis and the relative theoretical and practical implications, together with the limitations of this study and suggestions for future research.

1. CHAPTER

ANALYSIS OF INTERGENERATIONAL MOBILITY

This chapter provides an overview of past and recent research on mobility across generations, focusing initially on the theoretical and methodological indicators applied to measure intergenerational mobility. Based on economic as well as sociological research, the chapter examines and illustrates the underlying mechanisms that determine and influence the degree of correlation between father and son socio-economic standing. Finally, the chapter ends with a cross-country comparison of mobility in developed and developing countries.

1.1 INTERGENERATIONAL MOBILITY: DEFINITION

For some time, economists and sociologists have been keen on intergenerational mobility and they are focused on reporting the mechanisms underlying the occupational persistence between parents and children. Intergenerational mobility is a branch of social mobility and it refers to extend to which an individual's social status differs, up or down in the socio-economic ladder, from his parents' position. Differently said, this type of mobility analyses the changes across generation and it focuses on the relationship between the socio-economic status of parents and the status their children will attain as adults (OECD, 2010). A country portrayed by perfect intergenerational social mobility is country in which the odds of achieving an occupational position are the same for every person, paying little heed to their family foundation. This implies that individual fulfillments depend on capacities and endeavors. In contrast, in a society characterized by low mobility there is a solid correlation to occupational positions between parents and children. Thus, intergenerational mobility represents also a key factor for the analysis of career mobility: if the career's success of adult children strongly depends on the socio-economic family context and on the father's occupation, there will be consequences in the son's initial job position, which, as a domino effect, will have a strong impact on his subsequent career (Ballarino and Barbieri, 2012).

As far as mobility concerns, higher intergenerational correlation means more reliance between parents and children (often displayed as persistence) and therefore less degree of mobility. Lower association indicates less intergenerational dependence and greater mobility. This implies that in a society with a high level of mobility, adult children are not influenced by their family background. On the other hand, a society that shows a low level of mobility implies that children will most likely follow their parent's footsteps.

Several sociologist studies have distinguished between absolute and relative mobility, the former captures the changes associated to a different allocation of the occupational structure in a society. In other words, it represents the likelihood that individual moves to one position to another. The latter instead, represents the extent to which "the chances of being found in one destination class rather than another, are the same for everybody regardless of social origins" (Breen, 2004; p.5). Thus, relative mobility (also called social fluidity) measures how children's position in occupational distribution is comparable to that of their parents. Moreover, it measures the possibilities that children own to attain a certain position, given to the fact that they are born in different origins. The greater the correlation between origins and final position is, the lower the level of relative mobility of society will be (Erikson & Goldthorpe, 1992).

Another important distinction is between vertical and horizontal mobility. Vertical mobility refers to an individual who changes his status, upwards or downwards, passing from one position to another, depending on whether the individual increases his occupational status or not. Conversely, horizontal mobility refers to changes in similar socio-economic status. As far as intergenerational mobility is concerned, upward mobility is an enhancement in offspring's occupational status with respect to the parental one. Vice versa in case of downward mobility.

Theoretical literature, notably the model developed by Becker and Tomes (1979) on parents' investment in children's human capital, affirms a negative relationship with inequality and a positive relationship with intergenerational mobility. This implies that, when parents' investment in children's human capital increases, there will be a reduction in inequality and an increase in intergenerational mobility. Figure 1.1 shows this relationship.

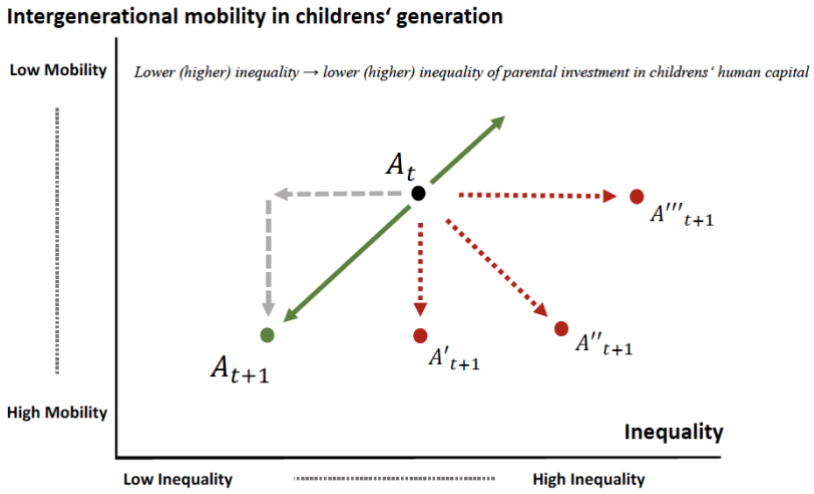


Figure 1.1 Inequality and Intergenerational Mobility.

Source: (Neidhöfer, 2015).

In a society, income inequality can vary from period t to period t+1, causing changes in intergenerational mobility. The movements along the green line represent "the expected ceteris paribus relationship between inequality and intergenerational mobility" influenced by parental investment in children's human capital (Neidhöfer, 2015; p.4). However, three other scenarios are empirically possible: A ', A "or A'", in which mobility can also be influenced by other factors beyond investment in human capital. Therefore, it should be taken into consideration that the socio-economic status of the offspring can be affected by three main channels: family, labor market and state (Corak, 2011). The family is the main determinant of the hereditary transmission of the traits between father and son, such as genetic skills, values and non-cognitive abilities; moreover, even the family background has effects on the status of offspring. The labor market, on the other hand, acts as an incentive for families to invest more on the human capital of their children (Solon, 2014). Finally, the state provides public investments to support families who do not have the necessary resources to invest in their children's economic and educational development (Davies et al., 2005). As a matter of fact, the state has a significant influence on the socio-economic status between parent and child and public institutions are a major cause of intergenerational mobility differences among countries (Ichino et al., 2011).

In addition, other studies have analyzed the possible correlation between intergenerational mobility and income inequality in a cross-country comparison. In order to represent this relationship, Alan Krueger created the so-called "Great Gatsby Curve" (Figure 1.2).

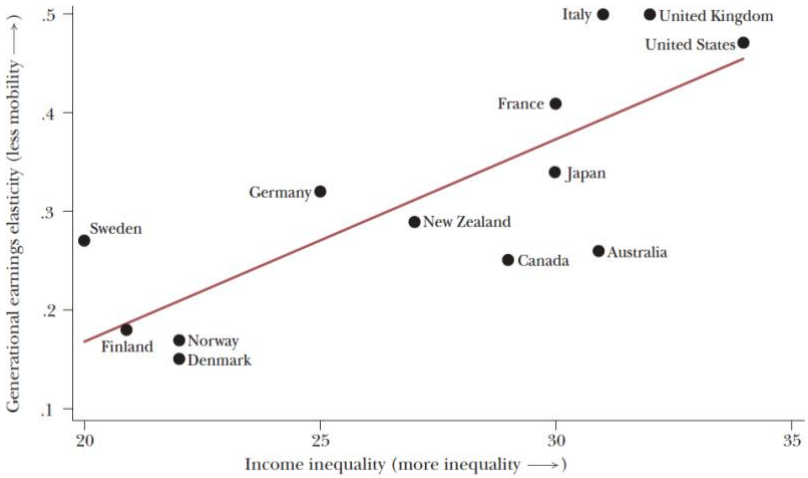


Figure 1.2 The Great Gatsby Curve.

Source: Corak (2013) and OECD

The curve classifies countries according to two dimensions: income inequality (measured by the Gini index) in the horizontal axis and generational earnings elasticity, as a measure of intergenerational elasticity, in the vertical axis. The graph highlights cross-country differences and it reflects inequality due to a different family background. For those born from top income parents there will be a different achievement and occupational role with respect to those born from bottom income parents, playing a decisive role in the occupational status that children will achieve compared to their parents. Indeed, countries with higher level of income distribution indicate lower levels of intergenerational mobility (Corak, 2013).

The graph shows that Finland, Sweden, Norway and Denmark have a low level of income inequality and a weak generational link; on the other hand, the United Kingdom, Italy and the United States are countries with a low level of mobility. In fact, in these last countries about 50% of persistence is transmitted between generations.

However, relatively little empirical research has analyzed the determinants designed to support the Great Gatsby curve, especially regarding the role of education. Indeed, a causal link between the two dimensions has not been ascertained even if a great level of inequality seems to rise the dependence of the children with respect to the family context.

1.2 MEASURES AND RELATED PROBLEMS

Intergenerational mobility has been examined by various disciplines: several studies have been discussed and analyzed by sociologists, although in the last two decades, research has been directed towards an economic perspective. The latter one focuses more on income and earnings

mobility whereas sociological approach is concentrated on occupational and social class mobility. However, a shared aspect is that mobility tends to be analyzed by the socioeconomic status (SES) of parents and adult children, measured by three different indicators: occupational status, individual income and education (Fox, Torche and Waldfogel, 2016). Unmistakably the three indicators collaborate and impact each other, making it difficult to do an entire investigation without considering every one of them. As a matter of fact, a society is related with the transmission of advantages and hindrances that condition education, occupation and wage. As a consequence, parents' income may influence directly or indirectly educational achievement and, in turn, education can affect the future professional career (D'Addio, 2007).

Most of the intergenerational analysis is descriptive: many research has been conducted with the aim of evaluating levels, patterns and trends of mobility. Nevertheless the attribution of causality is an important topic that researchers have begun to analyze only in recent years. Specifically, they are trying to understand to what extent and through which mechanisms the economic background of family influences the socio-economic status of children. Moreover, most of studies focus on individual income; although, recently, the analysis of mobility is also focusing on total family earnings (Fox et al., 2016). Indeed, it has been proved that the individual's earnings are not only influenced by the parent's income, but by the total earnings of the family (also wealth and benefits) too.

The methodological approach used to investigate mobility depends on the indicator chosen, since no single measure can provide an exhaustive analysis. Indeed, empirical research has figured out that degree of mobility differs over time and between countries depending on the type of measure applied, since indicators are affected by different dynamics. For these reasons each measure must be treated separately and calculated with different approaches (Torche, 2013).

Primary, the most important method applied to measure mobility is the linear regression analysis, in which intergenerational income elasticity (or earnings) is analyzed through the theoretical model of Becker and Tomes (1979; 1986): the logarithm of the adult child's income is a function of the logarithm of the parent's income. Transition matrices, mobility tables, log-linear models or multinomial and ordered logit regression are also applied (Moonen and Van Den Brake, 2011).

All these methods involve **common issues and challenges**: different criticisms have been made towards the elasticity regression analysis, since it is, by definition, influenced by the distribution of income. As matter of fact, the distribution of income may differ over time and may be different between the two generations in analysis. In order to solve this issue, the

intergenerational correlation coefficient is applied: this measure allows to generate a result not affected by fluctuations of income. This is due to the adjustment of elasticities by the ratio of standard deviation of income (Bjorklund and Jantti, 2009).

Another important issue is linked to data collection. In fact, to perform reliable tests, it is necessary to have a large sample of analysis and time series data. Unfortunately, this is not always possible, or it might occur that the data collected are not accurate. Moreover, researchers need similar and comparable data for individuals belonging to two different generations who lived in time periods in which there may be different political and economic implications. Differences in period of analysis causes bias and measurement errors (Grawe, 2006). Furthermore, most empirical studies focus only on the father-son relationship, rather than between father-daughter, omitting in this way an important aspect of analysis. Likely, recently, the analysis of mobility is also shifting its attention towards a female perspective (Fox, Torche & Waldfogel, 2016).

Similar problems also arise in the cross-country comparison analysis. Firstly, there is an issue related to the fact that variables that influence intergenerational mobility are specific and different in each nation, these variables are non-economic, institutional and economic factors. As a result, mobility differs among countries. Cross-country comparison becomes a significant challenge, also because there is neither "a desirable level nor an international benchmark for mobility" (OCED, 2010a; p.184). As with the collection of data from individuals belonging to different generations, also countries can go through periods of different growth and development. Therefore, data can change overtime, thus reducing their reliability and comparability of data.

Secondly, analysis is based on a collection of national dataset, therefore the homogeneity of the data may not be present because of different survey design, implying hardly comparable studies. The introduction of homogeneous international classifications, promoted by various national and international organizations, has partially resolve these problems. A significant example is that of John Goldthorpe and Robert Erikson who in 1979 elaborated an occupational classification, known as the EGP scheme, concerning the occupational mobility status, that has influenced the current international ratings. Indeed, based on this work, the European socio-economic classification (ESeC) was elaborated.

As well as problems common to all indicators, there are **specific issues** depending on the type of measure that researchers choose to adopt: the most applied is income. The latter involves a measurement error if parents and children are observed at different stages of their life cycle, since income fluctuations can generate upward biased measurement (Lorraine et al., 1997).

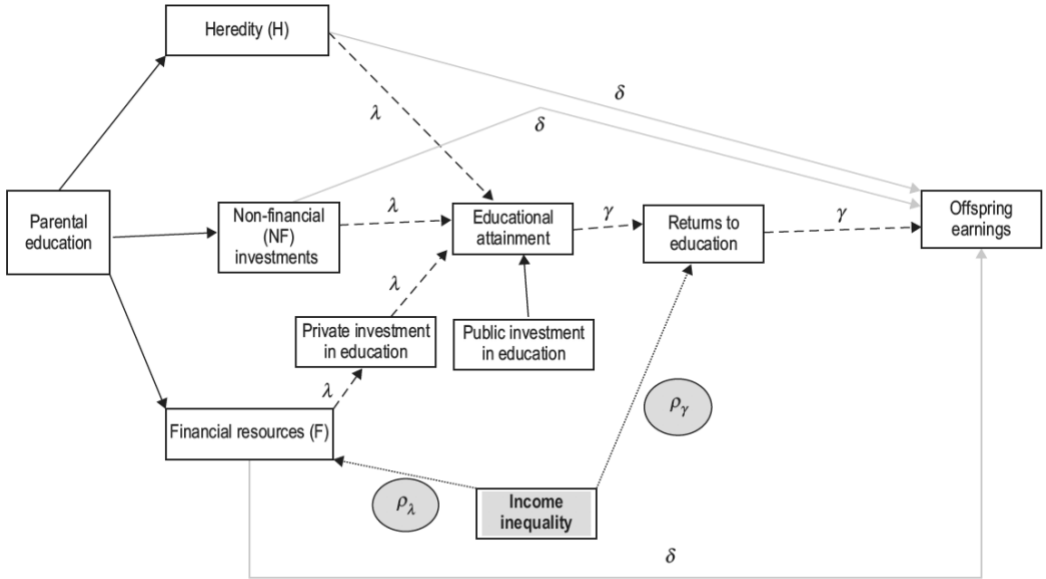
Luckily, the solution to this problem has been proposed by Solon (1992) and Zimmerman (1992). They use an average of the parents' income on consecutive years to overcome errors in the regression esteem due to the fluctuations of income. Furthermore, the importance of obtaining reliable data is again a critical aspect, worsened by the fact that in some countries there is a high rate of tax evasion and data regarding income level statements are poorly reliable. Another commonly used indicator is occupation, defined as the association between parent and child in employment choices (Emran and Shilpi, 2011). Some authors, such as D'Addio and Ichino argue that occupation is a good measure of the socio-economic status and that it is less subject to fluctuations in the level of income. However, it is not so easy to compare data across countries and over time, given the wide variety of occupational categories and social ladders (Piketty, 2000). Finally, a crucial measure is education. Educational mobility refers to what extent the educational attainment of children is influenced by the family context and the educational level of parents (Tverborgvik et al., 2013). The critical aspect in measuring education is mainly related to comparisons among nations since there are significant differences in education policies, for example the minimum and maximum education level or school attendance. However, this issue can be easily solved by comparing the probabilities of achieving a higher level of education in one country compared to another (Ichino et al., 1999).

1.3 MAJOR DETERMINANTS OF INTERGENERATIONAL MOBILITY

Literature underlines that intergenerational mobility is a complex and multifaceted topic. As matter of fact, there are many factors that influence mobility, either positively or negatively. Each factor can affect individual's socio-economic status in different ways and sometimes there is not a clear separation between the different elements, since they interact with each other and they may overlap (Nunn et. al, 2007). The determinants of intergenerational mobility can be divided into three different categories: social factors, institutional factors and economic factors. Within social factors, the most important elements involved are: education, family background and early years' influences, social capital, health and wellbeing and area-based influences. However, recent studies have shown that cognitive and non-cognitive abilities and skills, spatial mobility, geographical effects, ethnicity and race have also important effects on intergenerational mobility. On the other hand, regarding economic factors, the most important are: employment and labor market experiences, human capital investment and credit constraints. Some of these factors will be explored in this chapter, while family background and non-cognitive abilities, such as personality, will be illustrated in the next one. Finally,

institutional factors, such as institutional policies, cultural capital and political environment will be analyzed in the third chapter.

Many authors, such as Becker and Tomes (1986), Solon (2004), Duncan and Murnane (2011) and Corak (2013) deem that in countries with low levels of mobility, there is a huge gap in investment levels between rich and poor children. This gap starts from infancy and preserves in the first years of life through education and time that parents dedicate to their children. As a result, cognitive and non-cognitive skills are influenced even before schooling. After that, the imbalances in the parents' income level involves a high degree of school and neighborhood segregation (Harding et al., 2010), so the poorer are disadvantaged as they will attend schools of inferior quality compared to the richer ones. This process is expanded in the following years, since the level of investment of parents at the top of income level is greater than those with less economic possibilities, reinforcing the discrepancies between peers. Consequently, at the middle years of school, children show a significant gap in cognitive abilities (Marks, 2004), aspirations and ambitions (Sikora and Saha, 2007) and non-cognitive skills (Erikson and Jonsson, 1996). Finally, family influences continue in the choice of tertiary education, in the chances of children to obtain a degree and in the selection of the first occupation (Jackson et. al., 2007). This process is summarized in figure 1.3, in which the relationship between children's earnings and parental education is illustrated:



Note: H indicates a heredity pathway. NF indicates a nonfinancial pathway. F indicates a financial pathway. λ is the estimated link between parental education and offspring's educational attainment. γ is the estimated link between offspring's educational attainment and the returns to education. ρ_λ and ρ_γ refer to the correlation between these factors and income inequality.

Figure 1.3 Income inequality and the intergenerational transmission of (dis)advantage
Source: Jerrim and Macmillan (2015)

This correlation can be divided in two components: the first one income through the attainment

of children's education (dashed arrows); the second one, instead, represents all other factors of influence (solid gray arrows). As can be understood, education is one of the key driver through which family background affects the socio-economic status of offspring, since the future educational level of children is broadly determined by the educational and income level parents. Children, indeed, have a high probability of attaining a professional career similar to their fathers based on the influences transmitted. Many authors such as Erikson and Jonsson (1998), Bowles et al. (2005), Blanden et al. (2006) argue that mobility depends largely on education as mediating factor: indeed, upward mobility is significantly affected by schooling and therefore, education is one of the factors that determines income inequality in society. In addition, Blau et al. (1967) have shown that, in general, children born from higher social background perform better at school, which in turn leads to higher levels of education and then to achieve higher career level.

Several empirical studies have examined the relationship between education and intergenerational mobility: the most applied theoretical approach to describe the role of the educational attainment is the so-called "OED triangle" (Figure 1.4), in which the elements E (education), social origin (O) and D (social destination) are strongly associated (Goldthorpe, 2014). In particular, education affects destination (measured as adult children's occupation or income); and social origin (measured as parent's occupation or income) is empirically linked with educational attainment. The ED and OE's relationship has shown solid empirical results, whereas the "direct" OD association, not controlled by education, weakens.

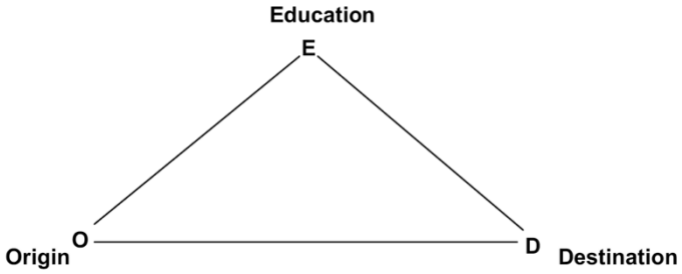


Figure 1.4 The OED triangle

Source: (Goldthorpe, 2014)

However, considerable divergences have been found in the empirical findings, particularly regarding the change in relationships within the triangle over time (Goldthorpe, 2014). Furthermore, analysis on the role of education in career success has focused mainly on the first occupation of the individual, leaving out the subsequent stages of career development. This could be a problem if the return of education emerges in the following years of the beginning

of the career, as supported by the theory of human capital; however, recent empirical models have shown that the effects of education are more restricted to the early years of the career than the later ones (Goldthorpe, 2009).

Another controversial determinant of intergenerational persistence is cognitive ability, which indirectly affects occupation because of its influence on educational attainment. Many researchers have analyzed the influence of intelligence and cognitive skills, measured as QI, in the transmission of professional positions through the generations. However, its contribution is still an open debate, since the transmission of cognitive traits is a complex element to be examined (Emran and Shilpi, 2011). Some economists and sociologists have tried to conduct various analyses: some empirical findings have shown a declining contribution in the heritability of cognitive skills on the occupational position between generations (Blanden et al., 2006). In contrast, other studies suggest that transmission of genetic ability plays a significant role in intergenerational persistence (Bjorklund et al., 2005; Sacerdote, 2007). For example, a study has shown that the father's social status and the cognitive ability of the child influence the achievement of the social status of the latter, with education as a mediating factor. During this study, it was also shown that the cognitive ability is manifested above all in advanced careers rather than in the first occupation (Deary et al, 2005). Furthermore, a recent research, carried out in the United States, has analyzed the intergenerational earnings elasticity between adopted children and non-adopted children: the adopted children showed that the correlation between fathers and sons would be halved if their biological bonds were removed (Liu and Zeng, 2007).

In addition to the transmission of cognitive abilities, parents can provide other resources to their children, such as values, beliefs and wealth; or they can also invest in their education, human capital or health (D'Addio, 2007). Indeed, numerous studies claim that the transmission of human capital linked to the employability can also take place, directly or indirectly, within the family. So, restrictions on investments of human capital is another main cause of intergenerational mobility, as limits in the accumulation of human capital cannot be offset by education in attaining career success. As the Becker and Tomes model (1979, 1986) affirms, the socio-economic persistence between generations is widely generated by investments in human capital and borrowing (or credit) constraints from parents having low income level. As a result, "the degree of intergenerational mobility is determined by the interaction of this utility maximization behavior with investment and consumption opportunities in different generations and with different types of luck" (Becker and Tomes, 1986; p.S31). The impact of credit constraints and level of investments on the achievement of children's careers is significant: in

fact, if the quality of investments is related to higher taxation and there is no state intervention, parents with a higher income level will be more advantaged than parents from more precarious situations.

For what concerns spatial mobility as contributor of intergenerational persistence, several recent studies have emphasized geographical mobility, area-based segregation and polarization, finding that spatial mobility can play an important role in influencing children socio-economic status (Numm et al., 2007). Evidences have shown that some societies are more "polarized", because of a growing spatial concentration in urban areas: high-status families live in a specific area, whereas low-status families live in a more disadvantaged one. As a result, concentrated environmental issues have been created, which increase the children's socio-economic disadvantage. Moreover, the economic disadvantage can be strengthened by the usage of new communication technologies and transport, especially the private ones, as it makes access to workplace more complicated for individuals in a lower economic status. A recent study, conducted in US by Kourtellos (2015) on spatial mobility, has attempted to explain mobility between generations using 9 categories of variables suggested by the Chetty model (2014): Segregation, Income distribution, Tax, Quality of Education, College Access, Local Labor Market, Migration, Social Capital and Family Structure. This research has discovered that five variables (segregation, income inequality, education, social capital and children with single parents) show a strong and solid correlation in explaining spatial change in intergenerational mobility.

In the last decades, significant employment and labor market trends have been identified with implications for the socio-economic status of children compared to that of their fathers. Firstly, in some specific areas or communities the levels of absence from work and economic inactivity have increased. Secondly, for some groups of individuals, an important cycle of "low pay/no pay" was noted (Numm et al., 2007). This highlighted important difference for some population groups, which face specific disadvantages within the labor market. This poses important issues about the employability of individuals born from families with disadvantaged positions, compared to families with more relevant positions, since parent's employment plays a crucial role in the child's ability to enter and advance in the labor market (Dickens at al., 2003). Moreover, another research, concerning the values transmitted by parents suggests that, in part, the experiences of parents in the labor market are transmitted to offspring, since "knowingly or not, parents tend to give their children lessons derived from their own social class and therefore help prepare their children for a similar class position" (Kohn, 1969; p. 234).

Finally, intergenerational mobility can also be partially influenced by factors such as health, well-being, ethnicity and race. Regarding health, the relationship between well-being and intergenerational mobility is not obvious; however, empirical studies have shown a correlation. Indeed, as stated by Robertson and O'Brien (2018, p.1), health represents "a key path for the transmission of the economic position through the generations ". The results of their research suggest that the role of early childhood health is a fundamental aspect in the persistence of intergenerational mobility and that the low weight of the unborn child is negatively associated with the transmission of status. In addition, another study showed that poor health causes downward mobility, while good health leads to upward mobility (Letelier et. al, 2016). For what concerns ethnicity and race researchers have conducted different analysis, focusing especially on educational inequality. Nonetheless, few studies have been addressed through the interaction that exists between race and gender (Ferrare, 2016). What has been discovered is that recently, the substantial black-and-white gap has been partially filled: parents with low levels of education influence children of different races alike. However, black children are more disadvantaged than white children who belong to parents with high levels of education. Another study conducted by Battacharyya et al. (2003) has figured out that black, Pakistani and Bangladeshi students tend to get poorer results at school than white students, while Indian and Chinese students tend to get better results than all other ethnicities.

In conclusion, there is a long history of research concerning the determinants of intergenerational mobility, although this topic still partially represents a "black box" (Blanden et. al, 2007). Nevertheless, as explained above, several academics are trying to bring to light the various mechanisms that govern the parent's and offspring's socio-economic status. Table 1.1 shows a summary of the contribution of several factors affecting intergenerational mobility.

Table 1.1 - Some of the channels underpinning intergenerational income mobility
Source:(D'Addio, 2007)

Variable	**Effect Size**	**+/-**	**Variable**	**Effect Size**	**+/-**
Education: Schooling or Parental Education	Large and significant	+	*Family size and structure:*	(few studies) Significant	+
Wealth	Large and significant	-	*Assortative mating*	Large and significant	-
Social conditions Economic activity rate measured at childbirth	Significant and large	+	*Labour market attachment* time spent in education or in unemployment	Large and significant	-

Cognitive abilities IQ	Small and significant	-	*Migrant status*	Significant	-
Other inherited traits Similarities among identical twins and fraternal twins	Significant and large	-	*Policies* Educational	Large and significant	+
Genetically inherited traits other than cognitive skills, (e.g. race)	Large and significant	-	Reducing income labour taxes on the poor	Unclear	
Non-cognitive abilities (and personality traits)	Significant and large	+			
Health status	Significant	+			

1.4 CROSS-COUNTRY COMPARISON

A wide range of studies have been conducted with the aim of understanding the relationship between parent and child socio-economic status, but in the last 20 years, research has also focused on gaining an insight into the differences in intergenerational mobility that exist among countries. Comparing societies is crucial to assessing the degree to which they provide equitable opportunities for individuals (Bratberg et al., 2007). In particular, cross-country comparison is useful for understanding how socio-economic status is transmitted between father and son and why intergenerational mobility varies among countries. As previously mentioned, the cross-country comparison analysis represents a critical challenge, because mobility measures are sensitive to the selected sample since data collected are not always so reliable and easy to compare. However, international organizations are trying to solve this problem by providing similar and comparable databases.

For what concerns international comparison among developed countries, a considerable number of studies have been conducted: Robert Erikson and John Goldthorpe (1992) have undertaken one of the largest comparative studies among countries and it was used as a reference for subsequent research. They compared 15 countries: England, Wales, France, Northern Ireland, Scotland, Republic of Ireland, West Germany, Sweden, Poland, Hungary, Czechoslovakia, Italy and the Netherlands, United States, Australia and Japan. The findings have shown that England and France were quite similar, while Germany and Ireland were more rigid societies. Vice versa, Sweden and the Netherlands were considered much more open. More recent studies have compared United States with other countries, such as Canada, Sweden, France, Germany and many others. Corak (2006) found that United States and United Kingdom are societies with a low level of intergenerational mobility, followed by France, Italy, Germany and Switzerland.

In contrast, Canada, Australia, Finland, Norway and Denmark are countries with a high level of mobility. In general, literature has observed a considerable difference in intergenerational persistence between US and other industrialized countries (Corak, 2014).

Overall, the analysis conducted on the OECD countries showed that family background plays a key role in the education, income and wages of children in almost all the countries analyzed (OECD, 2010). As matter of fact, there is a "wage premium" for children born to families with a higher education level and belonging to a higher income class. This effect is particularly marked in southern Europe (especially Italy and France), as well as UK and US. In these countries, the 40 % of the economic benefit of high-income fathers is transmitted to their children, compared to parents with a low income. In contrast, in the Nordic countries, Canada and Australia, less than 20% of the economic benefit is passed on from father to son (Figure 1.5). Indeed, evidence showed that Nordic countries have a higher level of mobility than southern European countries (Causa et al., 2009).

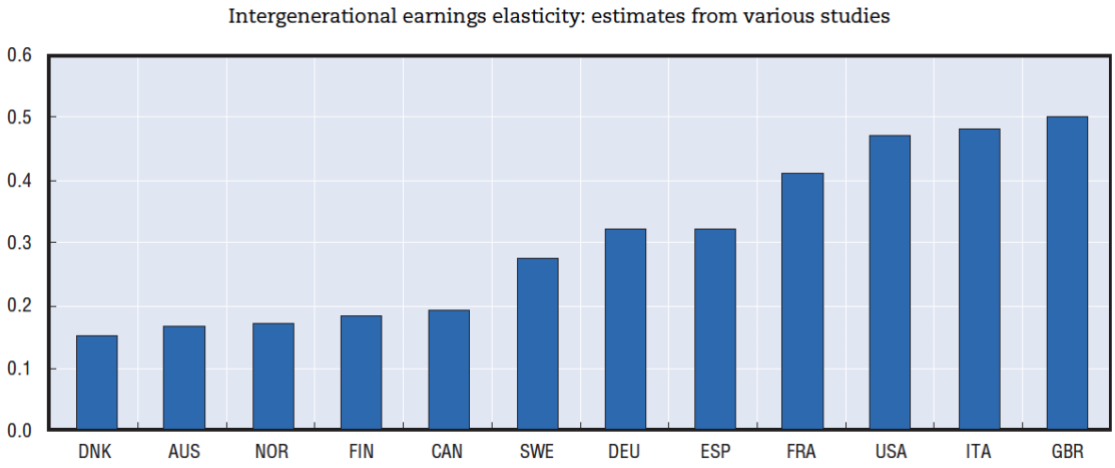


Figure 1.5 The strength of the link between individual and parental earnings varies across OECD countries[1]

Source: D'Addio (2007)

With emphasis on Italy, several studies have shown that Italian society is characterized by low levels of intergenerational mobility and high levels of income inequality (Breen, 2004). A study carried out by Mocetti (2007), found Italy as a highly immobile country, one of the least mobile in all developed countries. As a consequence, it cannot be defined as an open and completely meritocratic society. Through an analysis of the mechanisms of inheritance, the author has

[1] The height of each bar measures the extent to which sons' earnings levels reflect those of their fathers.

shown a remarkable degree of persistence in the level of education between parents and children and in the level of occupational status. However, a recent study, undertaken by Schizzerotto and Marzardo (2011), has revealed that the country, in the last twenty years, has improved its occupational status, i.e. it is moving towards a more equitable allocation of professional work classes, both as regards intergenerational mobility and career mobility. The Italian occupational structure has changed from an economy based on agriculture to an industrial economy. As a result, there has been an important and rapid change in the occupational status. The first changes in the Italian occupational structure began at the end of the 1930s, but a significant professional retraining took place at the end of the 1980s. This means that the structural change of the economy has not generated an immediate push towards greater equity, but it is a long process that happens slowly over time. This slowdown is mainly caused by the family, which acts as a brake on the opening of the occupational classes. Since, due to the weakness of the Italian institutive system, the family has tried to shape the path of individuals' development, acting as a protective resource. Educational achievements, occupational status and children's earning are affected by family background, in particular by parent's level of education, occupation and income. Indeed, as Schizzerotto and Marzardo (2008, p.38) sustain, "today, Italian families act as highly effective agencies of reproduction of inequalities. They thus avert the need for the fairer process of structuring inequalities that emerges, albeit with difficulties, from the economy."

Although most of the studies focus on the western countries, some research has been undertaken in East Asian countries, such as Korea, Japan and China. Empirical findings show that intergenerational mobility is lower in Korea and China than in Japan. Indeed, the latter reports lower levels of transmission of class inheritance than the other two countries (Takenoshita, 2007). Furthermore, evidence suggests that the level of socio-economic persistence between parent and child tends to be higher in China compared to developing countries, and it is in a range roughly similar to the one of the United States (Mazumber, 2015). Indeed, surprisingly, the developed countries are outperforming in terms of low intergenerational mobility the developing countries (World Bank Group, 2017). Although the analysis is still limited for developing countries, Latin America has been the subject of research in the last decade. The findings indicate a significant low level of intergenerational mobility. In addition to it, evidence is provided by Grawe (2004) who compares mobility in the United States, Canada, the United Kingdom, Germany, Malaysia, Vietnam, Pakistan, Mexico and Peru and he has found a stronger parent-child correlation in Latin American. However, the data collected are still scarce and difficult to match, so for future research they should be reviewed (Torche et al, 2016).

To conclude, the comparative analysis between countries has shown that the United States is clearly one of the countries among the lowest levels of intergenerational mobility, although this result partly depends on the measurement method applied. Secondly, the Nordic countries have higher levels of intergenerational persistence and lower levels of inequality with respect to southern European countries. Finally, the cross-country analysis shows a negative relationship between inequality and intergenerational mobility, except for Canada and Austria showing high levels of inequality and high level of mobility (Smeeding et al., 2011). This finding is consistent with the "Great Gatsby Curve" mentioned above, however more research is needed to guarantee the reliability of this relationship, since the correlation between inequality and mobility is complex and influenced by several factors.

1.5 CONCLUSION

To sum up, the first chapter has analyzed and defined intergenerational mobility in its different dimensions, focusing on the relationship that exists between mobility and inequality. As a matter of fact, the "Great Gatsby Curve" has highlighted how countries with the greatest income inequality are, at the same time or meanwhile, the least mobile ones. As a result, the advantages and disadvantages of inequality are transmitted between generations. In addition, attention was focused on the main indicators for measuring intergenerational mobility, which present considerable criticalities and challenges that researchers are required to consider.

Subsequently, from the analysis of the determinant factors of mobility, three main categories have been identified: social factors, economic factors and institutional factors. They interact with each other in conceiving a system aimed at influencing the socio-economic status of the child compared to that of his parents. Among the major causes, it has been highlighted the considerable role that education plays in generational occupational status, as many researches claim that education is related to occupation. In fact, it has been shown that children attending high quality schools or coming from parents with a higher education level, achieve better results in terms of education and occupation. These children have been compared with other coming from parents with a lower education or who do not have same living or working opportunities. Determinants of intergenerational mobility stretches out to other factors. For instance, cognitive abilities, race, health, spatial mobility and labor market conditions. Furthermore, educational outcomes, occupational careers and individual income are often influenced by the family background, which will be explained in detail in the next chapter.

Finally, the cross-country analysis has shown that intergenerational mobility varies significantly among countries. In particular, it has revealed that Italy, United States and England are among the least mobile countries in the world, whereas Nordic European countries tend to have higher levels of mobility than those in southern Europe.

2. CHAPTER

FAMILY BACKGROUND AND INDIVIDUAL TRAITS: A LITERATURE REVIEW

In this chapter, the analysis on the theoretical and methodological aspects of intergenerational mobility will be deeply studied. The focus will be on the extent to which the role of family background can influence the socio-economic status of offspring. Subsequently, an analysis of the individual characteristics, such as personality and aspirations, will also be addressed to figure out the contribution of these traits to child's career success with respect to his father's one.

2.1 INTERGENERATIONAL TRANSMISSION PROCESS

Several studies have sought the key aspects in the correlation above parents and children in various areas of analysis, including education and behavior. Researchers have tried to explain the process through which abilities, traits and actions are passed from parents to their children (called intergenerational transmission process). For example, it has been shown that children of successful and highly educated parents are more inclined or motivated to replicate their parents' behavior in the future. On the other hand, children of parents who smoke, use illegal substances or commit crimes will tend to follow their footsteps, unlike children whose parents are not involved in these actions. It has also been discovered that these inappropriate behaviors are positively associated with some socio-psychological traits, such as depression, emotional closure and locus of control (Duncan et al., 2005).

Researchers suggest the following model to explain how the process of transmission of behaviors, between parents and children, can take place (Figure 2.1). The first explanation for this mechanism stays that parents tend to transfer **general** traits to their children. The model A in the figure shows how a set of characteristics of the father (P_1, ..., P_n), combine with each

other to form a single characteristic P_z, which is, then, transmitted to the child (C_1, ..., C_n). P_z can represent, for example, parent's socio-economic status or parenting style.

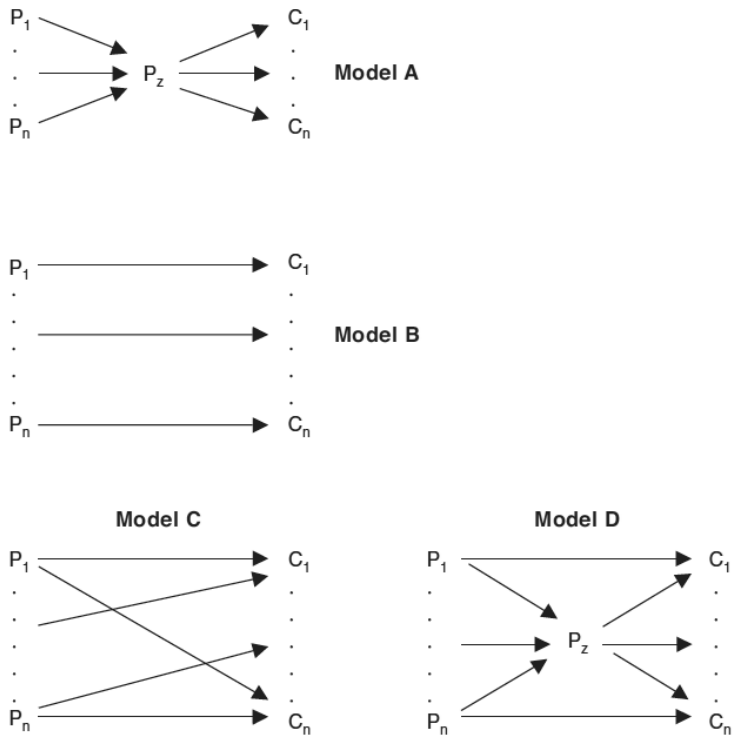


Figure 2.1 Models of intergenerational transmission process

Source: Duncan et al., (2005)

On the other hand, a second explanation stays that parents do not transmit generic traits to children, but rather certain **specific** characteristics of behavior. For example, if the parent smokes, he will be more likely to have a son who smokes too, but less likely to have a child who does not perform well at school. This means that only some specific traits are transmitted from father to son, which do not influence each other. This relationship is depicted in model B. The choice of one interpretation with respect to the other one implies consequences: if what matters most is the general transmission of skills among generations, then interventions that modify P_z could improve many aspects of children's behavior. However, if only transmission of specific skills prevails, then such interventions on P_z may no longer have effects. However, researchers have argued that intergenerational transmission is not just generic or specific. For this reason, two additional models have been coined. In model C, each parent's behavior has effects on different behavioral aspects of the child. For example, P_1 can influence both C_1 and C_3. On the other hand, model D represents a mixture of models A and B: parents' skills can directly influence a child's characteristic, or they can combine with each other to create P_z. Consequently, P_z will affect their child's skills.

Many studies have been undertaken with the aim of understanding what is the prevailing interpretation between generic or specific transmission. For example, Case and Katz (1991) argue that the process of transmitting parent's characteristics is specific. Although their work has limitations, their findings show that specific parents behaviors influence the same child's behaviors, without affecting other characteristics. Overall, empirical analysis supports more evidence for specific transmission of behavioral traits than generic ones.

2.1.1 MECHANISMS OF TRANSMISSION PROCESS

Researchers suggest four possible explanations for the transmission of characteristics from parents to their children:

1. "parental socioeconomic resources,
2. parenting style and home environment,
3. genetic inheritance,
4. role model" (Duncan et al., 2005).

The first hypothesis claims that the socio-economic status of the parents is the main cause for similarities between parents and children. Differently said, it asserts that parents' behaviors can be handed down to their children through socio-economic resources. For example, higher incomes allow parents to invest more in their children's human capital from the early years of childhood. Thus, providing their children a better lifestyle, higher quality of education and the possibility of living in safer neighborhoods. If these factors imply children's acquisition of more positive behaviors and traits, therefore, it means that socio-economic resources play a key role in the intergenerational persistence of parenting traits. However, empirical analysis does not suggest much support to this hypothesis.

The second hypothesis, parenting style and home environment, assumes that children are strongly influenced by parenting style, in terms of involvement and parental control. Generally, four parenting styles are identified based on the dimensions of warmth and control, through which the transfer of parenting characteristics to their children occurs (Baumrind, 1967). However, once more, empirical evidence does not give much support to this hypothesis because, thanks to a study on the effects of parental practices on maternal characteristics, it was shown that there was no correlation, or only partially, between them.

For what concerns the inheritance of traits and behaviors, much research has been conducted in this regard. According to Duncan et al., (2005, p.65), "each of a parent's genetically determined traits and behaviors should predict its counterpart trait or behavior in children". Indeed, it is a

common opinion that a large part of the transmission of parenting behaviors can be explained by genetic inheritance (Loehlin et al., 1994). Moreover, the genetic legacy has also been extended to personality traits, the so-called "Big Five" of personality, which has been found to represent a significant portion of the genetic transmission from parents to children (Loehlin and Rowe, 1992). Although the sample of data collected is not so broad, findings generally support this hypothesis.

The fourth and last hypothesis argues that the transmission of parental behavior occurs through role modeling. In fact, children observe the behavior of the parents and subsequently feel justified to replicate that specific behavior (Capaldi and Clark, 1998). For example, if a father smokes, the child may feel entitled to smoke too. Role modeling produces specific behavioral associations, since children imitate certain parents' practices. As well as for the genetic heritability of traits, also the transmission of parental models demonstrates empirical evidence for specific correlations of behavior between generations.

In conclusion, there is more confirmation of specifics than general intergenerational transmission, since specific behaviors are more likely to pass down among generations. However, the four hypotheses have been limitedly tested or there is a lack of direct measures, forcing researchers to take indirect measures. This leaves an open space for further and more detailed analysis.

2.2 FAMILY BACKGROUND EFFECTS ON INTERGENERATIONAL MOBILITY

2.2.1 FAMILY CONTEXT AND BACKGROUND

The extent to which an individual's income and occupation are identified with those of his family is a point of extraordinary debate for scholars, political institutions and regular discussions among individuals. Many researchers argue that family background plays an important role in shaping child's traits and behaviors which, as a domino effect, will influence his education and his future occupation. As matter of fact, the first context in which children relate is precisely that of the family of origin and parents represent one of the most important and influential pillar in their children's lives. In addition, family context plays a key role in the heritage of the social class, education and income, which have considerable impacts on the socio-economic status of children in their various stages of life (Erola et al., 2015). Their effects can be causally combined, as shown in Figure 2.2.

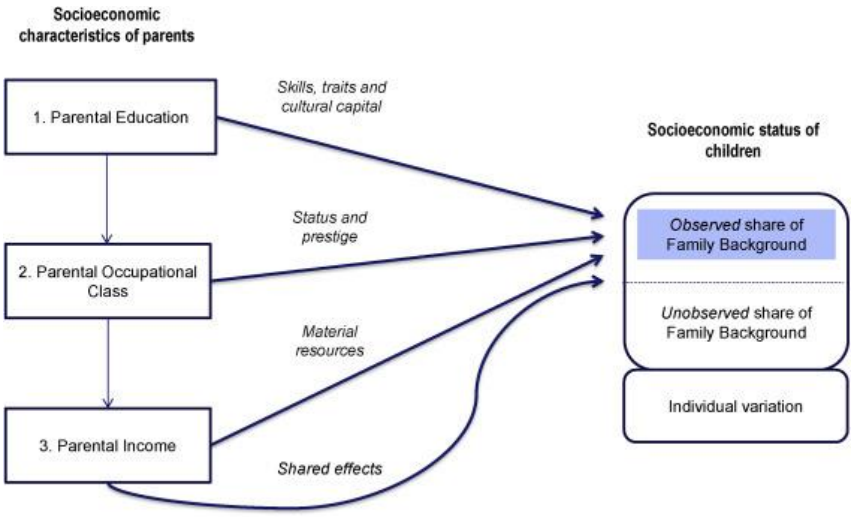


Figure 2.2 Effect of parental resources on socio-economic status of children

As the picture displays, parental education can have direct or indirect effects on the status that offspring will reach as adults. For example, children can directly assimilate their parents' abilities and traits through genetics or by observing their behaviors. On the other hand, education can also have indirect effects, through the parental occupational class that parents can achieve thanks to a higher level of knowledge. Indeed, the most educated parents have often greater earnings, which can influence the educational fulfillment of their children. Some parenting skills and qualities identified with their education may be useful simply because they offer access to a specific type of employment. As a result, parent's occupational class conveys the level of income, which indirectly guarantees the material resources required for children development since their infancy and can directly provide them status and prestige. Eventually, parental education, occupational class and income too have an impact on children's socio-economic status, on the grounds that a specific type of education (or absence of it) prompts certain occupations and which thus give a precise level of wage. These "shared effects" also include the impacts of all the unmeasured elements that link to the three socio-economic characteristics of parents. For example, favorable parental interpersonal relationships, which can include their associates from the school, their social companies in the labor market and colleagues met during recreational activities. Finally, "parental education, class or income are applied as a proxy for family background" (Erola et al., 2015; p.4). However, other elements belonging to family background can affect children's socio-economic status. These components, after an analysis of parental education and income, will be illustrated below in detail.

2.2.2 PARENTAL EDUCATION

As previously mentioned, **parents' education** is a fundamental aspect of influence in the socio-economic status of offspring, which may have both indirect and direct impacts on their development. There is wide evidence about the impact that educated parents have on their children's education. There are two reasons that can justify this connection. Firstly, the influence of parental education can be explained by children's imitation of their parents. For example, if parents usually read books, children will be encouraged to do the same. Secondly, education of young generation can be induced by the parents. This is the most accredited case as a well-educated parent will stimulate his child to a greater commitment in schooling. In addition, parents will be more attentive to the mental and monetary estimates of education and in this way, applies more weight to their children to get more at school (Erola et al., 2015).

A study conducted by Dubow and Boxer (2009) shows that the positive effects of parental education do not only affect childhood, through school performance, but also have effects in adulthood, in terms of education and occupation levels. They show that "parents' educational level, when the child was 8 years old, significantly predicted educational and occupational success for the child 40 years later" (p.1). These positive impacts have all the characteristics of being indirect because they intervene through youthful desires and educational achievements, rather than on the direct long-range impacts of individual factors of children, such as IQ and aggression. On the other hand, the authors have shown that the positive results of parental education are independent from family dynamics, such as negative family relationships, high IQ results and negative impacts of youth aggression. Another important finding is that "parental education affects children's aspirations for their own education as well as their actual educational achievement through adolescence" (Dubow et al., 2009; p.30). As a matter of fact, research has shown that parents' education gives their children a more stimulating home environment and more accurate perceptions in the results their children can achieve. These actions influence the construction of goals, aspirations and behaviors related to the future realization of children. As might be expected, there is a correlation between parental education levels and parents' wishes for the prosperity of their children, suggesting that the most qualified parents support their children to develop their own unique requirements (Davis-Kean, 2005). In contrast, McLoyd (1989) discovered that children of parents who encounter precarious monetary conditions are more skeptical about their educational and professional fates.

2.2.3 ASSORTATIVE MATING

A further strengthening element derives from the fact that, recently, what is called "assortative mating" is being established, i.e. more educated individuals mate with other educated individuals. This aspect means that social foundations within a family are more homogeneous and the impacts obtained by each parent are mutually reinforcing (Checchi, 2005). Moreover, parental education alters children's conduct through the distribution of parental time between work and family. More specifically, parents' education is an important indicator of future children's outcomes and behaviors, since the influence of education on parents' livelihood can change the amount of assets allocated to housing, schools and childcare (Davis Kean, 2005). For instance, a low level of schooling can mean lower salary for parents and impotence to make progress. Consequently, parents could consider children's commitment to the maintenance of family income as more essential than their education and they can also disfavor the continuation of their schooling (D'Addio, 2007).

2.2.4 PARENTAL INCOME

Another important source of child development is **parental income**. Several studies have tested the effects of parental income on young generation. It has been documented that low-income families are more likely to have children who obtain lower school results and, when adults, lower wages than children born in high-income families (D'Addio, 2007). This is due to the fact that families' investments on children's development are low, given the financial and income constraints of parents. Moreover, if restricted family financial resources limit the access to school and if a high level of education allows access to more generously compensated jobs, this paves the way for a "poverty trap": poor parents are hampered to invest resources into their children education. As a result, their young ones remain ignorant and underprivileged. In this way, there would be a discrepancy in the opportunities of improvement of individual abilities that rely on the economic possibilities of the family since investments in people from poor contexts are restricted by absence of liquidity. Indeed, greater investment in education and childcare makes it possible to break the cycle of intergenerational disadvantages caused by the low level of family income. However, the way in which the child's development is shaped by parental income depends on the source of income. As quoted by D'Addio (2007), it varies according to whether the source is "work, assets or welfare". For example, concerning welfare, some research shows that it is more likely to negatively affect some of the child's outcomes

depending on the nature of well-being received since the consequences are different from those related to child sustenance. For instance, welfare dependency may reduce the probability of young generation to graduate, it can reduce earnings and working hours and it may increase child's leisure circumstances. In any case, literature focuses more on how the salary influences the youngster's progress and the extent of these impacts. Distinctive perspectives on these topics are reflected in three theoretical models:

- In the "investment model", families use extra wages to invest in their youngsters' development. In this perspective, parents with major financial resources can provide better "contributions" for their advancement; whereas low income families cannot provide a share of the benefits that encourage their educational and occupational advancement (Becker, 1965).
- In the "stress model", a high family income can improve the child's progress by decreasing parental pressure. Thanks to this, the implementation of different styles of education can be adopted by parents. Vice versa, a low level of salary can affect the degree to which parents can support their children, since it can cause a family stress situation.
- In the "role model", family income is vital for the improvement of the child through the connections that are created between parents and children through behaviors, ideals and ambitions. For example, low-income parents can have qualities, needs and moods that affect the results of young generation unlike high-income parents. This model is based on the theory of the culture of poverty (Lewis, 1959) which argues that "people become, are and remain poor because of their beliefs, attitudes and behavior". These factors have an impact on the way in which different financial resources are conveyed through the generations.

Despite the different perspectives taken in analysis, each of them shows that parents' income plays a fundamental role in the investment of human capital of the second generation. However, not only parental education and income alone affect the status that children will attain as adults. In fact, their results also depend on early years of childhood, parenting styles, home environment, parental involvement, family structure (such as the number of siblings and birth order), gender of offspring, and social environment (D'Addio, 2007).

2.2.5 EARLY YEARS OF CHILDHOOD

In the first place, literature focuses on **early years of childhood** as, in this period, children begin to accumulate their first experiences and receive the first input from their parents. In fact, the stimuli received in the first years of life, implement a model of child development that is difficult to change, even through education. For this reason, family environment and time that parents dedicate to their children are key factors in determining the future achievements of the offspring. Several studies have identified three possible development channels that affect children in early years: child endowment (for example inherited characteristics), home environment and pre-school interventions, such as childcare and education (Waldfogel, 2004). There is an increasing number of researches to support the importance of early childhood care and early education (such as nursery schools) for the development of individual skills. Actually, evidence has shown that greater attention to child's early years involves a lower influence of family background (OECD, 2010). Despite the fact that preschool care and education are of paramount importance to successfully support children's learning; part of the children's achievement in the school years is not solely due to these factors. Firstly, children start life with different skills and characteristics. Secondly, the impact that children face in the first years of life are affected by parents and home conditions. In fact, as Waldfogel says (2004, p.1), "children are influenced by the amount of stimuli given by their parents and how sensitive their care is." These parts of parents' care are therefore influenced, in turn, by wage and monetary difficulties, parent's health, emotional well-being and the amount of other family members and households. However, understanding which factor influences more than another is a significant challenge for researchers, as these aspects contribute differently depending on situation and person.

2.2.6 FAMILY STRUCTURE, SIZE AND STABILITY

Secondly, in the last four decades, the **family structure** has changed: the number of divorced parents or single parents has increased, emphasizing the income gap compared to united families (Nunn et al., 2007). These changes have negatively affected children's development. In fact, children raised in families with a single parent tend to achieve lower school results and are more likely to remain unemployed (D'Addio, 2007). This is also confirmed by Feinstein's studies (2004), which have shown that children of separated parents get different educational and behavioral outcomes than children of married parents. Another research undertaken by

Margo et al. (2006), confirmed these findings, demonstrating that children of families with married parents tend to achieve better educational outcomes than children of divorced parents.
Regarding **family size**, (such as the number of family members, the number of siblings, and the birth order), it has been proved that the greater is the size of the family, the lower is the future educational attainments, since every additional child receives relatively fewer parental resources (Becker and Tomas, 1976). As matter of fact, generally, children grew up in small families obtain better educational results than children of large families. However, some studies show that the effects of a larger number of siblings are not only negative. As the family size increases, the possibility that older siblings have already attended school increases too. Therefore, it is more likely that younger siblings will receive support from older ones (Checchi, 2006). Even the birth order has its importance, since first-born children usually achieve higher educations than children born later. Furthermore, the association of wages between first-born and parents is higher than for children born later (OECD, 2008).
Another dimension of analysis is **family stability**. Several studies support the importance of a solid family situation: as Murphy (2006, p.37) said, "a child's cognitive and behavioral development benefits significantly from parents who create a stable and happy environment and who are very responsive and attentive." On the other hand, a conflictual environment, characterized, for example, by disputes or unstable parents' relationships, can have negative implications for children's behavior and school performance (Feinstein et al., 2004).

2.2.7 PARENTAL INVOLVEMENT

Finally, regarding **parental involvement**, literature suggests that it involves many factors, such as time spent with kids, parenting in the home environment, parental attention on school activities, and discussion between parents and children (Al-Matalka, 2014). Differently said, parental involvement means the time parents spend caring for their children, which is essential for the development of their abilities and human capital. Furthermore, home involvement has a significant impact on children's performance in school activities, learning and children's cognitive abilities. From a study conducted by Gayle et al. (2018), considering parents' education, skills and income, it has been shown that parents' investment over time in the first years of their child's life has a great effect on their child's development, particularly on their education. Moreover, it has been shown that parents with a higher level of education and more skills tend to devote more time with their children. In fact, the greater the scholastic level of parents, the greater would be the parental presence at home. In this manner, the

intergenerational educational relationship may mirror the way that more capable parents get more education and, in turn, they have better capable youngsters who get better education. Moreover, from the analysis of the authors, a causal effect between parental education and parental involvement in the lives of young generation has been demonstrated on school results. However, the time spent by parents depends on how families are divided between work, leisure time and domestic activities. In particular, Gayle et al. (2018) explicitly investigate the effects of the business sector on the distribution of family time and on the educational results of children. They identify that parents' time is extraordinarily influenced by "marriage markets", parental occupation and parents' socio-economic status. As a result, they show that partner and occupational structure significantly influence intergenerational mobility trough time spent at home. As matter of fact, parents with higher occupation level have the ability to support their children to do their homework, and also to encourage them to achieve better education. Finally, the working status is firmly connected to the salary of the family. Consequently, parents of high salaries can give skills, learning and tools that are vital for young generation (Midraj, 2011).

2.3 NEIGHBORHOOD EFFECTS ON INTERGENERATIONAL MOBILITY

Some studies have focused on the impact that social environment, especially neighborhood, has on intergenerational mobility. In fact, even the context in which children are immersed causes effects on their development and on the inputs they can receive. In fact, a stimulating neighborhood, characterized by respectable and cultured families, it can lead children to higher aspirations or motivations than offspring born in unfavorable contexts. For this reason, some researchers have analyzed more closely the effects that neighborhood can imply on some children characteristics. The research conducted by Chetty and Hendren (2015, p.1) has analyzed the effects of neighborhoods on children's income. They have documented that communities influence "intergenerational mobility through the effects of child exposure". This implies that youngsters' results, whose families move to a superior neighborhood enhance directly in extent to the time spent developing around there. The authors show that experiencing childhood in a superior district from birth builds a child's wage by around 10%. In any case, the impact of the area is based on the time spent by young people in that place. Ergo, empirical findings show that neighborhood exposure during childhood must be considered. However, the impact of neighborhoods on the children improvement remains an open discussion because observational examinations (undertaken by sociologists) have found interesting variations in

neighborhoods with regard to economic results. In any case, most empirical surveys have found few confirmations that areas influence economic performance.

Additionally, any observational research, aimed to understand the impacts of family and neighborhoods, is muddled by the fact that these two factors are highly associated: those youngsters who experience childhood in networks with schools, mates and good examples that support great grown-up results likewise live in families with positive qualities. Along these lines, recognizing family and neighborhood influences, is complicated. Nonetheless, these investigations recommend that elements related with family are more significant than elements associated with community (Björklund and Jäntti, 2007).

2.4 IMPACT OF INDIVIDUAL CHARACTERISTICS ON MOBILITY

Once influences caused by family background have been well defined and identified, it is important to consider the other individual variables that can influence career decisions. More specifically: school outcomes, cognitive qualities, investment in human capital and other determinants of intergenerational transmission (illustrated in the first chapter) have proved to be solid indicators of the success of the younger generation. However, literature recommends that these factors cannot fully explain all the determinants of intergenerational mobility. Other individual factors can come into play and influence the gap between parent and child's occupational position since career success is, to a certain extent, driven by one's own individual characteristics. Non-cognitive abilities (such as personality), aspirations, motivations, locus of control and talent are examples of factors that can affect individual career decisions.

The procedures describing career choices have been described from two perspectives:

- individual differences of personality and ability;
- the socio-economic conditions (that underline the social class and the family environment).

For instance, the conceptualization of career decision, as an outflow of individual characteristics, presupposes that specific personal qualities relate to the characteristics and results of a chosen occupation. As indicated by this vision, the career decision is the side effect of a procedure in which individuals seek perfect working environments based on their individual characteristics. In conceptualizing career advancement, as a purely individual process, does not adequately take into account the limitations of social conditions. In fact, for some people, professional improvement depends more on the current social structure, and on existing opportunities rather than on the career choice itself (Thomas et al, 2015).

Literature suggests that there are at least four sources of individual characteristics that can influence occupational career decisions:

1. personality traits,
2. aspirations,
3. career interests,
4. values and attachment styles (Thomas et al, 2007).

While personalities and occupational interests have been object of major study, values and styles of attachment have received moderate attention. In any case, values and styles of attachment can play an important role in occupational mobility. Since values are accepted to have an improving effect on human behavior: they can play a fundamental role in deciding job choice. Furthermore, styles of job attachment can affect the prospect of occupational change that people might choose.

In the following paragraphs the five individual sources that influence career decisions will be illustrated in detail.

2.5 INFLUENCE OF PERSONALITY ON CAREER DEVELOPMENT

Identifying the determinants of intergenerational mobility is a difficult task for scholars. Certainly, family background represents a significant starting point to explain the socio-economic status of the children. However, scholars have wondered to what extent children resemble their parents and which family characteristics affect their children's income, regardless of their cognitive abilities and level of education. Researchers have identified a valid response in personality traits because there is a "high degree of heritability of personality traits (both genetic and environmental) and personality is relatively stable over time" (Bowles et al., 2005; p.213). The extent to which personality traits influence children's development is a major debate among researchers. Indeed, several scholars, including sociologists, psychologists and economists, have focused their analysis on investigating the role played by personality traits in determining individual success. However, the study of non-cognitive skills as a factor influencing intergenerational mobility, is a topic of interest developed in recent years (Blanden et al., 2006).

As stated by a study conducted by Bowles (2005, p.209) "the Big Five personality inventory (extraversion, agreeableness, conscientiousness, openness to experience and neuroticism) as well as the locus of control and self-esteem have been recognized for their ability to explain the differences in academic achievement and professional success". In addition, further analyses

have tried to investigate which other individual characteristics can affect career success. In this regard Jecnks (1979) and Filer (1981) have identified social affectivity, friendliness and culture as factors of vital impact in the intergenerational mobility gap. In the same way, another dimension that has proved to be relevant, is the perception that individuals have of controlling their own results. In fact, the more a person believes that thanks to his efforts and abilities he can achieve the desired results, the more he will achieve professional success (Duncan and Dunifon, 1998). Other studies have instead focused on those factors that Bowles et al. (2005) define as "non-determinants of socio-economic success": that are physical and aesthetic characteristics. The authors have shown that "seemingly irrelevant personal characteristics, including beauty, height, obesity and even if an individual keeps clean house, are often solid predictors of earnings" (p.9). Therefore, not only personality traits can influence individual career success, but also physical and aesthetic characteristics. Moreover, external appearance provides higher income for both sexes (Biddle and Hamermesh, 1998).

Several researches have tried to provide a more comprehensive definition of the concept of non-cognitive competences. They refer to those non-cognitive and mental abilities that affect the determination of individual profits, such as personality traits, aspirations and motivations. These competences differ from education, intelligence and experience, which cannot exhaustively explain the variance of profits between parents and children (Bowles, 2005). Authors such as Osborne (2000), Heckman and Rubinstein (2001) have argued that these non-cognitive skills have a huge impact on individual economic performance and on educational attainment. For instance, their study conducted in the United Kingdom and the United States has shown that personality traits such as "externality, aggression, and withdrawal have statistically significant influences on wages" (p.210). Moreover, they have also proved that other traits, such self-esteem, perseverance and self-direction affect labor market results. Besides, other authors such as Heckman, Urzua and Stixrud contributed to the literature on generational persistence by demonstrating the impact of non-cognitive attitudes on education and future income.

2.5.1 HERITARY TRANSMISSION OF PERSONALITY

Few researchers have focused on the economic implications of hereditary transmission of traits that occur in the family. Especially, on the transmission of personality from parent to child, which has proved to be a highly hereditary element. Personality transmission refers to children that are likely to acquire traits and personalities similar to their parents; however, the impact of

personality inheritance on the transmission of income remains ambiguous. In this regard, Bowles et al., (2005) have developed a model to understand how personality is linked to income and intergenerational transmission of income. Their results demonstrate that personality improves the understanding of income transmission. In fact, the still unknown causes of the intergenerational transmission of income decrease by a non-negligible sum when the model considers the attributes of the personality. Furthermore, about 11% of the intergenerational relationship in income is deducible from family similarity in personality. Therefore, the second part of the chapter aims to analyze those individual variables that are able to influence and modify the nature and strength of the effects of family background and of the economic and social factors external to the individual.

Therefore, there are some personality traits that parents convey to their kids that could impact on children's work decisions and on their future economic results. Be that as it may, what remains obscure to scholars is the magnitude of the impact that this resemblance between personalities has on the intergenerational transmission of profit. In this regard, Bowles et al. (2005) developed a behavioral model that can explain the extent of the impact of personality similarities between parents and children on income transmission. The model is depicted in Figure 2.3.

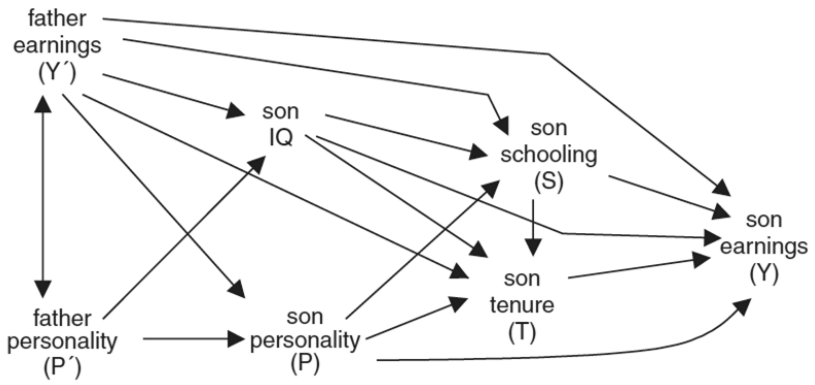


Figure 2.3 Behavioral model

Source: Bowles et al. (2015)

"Son schooling" and "son tenure" are variables that represent the magnitude of human capital. In addition to these variables, it is also believed that cognitive performance helps to explain the transmission of socio-economic status between parents and children. Therefore, the variable "son IQ" has been especially included in the model as the main determinant of achievement at school. Finally, given for granted that personality traits have proved to be a determining factor in career success transmitted between parents and offspring, the variables "father personality"

and "son personality" have also been included in the model. This model proposes that patterns of income transmission behavior can clarify significant changes in the transmission of profit not represented by human capital factors. Indeed, changes in human capital only represent a part of the transmission of income since it seems that economic opportunities of young people are limited by family affinities. This research helped to identify that personality significantly explains the transmission of earnings from father to son; in fact, the authors find that "personality is able to elucidate a significant mechanism by which families transmit economic status" (p.221). Moreover, similar personality traits between parents and children also contribute to economic success. Therefore, non-cognitive skills are a fundamental determinant of intergenerational income mobility, controlling for the level of education, tenure and IQ.

2.6 INFLUENCE OF ASPIRATIONS ON CAREER DEVELOPMENT

During their adolescence, teenagers experience a phase of great importance in the development of future professional career. Adolescents' forthcoming, wishes and expectations may have critical outcomes for their following upgrading. Indeed, some research has stated that youngsters' aspirations are critical indicators of adult achievement; since it has been shown that young generation with high-level goals will likely reach career success. As a matter of fact, children with high career aspirations shown a high persistence in pursuing their objectives with respect to their peers less ambitious. (Schoon and Polek, 2015).

Rojewski (2005) defines **career aspirations** as "goals or choices expressed in careers", alluding to a person's dreams about his future ideal occupation, which can have an impact on individual prosperity and enduringness in carrying out a profession. According to this concept, Benjamin et al. (2014) described career wishes as the procedure by which young people decide their goals as they enter adulthood. Career goals are a measure of individual's "internal career", which describes how a person sees his career improvement with regard to his intrinsic objectives and desires (Ming et al., 2007). Therefore, aspirations are individual's inner vocations. These vocations also influenced by social context, environment and institutions. In fact, it is assumed that family social status, education and ability affect career aspirations. However, the relationship among ability and aspiration is not straightforward, since "childhood ability is more strongly related to status attainment in adulthood than to occupational aspirations expressed as a teenager or time spent in education" (Schoon and Polek, 2015; p.3).

Another significant relationship is between goals and socio-economic status. A research conducted by Buchanan (2002) argues that professional goals in adolescents have reliably been

related with high socio-economic status of parents, inward locus of control, confidence and scholastic accomplishment. Indeed, it has been argued that the impacts of the parents' socio-economic status are mediated by individual factors, such as aspirations and motivations about schooling and career development (Erikson and Jonsson, 1996). Career aspirations, in particular, the objectives for administrative or managerial occupations, are linked to educational desires. Differences in occupational goals have been discovered based on the level of social classes and children's cognitive abilities (Sewell and Hauser, 1975). The young generation, in the search for which occupations are adequate or not, takes as a reference model different social groups. Finally, they are influenced by their parents' desires. Furthermore, it was found that parents have different aspirations depending on the social class they belong to (Schoon and Parson, 2002). In the following model, called *Contextual Systems Model* (figure 2.4), the link between social class, education, family environment and aspirations is depicted.

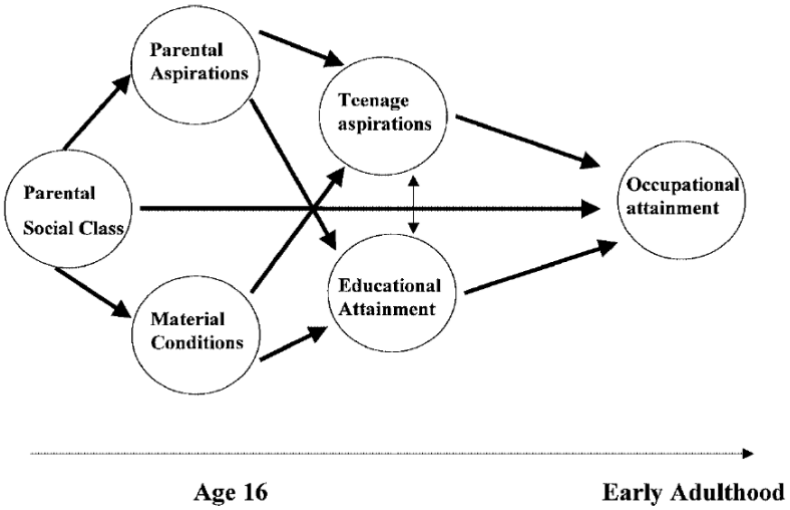


Figure 2.4 Contextual Systems Model
Source: (Schoon and Parson, 2002).

The model of contextual systems was developed to gain a better understanding of the procedures that associate family and social context with individual's development, since he is inserted into an interconnected system that has direct and indirect effects over time. According to this model, adolescent aspirations are influenced by material conditions in the home environment and by parenting aspirations, which are, in turn, influenced by parental social class. The latter also affects children's education and occupational achievement. Finally, children's aspirations will influence scholastic and occupational attainment. Therefore, the model states that educational attainment and children aspirations are the main driving force in

occupational attainment, mediated by the influence of family background. However, parental social class is a strong predictor of children's educational and occupational attainment.

In conclusion, career mobility, although largely influenced by individual's aspirations, is closely intertwined with social context. Nonetheless young people are ambitious in their career aspirations and increase their efforts to achieve higher qualifications. The traditional criteria of influence, such as family, environment and institutions, continue to contribute to the distribution of opportunities.

2.7 INFLUENCE OF CAREER INTERESTS, VALUES AND ATTACHMENT STYLES ON MOBILITY

Personality and aspirations represent the individual factors of greater importance that drive occupational achievement. Nevertheless, literature suggests that individual's career interests, values, attachment styles and motivations can influence career success as well.

Firstly, scholars have hypothesized that individual **career interests** influence their career decisions. The most used model for the analysis of the type of occupational interests is the so-called "Holland's model", which identifies six possible areas of interest: these are "realistic, investigative, artistic, social, enterprising and conventional" (Thomas et al, 2007; p.1). Most of these interests play a significant role in influencing career decisions. For example, social, extrovert and investigative people may probably experience more horizontal mobility, as they may want to explore more work possibilities and they are open to new experiences. On the other hand, ambitious people are more likely to experience upward mobility, since they have high managerial aspirations. In contrast, other people may prefer family environments or occupations where job security is high. For instance, it turned out that people who are risk averse prefer to find a stable job. Finally, individuals who demonstrate an artistic inclination may have the ability to start an independent job, a sort of growing upward mobility.

Secondly, **values** are "internalized beliefs about how to behave" (Thomas et al, 2007), which are different from personality traits. Values determine the way people see outer stimuli, inspire individuals to act as per these values, and consequently impact work conduct. Individuals' values have not been particularly considered in connection to career mobility, even though it has been proposed that work values influence career aspirations and career decision (Greenhaus et al, 2000). Schwartz (2001) developed a scheme of individual values, which are: control, achievement, gratification, incitement, self-course, universalism, consideration, congruity, convention and security. These values can influence individuals at various level of career

mobility. For example, success and power ought to be especially indicators of upward mobility, as aspiration frequently advances career mobility.

Finally, **attachment style** refers to the individual's inclination to create strong emotional bonds with other ones (Bowlby, 1977). The attachment styles shaped in young people continue to be essential throughout life and influence feelings, discernments and practices. People can be grouped into four classifications based on two dimensions: self-view and others-view (Thomas et al, 2007). Those with a positive vision of both themselves and others have a stable attachment style with other people. Those who have a positive but negative view of others have weak attachment styles. Those who have a negative view of themselves, but positive of others, have not very stable attachment styles. Finally, those with a negative view of both themselves and others see terrible connection styles. In the same way as the other individual factors described above, the style of attachment can vary, upward or downward, career mobility.

2.8 OTHER INDIVIDUAL FACTORS INFLUENCING CAREER CHOICES

To have a more comprehensive idea of the individual characteristics that affect intergenerational mobility, it is necessary to include other possible determinants of career success. For this purpose, the following individual factors are also taken into consideration: gender, age and employability. These factors will be briefly explained below.

Firstly, focusing on **gender**, in the last decades women have reduced the gap between men and women regarding school results, however sexual disparities still exist with regard to occupational levels. This derives from the fact that individuals have different inclinations that identify themselves with different career decisions, confirming that women choose less high-status positions (Schoon and Polek, 2017). However, more recent analysis suggest that young women have turned out to be more ambitious about their future occupations than young men. Furthermore, women and men are divergent for the significance that they attach to professional success. For example, with equal occupation achieved, women will be more satisfied than men, because they aspire to lower positions and they are less ambition. Therefore, women will feel more fulfilled and satisfied then men (Scheerens et al., 2006).

In addition, young generation prefer careers that are reasonably gender orientated. For instance, women feel more skilled in female occupations than in male occupations. However, young women are more likely than young men of similar age to seek position that requires high educational skills. In any case, in the long run, females earn less than males, and they are less likely to reach top positions (Schoon, 2006).

Secondly, **age** is another individual characteristic that can affect career decisions. For example, in Netherlands, as in other countries, there is an increase in wages with increasing age. In addition, older people are more established in the organization and they are more likely to have a have higher status because they have more experience and they are more involvement than young workers (Scheerens et al., 2006). Yet, for older workers, it could be more difficult to change jobs, because they have more to lose. On the other hand, it could be simpler for them to change, since they have even more to offer. This is a manner by which age can impact career vocation and expert abilities.

Finally, literature suggests that **employability** is a basic condition for achieving career success, and refers to the extent to which an individual considers himself expendable in the labor market. Employability is linked to a state of psycho-physical well-being and includes the individual perceived competences, such as knowledge, attitudes and abilities, which potentially allow to satisfy, acquire or create new work (De Vos et al., 2011). Several studies argue that self-perceived employability (SPE) is positively associated with career outcomes, career satisfaction and perceived marketability. It has been shown that if an individual has confidence in its abilities, he will be able to work with less effort and stress, he will feel more interested, motivated and, in general, more satisfied. This, in turn, will allow individuals to more easily achieve career success (Wittekind et al., 2010). Indeed, a high degree of perceived employability provides greater control over careers, motivate to achieve aspirations and stimulate to improve skills by triggering a virtuous positive emotional cycle.

2.9 CONCLUSIONS

To summarize, the second chapter has analyzed the factors that influence intergenerational mobility in two distinct dimensions. The first one refers to the family context at the base of child's development, while the second one refers to the individual characteristics that can influence decisions and career success. As a matter of fact, literature argues that a great variety of factors contribute to young generation improvement. These factors connect to children's cognitive and non-cognitive abilities, influence their future career development. Among these, what plays a significant role is family background, since family is a pillar of fundamental influence in shaping children traits and future behaviors. Numerous research questions concern the meaning of transmission, from parents to children, of qualities, characteristics and identifying behaviors. The findings affirm the importance of parent-child relationship. Therefore, several models have been hypothesized to understand how the process of

transmitting traits and behaviors can be passed down from parent to child. In particular, scholars have focused on analyzing whether the intergenerational transmission process is specific or generic. Empirical evidence has shown that there is greater support for a specific transmission of behaviors rather than generic one. Several models have tried to analyze the mechanisms through which the intergenerational transmission of characteristics can occur. Researchers have identified at least four hypotheses that can explain how transmission takes place: socio-economic resources, parenting style, genetic inheritance and role model. The data collected and analyzed converge in favor of a greater support of the last two hypotheses. Moreover, literature suggests that the most significant factors of influence, belonging to the family context, are: parental education, parental occupation and parental income. As a matter of fact, they influence both directly and indirectly children's socio-economic status by affecting offspring's educational attainment and future occupation. However, also other factors matter. These are: early years of childhood, parenting styles, home environment, parental involvement, family structure, gender of offspring, and social environment.

Subsequently, the focus was on analyzing those individual characteristics that contribute to career success and influence the future occupational choice. Literature has shown that personality traits and the transmission of personality traits from parent to child have a significant influence on young generation educational achievements and career choices. In particular, evidence has shown that non-cognitive skills are a fundamental determinant of intergenerational income mobility. Among the personality traits analyzed, researchers argue that affectivity, friendliness, safety and emotional balance, locus of control, self-esteem, perseverance and self-direction have a greater impact on career success. In addition, several studies have identified other individual characteristics of considerable relevance, such as aspirations, career interests, values and style of attachment. In fact, empirical evidence has shown that future desires and expectations can have critical outcomes for subsequent academic and occupational progress. The same results were also found for the other characteristics mentioned above. Finally, to have a more comprehensive view of the individual traits that can drive behaviors and decisions, gender, age and employability were also considered.

Overall, it can be perceived how family and individual characteristics play a decisive role in shaping and improving child occupational and socio-economic development. Family represents the first fulcrum of relationship, in which the first traits and behaviors are formed. Family's support and home environment contribute to their development and then leave room for those individual characteristics that influence future career choices. However, the factors of influence analyzed in the first two chapters are not sufficient to explain intergenerational mobility, since

the role of institutions and culture also contribute to affect young generation socio-economic status. These factors will be explained in detail in the next chapter.

3. CHAPTER

COUNTRY LEVEL FACTORS INFLUENCING INTERGENERATIONAL MOBILITY

Once the socio-economic, family and individual factors influencing intergenerational mobility are analyzed, it is important to investigate the institutional and cultural factors that can contribute to altering, modifying or developing the mobility gap between parent and child. In this chapter, the country level will be analyzed: the emphasis will be on the institutional and cultural dimensions that can moderate the relationship between family background, parents and children's socio-economic status and career development. The purpose of this chapter is to create an image of the exogenous phenomena that structure careers. The first paragraph will focus on contextual factors. The second one will pay attention on institutional factors that can affect intergenerational mobility and it emphasis on political policies implemented in a cross-country comparison. Finally, the last one will focus on such cultural dimensions, based on Hofstede's model, that shape and affect individual behaviors in career development and choices.

3.1 COUNTRY LEVEL: CONTEXTUAL FACTORS

It is essential to understand that intergenerational mobility cannot be considered only in a family or individual context, since individuals are also placed in a country dimension (Mayrhofer et al., 2007). The socio-economic status of an individual is influenced by the institutional and cultural variables of a specific country in which the individual lives. It follows that the context, and the consequent contextual variables, should receive a meaningful consideration.

Several studies take into account contextual issues and their influence in the career nature across different countries and cultures, since contextual variables are exogenous factors that influence and shape individuals' careers and organizations. Mayrhofer et al., (2007) identified four major

contextual factors that influence careers. These factors are: the context of work, of origin, of society and culture, and global context. The model is depicted in figure 3.1.

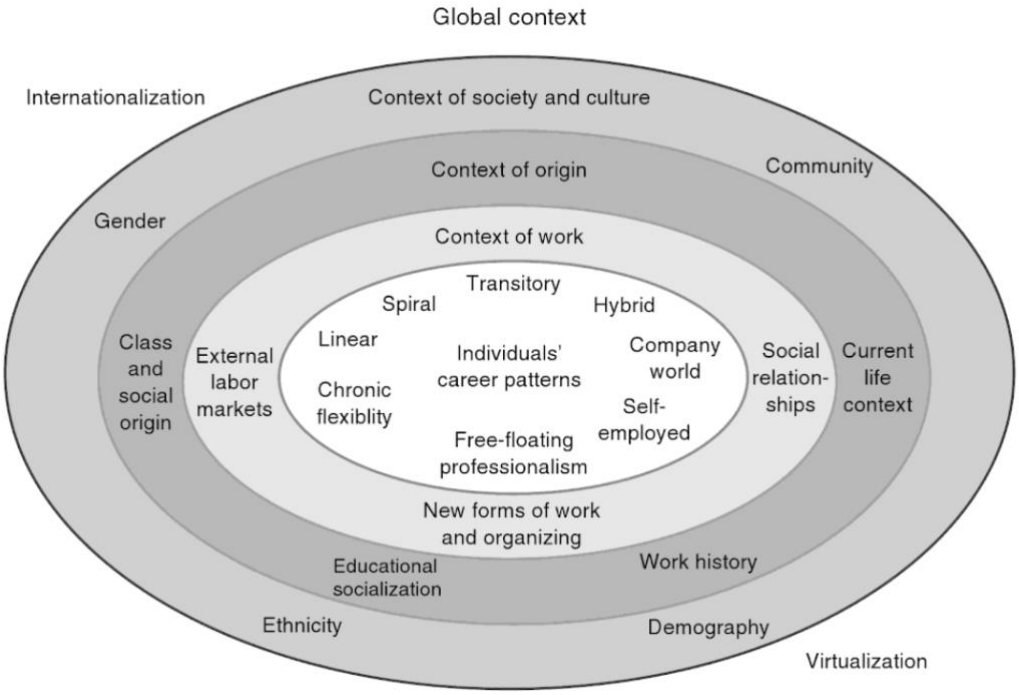


Figure 3.1 Major contextual factors in career research

Source: Mayrhofer et al., (2007)

The first circle, close to the dimension of individual's career patterns, refers to contextual factors related to the working environment. Here, the economic and institutional context, external labor markets, new forms of work and organization and social relations are the major factors that can affect career development. The second circle, refers to the context of origin, in which current life context, work history, educational socialization and class and social origin are the major factors that can impact on individual's socio-economic status. In the third circle, the context of society and culture is related to four features that are gender, demography, ethnicity (such as ethnicity minority and discrimination), community and social ties. Finally, the last circle refers to the global context, in which internationalization (e.g. global career systems) and virtualization are the main issues (Mayrhofer et al., 2007).

This model is helpful to recognize which are the contextual variables that come into play in influencing individual's career development. In this regard, economic and institutional policies can identify the main issues faced by everyone in the various levels of context. They can also intervene to reduce economic inequality and increase intergenerational mobility between parents and children. Furthermore, the model allows to focus on those elements of the context

that can influence and shape the individual conduct in each country. In this sense, the aim is to unveil the policies and institutions that have been adopted to support families and individuals in developing their educational and occupational outcomes.

3.2 COUNTRY LEVEL: INSTITUTIONAL FACTORS

In clarifying how and why social origins have an impact on people's lives, the family background is the focal point of the scene. In any case, also the role of institutions is at the center of the theory of intergenerational mobility. Indeed, as claimed by Ichino et al., (2008) "intergenerational mobility depends not just on nature and nurture, but also on redistributive institutions that emerge endogenously from collective decisions of a society" (p.1). In principle, institutions and the macroeconomic context have been recognized as essential in the development of the socio-economic status of the individual (D'Addio, 2007). The role of the family in shaping and supporting the child's development has already been examined in the second chapter. On the other hand, in this chapter the focus will be on understanding the role played by two other categories of institutions: school and state.

Policies and institutions shape individual's opportunities from early years of life, and continue in the various stages of life. Narayan et al., (2018) conducted a study aimed at establishing the elements that influence intergenerational mobility from the "birth circumstance". Factors such as ethnicity, family and geographic location both directly and indirectly influence each phase of the individual's life cycle. Here, from birth circumstances institutions come into play to shape future children's opportunities. Figure 3.2 shows how birth circumstances correlate with labor market, policies and institutions to shape children's development, which largely influence their future income.

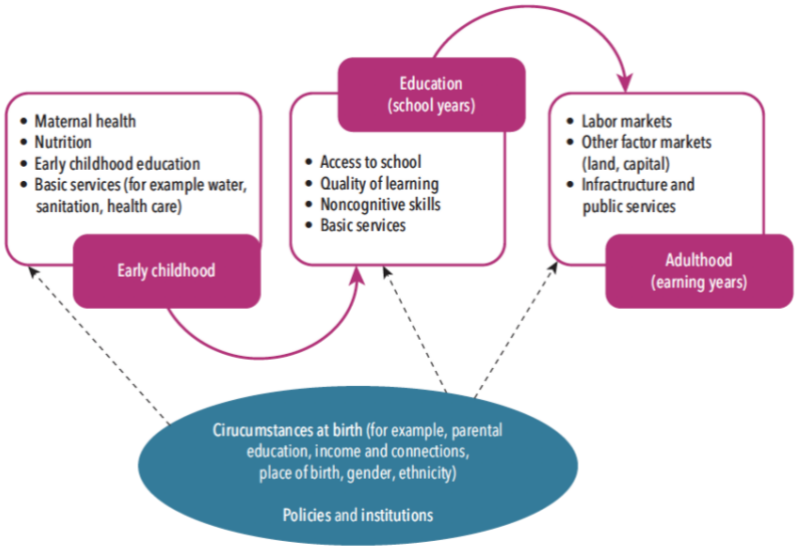


Figure 3.2 Circumstances at birth interact with policies and institutions to shape intergenerational income mobility.

Source: Narayan et al., (2018)

Institutions can influence individual opportunities significantly, for instance through regulations and policies that influence labor markets and services provisions. Moreover, public investment policies have a fundamental responsibility in improving mobility by providing fair opportunities for all individuals belonging to different social classes (Narayan et al., 2018). Among the most significant institutional variables, some are simply connected to public policies (e.g. work attitudes, norms, interpersonal networks and risk attitude), while other variables could be strongly influenced by institutional policies. The latter refers to policies that ensure human capital development, such as support for young generation, high-quality education and redistributive policies that can reduce the barriers associated to schooling admission (OECD, 2010).

Institutional variables that influence **education** play a central role, since it is one of the most important channels, as well as more examined, which can favor or hinder intergenerational mobility. Moreover, education represents a critical institutional column for every industrialized nation and it is translated as one of the factors able to influence the socio-economic status of the individual. Undoubtedly, research is based on the primary hypothesis that equality of access to schooling would weaken the effect of social origins. Individuals invest their resources in education, trusting that they will increase their employability and income. Therefore, a fair and high-quality public education system can provide greater opportunities for individuals from disadvantaged backgrounds. People have different abilities and backgrounds but thanks to the same educational opportunities offered to all children, education becomes a fundamental

component in giving reasonable chances and it makes feasible for anyone to be inspired to succeed (Feinstein et al., 2004). According to Tverborgvik, et al. (2013) attending a high-quality school is a crucial factor for those individuals who want to improve their employment position compared to their parents. In fact, education is used to acquire different knowledge and skills, which allow the individual to achieve different goals than those of family members.

Recently, the role of the institutions has recorded two noteworthy updates. First of all, empirical evidence suggests that differences in the school structure seem to affect substantially less than previously thought. Secondly, analysis has begun to shift its concentration towards possible impacts on **social welfare** (Nolan et al., 2010). Disparities in the redistribution of the welfare state are highly reported, but the degree to which they influence the intergenerational mobility is substantially less known. However, the empirical results lend support to the fact that redistributive and income support policies seem to be associated with greater equality of opportunity (OECD, 2010).

In general, most institutional policies, including government policy regarding minorities in society, welfare programs and subsidies to poor families, can affect intergenerational income mobility (Ichino et al., 2008). Moreover, other institutional policies belonging to the welfare state can influence the persistence between parents and children's socio-economic status, such as "social security, labor market regulation, health care, housing and family policies" (Nolan et al., 2010). In the possibility that income imbalances affect the way parents can invest resources in their children, the redistribution of welfare state should eliminate opportunity inequalities in young people lives. Equality of income and opportunity has certainly been an imperative component in programs to reduce the imbalance. Furthermore, in many countries this has been mainly sought through democratization of access to schooling.

Finally, the Great Gatsby curve (the correlation between income inequality and intergenerational mobility) has some political implications. The relationship between income inequality and mobility is negative, i.e. the bigger the inequality in a country is, the lower the mobility will be. Given this correlation, institutional policies, aimed at greater intergenerational mobility, should be prescribed to have a more equitable society. In a strategy proposal, the OECD recommends that progressive tax systems and social transfer projects should provide individuals with more opportunities for social and economic development, and not just guarantee a fairer society. On the other hand, inefficient redistributive policies can clarify the decreases in social mobility (Boudreaux, 2014). However, the fact that countries with a fair income distribution exhibit a high level of intergenerational mobility does not always find empirical support. This is the case of Australia and Canada, which combine high levels of

income inequality with high levels of intergenerational mobility. Furthermore, France also shows less mobility than it would be expected given its level of inequality (Nolan et al., 2010).

3.2.1 CROSS-COUNTRY COMPARISON

The effect of institutions and family background on intergenerational mobility applies in all countries, showing a high correlation between parent's socio-economic status and the child's one in most of them. Nevertheless, there are exceptions. Scandinavia, Norway and Sweden emerge as countries with high intergenerational mobility. The ranks of these countries give important insights on how to understand the potential impact of social institutions and social state. Starting from the latter, empirical studies clearly show the remarkable importance of well-being from a health point of view (Nolan et al., 2010). From a healthcare perspective, the United States emerges as a truly exceptional case, since there is no general access to quality health insurance. Scholars consider it is an essential motivation behind the reason why the United States continues to achieve low values on numerous mobility indicators, particularly for intergenerational ones.

According to Nolan, et al., (2010), the way in which Nordic nations are recognized so differently in terms of degree of intergenerational mobility could be also deduced from "their international leadership in terms of early childhood protection based on identical high-quality standards for all children." Nonetheless, there is another exceptional case. France, which, after the Nordic nations have extended the highest childcare rates in Europe, has adopted the same policies, but the results obtained have been different. In fact, after increasing rates of asylum assistance, the French country has found less social mobility compared to other comparable countries.

A study conducted by Herrington (2015) focused on the role of public education and on the progressivity of labor tax in the United States and Norway. The analysis of both policies is important as they directly influence the distribution of human capital and its relationship between generations. Specifically, Herrington argues that "progressive employment tax policies influence incentives for the accumulation of human capital and disposable income available to parents for investment in their children's education" (p.2). Similarly, the distribution of public expenditure to education influences subsequent allocations of human capital and the association of human capital among generations. The reasons why the research has focused on United States and Norway are multiple. Firstly, United States is classified, in the Great Gatsby curve, as the country among those with the greatest income inequality and with a low intergenerational

mobility. In contrast, Norway is ranked at the opposite of the United States in the Great Gatsby curve. Therefore, it is among the countries with the least income inequality and high intergenerational mobility. Secondly, the two countries have completely different policies, particularly with regard to tax systems and public expenditure on education. Indeed, a study conducted on completely different policies makes it possible to understand the significant effects on the distribution of income and on the accumulation of human capital. Finally, data are available for both countries. The findings show that taxes and spending on public education account for about 33% of the differences in income imbalances and, to a certain extent, clarify the differences in the persistence of intergenerational income between the two countries. Moreover, public intervention in early education has increased these political effects changes (Herrington, 2015).

Other authors have compared the United States and the United Kingdom. The two countries have very similar levels of income inequality and intergenerational mobility. However, the American country displays that the income correlation among generations is strongly influenced by educational pathways and public educational system, while for the United Kingdom, what matters most is the occupation that the second generation will reach in adulthood (Smeeding et al, 2011). Furthermore, Corak et al., (2004) have focused their attention in analyzing the differences between the United States and Canada. They found greater intergenerational mobility of income in the Canadian country than in the US. These results suggest that American children belonging to the bottom of the income ladder receive less support in terms of investment from the state, labor market and parents.

Imbalances in the labor market can affect generational mobility as well. Evidence suggest that more stringent labor-market-regulation is associated with greater income correlation between parents and children (OECD, 2010). Moreover, if institutions compress wage distribution the resulting effects show less persistent in intergenerational wages. In addition, unemployment is strongly correlated with the individual's social origins and has negative consequences for future wages. The empirical analysis suggests that the high intergenerational mobility reached by the Nordic nations has been achieved thanks to a combination of low unemployment, job stability and wage equality. It is interesting to note that the Nordic countries differ considerably from most continental European nations, for example France, Belgium and Italy (Nolan et al., 2010). Finally, for what regards Italy, a study conducted by Checci et al. (1999) analyzed the differences between the United States and Italy. The level of Italian intergenerational mobility is lower compared to the United States. However, researchers have found that with respect to school results, the influence of family background is surprisingly much more critical in Italy

than in the United States. The presence of a high rate of persistence between parents and children and a high influence of the family context in the Italian state is unexpected because it is inconsistent with the educational framework adopted in the country. In fact, the school in Italy is financed by the state and it is a "public, egalitarian and centralized" system (Checci et al., 1999). Therefore, the low level of family income should not be considered to explain the low level of mobility. Children of low-income families should have the same opportunities to achieve upward mobility as children of high-income families. However, it has been shown that parents coming from disadvantages context invest less resources in their children. In fact, they require them to start working as soon as possible to contribute to the sustenance of the family. In conclusion, it is interesting to note that the same institutional structure can provide different results. The institutional policies that interface with the socio-cultural elements, make the existence of the school in the Italian landscape favoring intergenerational social immobility.

3.3 COUNTRY LEVEL: CULTURAL FACTORS

After investigating the institutional factors, it is essential to complete the analysis by explaining the role of culture in relation to intergenerational mobility.

In the last decades, there has been a remarkable development in the analysis of the factors that affect generational persistence. However, it is still unclear the role played by the cultural dimension, as there is little research in this field. Cultural capital is defined as the set of individual cultural assets, knowledge and experiences, handed down for generations through family life, who confer status. According to Pierre Bourdieu, cultural capital is a significant factor that can favor or hinder intergenerational mobility. More specifically, the relationship between mobility and culture is mainly reflected in educational attainment. This has been confirmed by several studies that believe family transmit a set of knowledge, values and attitudes towards culture that facilitate the achievement of a high level of education (Nunn et al., 2007). As a matter of fact, Scherger and Savage (2010) stated that, "cultural interests and attitudes, the existence of objectified cultural capital in the parental home, cultural activities and the connected knowledge all have a positive effect on children's educational attainment" (p.4). In addition, it has been shown that culture capital transferred to children is unevenly distributed among the classes, as low-income families are associated with low cultural endowments. This is one of the reasons why children coming from less privileged families achieve lower educational outcomes.

Another cultural variable that can affect equality of opportunities is the distribution of ethnic groups in a society. A study conducted by Chetty et al. (2014) suggests that ethnic dispersion causes a reduction in mobility. In particular, the researchers argue that in homogeneous and very different countries mobility is significantly high. This is because, in the first case, there are no different ethnic groups; while in the second case, high ethnic dispersion allows no ethnic group to be favored or disadvantaged. However, as the concentration of ethnic groups is moderate, mobility tends to be low.

Several researchers have explored the main cultural dimensions that should be considered for differentiating cultures and nations in the analysis of intergenerational mobility. The Hofstede's model (2001) allows the evaluation of culture dimensions and encourages the fusion of culture into quantitative empirical evaluations. This approach includes the analysis of six cultural dimensions, in which information was collected in almost 60 countries for each dimension. Among these dimensions, four are essential for mobility: the two most important ones are *Individualism/Collectivism* and *Egalitarianism/Hierarchy*. The other ones are *masculinity/femininity* and *uncertainty avoidance* (Berthold and Grundler, 2014).

Firstly, the most investigated cultural dimension is that of **individualism / collectivism**; it focuses on associations and connections among individuals. Collectivism refers to a culture in which people are close to each other and affiliated in groups. On the other hand, individualism refers to a culture in which individuals have weaker associations among themselves and are in some ways autonomous and independent (Hofstede, 2001). The consequences resulting from the degree of individualism of a society are manifold. Specifically, the social belief that people are responsible for their success or failure is shared in individualistic countries. In contrast, the belief that success is achieved thanks to external factors is a shared belief in collectivist countries. The most striking example of an individualist country is the United States, where individuals are strongly convinced that everyone can aspire to success. A study conducted by Schmidt (2010) has shown that the effect of upward intergenerational mobility is amplified in individualistic countries (e.g. Sweden, Canada, Australia and Western European nations) and opposed in collectivist countries (e.g. Bulgaria, India, Taiwan and Guatemala), supporting the hypothesis that mobility is moderated by the cultural context.

Secondly, another greatly explored dimension is that of **egalitarianism / hierarchy**. It refers to Hofstede's Power Distance dimension, which represents "the extent to which national cultures expect and accept that power is distributed unequally in society" (Hofstede, 2001). In nations with a high-power distance, individuals accept a hierarchical order and an important "emotional distance" isolates the subordinates from authority. Respect and formal conduct for individuals

of higher status are critical in hierarchical society. Empirical results show that mobility rates in countries where cultural values are firmly associated with a hierarchical order tend to be rather low (e.g. Malaysia, Guatemala, China and Mexico). On the other hand, the high rates of the Nordic countries (such as Sweden, Norway and Denmark) show that countries with cultural values linked to equity find a lower persistence of income between father and son (Berthold and Grundler, 2014). In general, countries characterized by a hierarchical and authoritarian culture exhibit less developed societies, low levels of education, income and life expectancy. Furthermore, the income gap between rich and poor is considerable greater. Essentially, High-Power distance, as well as collectivism, is related to low social development, high income inequality (Gini index), high socio-political corruption and low competitiveness (Basabe and Ros, 2005).

Finally, as regards the other two dimensions, a study conducted by Berthold and Grundler (2014) suggests that the empirical outcomes, in terms of **avoidance / uncertainty**; and **masculinity / femininity,** are less straightforward. The first dimension refers to the extent to which individuals consider themselves threatened by uncertain situations and are risk-averse. As a result, they tend to behave in ways that reduce anxiety. Greece, Japan, Spain and Italy are examples of countries with high uncertainty avoidance, while countries with low uncertainty avoidance are Denmark, US, UK and China. Countries in which people take more risks and with a high propensity to entrepreneurship tend to have higher mobility levels. Indeed, if the level of risk prevention towards entrepreneurship or towards new opportunities is high, the level of upward mobility is limited (Berthold and Grundler, 2014). Whereas avoidance of uncertainty has proven to be a cultural dimension that hinders mobility, there is no clear association between gender and mobility. The second dimension distinguishes "male" societies (e.g. Austria, Japan and Italy), in which there is a clear role differentiation by "female" societies (e.g. Sweden, Norway, Denmark and Netherlands), in which roles are quite equally distributed (Hofstede, 2001). In the last decade, countries have observed an increase in upward mobility in absolute terms for women, but a small gap between men and women still exists. Research conducted by the Pew Charitable Trusts and Brookings Institution found that "while 69% of men live in households with higher incomes than those in which they grew up, 64% of women do so" (Reeves and Venator, 2013; p.7). The gap in terms of relative mobility is even more considerable. In fact, women are very linked to family background and tend to stay tied to the same income class of their parents. Therefore, in society where there is a prevalence of masculinity culture, women who are born in disadvantageous conditions are more likely to remain poorer than men.

3.4 CONCLUSIONS

In this chapter, the main institutional and cultural areas of potential engines of intergenerational mobility have been illustrated. In particular, it has been identified the factors that determine the differences among countries, in terms of fairness of opportunity.

Firstly, it emerged that differences in institutional incentives, especially for education, can lead to imbalances in terms of children's human capital investment by parents. As a matter of facts, public educational expenditure plays a key role in reducing generational persistence. Furthermore, educational policies help to explain differences among countries in terms of intergenerational mobility. For example, the Nordic countries stand out from all other countries, in terms of high levels of mobility, thanks to their international leadership in early childhood investment and the high-quality school standards given to all children.

Secondly, policy reform can enhance equality of opportunity through healthcare, welfare, direct transfers and redistributive policies. These policies allow disadvantage children to improve their conditions and they cut obstacles associated to educational access. The United States are an exception case, since there is no universal access to healthcare insurance. This is considered one of the main reasons that explain the low levels of mobility registered by the American country.

Thirdly, the impact of the family background varies from one country to another. It depends on a perspective through genes, where family inheritance could be more entrenched in nations characterized by assortative mating. From another perspective, family culture can differ: the values, goals and behaviors handed down from generations are different across countries. For instance, although Italy and the United States have quite similar levels of intergenerational mobility, the Italian society displays a greater family of origins' influence. Indeed, despite in Italy there is a system of egalitarian and centralized educational policies, the influence of family of origin is significantly persistent on children's outcomes.

Finally, equality of opportunity also depends on cultural factors, although it has been little analyzed. Based on Hofstede's model, four cultural dimensions are significant for the analysis of intergenerational mobility. These are: *individualism/collectivism*, *power distance*, *masculinity/femininity* and *uncertainty avoidance*. The empirical results have shown a broader correlation in terms of individualism and power distance in relation to mobility. The more a society is individualistic, the more the persistence of income distribution is low. On the other hand, the level of income mobility is higher if people do not accept the unequal allocation of

power. For example, the Scandinavian nations are considered egalitarian countries, in fact they are characterized by a low power distance.

In conclusion, literature suggests that public institutions play a key role in favoring or damaging intergenerational mobility. Political reforms should be aimed at ensuring equality of opportunity in order to improve individuals', as well as economic growth. However, institutional attention should not be limited to the distribution of incentives to school and labor market. Given that cultural dimension has also proved to be a factor influencing mobility, policies should also focus on the setting-up of values and beliefs during early childhood. This would ensure that children from disadvantaged backgrounds get the belief that they have control over their own life and that they have the same opportunities as the most highly prized children.

4. CHAPTER

EMPIRICAL ANALYSIS

Literature review has defined an overview of the major determinants of intergenerational mobility, both at individual, institutional and cultural levels. Since socio-economic persistence between parents and children is still a matter of fact, further analysis of the issue is required through an empirical investigation. For this purpose, in this chapter, a model will be created in order to explore in which extent individual and contextual characteristics impact on the intergenerational gap. The main objective of the research is to verify whether the hypotheses proposed in literature, and the model built in this analysis, are also reflected on observed experience. Likewise, it is significant to understand if the hypothetical intuitions considered could be grouped into a single framework with the final aim of constructing a unique and intelligible investigation structure. The legitimacy of the model will be tested using a set of overall information gathered by the 5C Group (Cross-Cultural Collaboration on Contemporary Careers), i.e. a non-profit consortium of international teachers from different cultural contexts of each part of the world that investigates on career management.

4.1 THE RATIONALE BEHIND THE ANALYSIS

Previous chapters have been filled up with analysis regarding the intergenerational mobility. This topic has been of great interest during these last years and it still is one of the very current ones nowadays. Researchers have investigated in depth the possible determinants of the intergenerational gap, finding exploratory variables of different nature, from human capital and socio-demographic data, to factors related to family background, personality or aspirations (Bowles et al., 2005). However, even though the correlation between fathers and sons has been widely studied in the last decades, intergenerational mobility is still considered as a "black box" (D'Addio, 2007, p.40). This is due to the fact that there are still some issues in which the

investigation is not yet deeply developed or clear. Specifically, a study conducted by Torche et al. (2016) highlights three areas that need further study. Firstly, most findings focus on father-son relationship rather than parents-children relationship, neglecting in this way one important aspect of analysis. As a result, it is necessary to **focus on gender and family structure**, since research based solely on males and married couples has led to an incomplete and biased mobility framework. According to these considerations, it becomes of fundamental importance to expand the field of variables included in the research. For this propose, **the proposed model will examine female and male respondents as well as both parents, married and divorced**. Therefore, the analysis will include a more comprehensive and exhaustive view of the parent-child relationship in terms of education and occupation. Secondly, authors argue that "continued cross-disciplinary dialogue is needed" (Torche et al., 2016, p.24). As a matter of fact, most of the research conducted so far, focuses its analysis on a single measure of socio-economic status (earnings, occupation, education, family income and class) and findings lead to different outcomes depending on the type of measurement adopted. As these measures capture different dimensions of analysis, it becomes necessary to consider the analysis from **more disciplinary perspectives** and to investigate the main differences that exist in them. This is the reason why the following analysis aims to test a **comparison between two models: parents-child's education and occupation.** Indeed, the main objective is to bring to light what could be the major discrepancies and similarities in the findings between the two socio-economic status measures in order to understand the main drivers that affect one measure rather than another. Finally, since more reliable data in cross-country comparison are required, a more accurate **international comparative analysis** is what future research would benefit from, with the clear objective of further investigating the association between institutional policies and equality of opportunities (Torche et al., 2016).

Furthermore, some variables have not been investigated in intergenerational mobility's literature, or have not yet been investigated in depth both at **individual level** and at **country level**. Among all these predictors, I decided to investigate the moderating variables related to individual attitudes and characteristics, such as personality and the attitude to learn and develop that an individual has, both in his own career and educational field. The choice of these variables was guided by the following reasons. Firstly, despite the existing research on the effects of personality in the correlation between parents and children (see Chapter 2), there are still some gaps in the research that need to be addressed (Bowles et al., 2005). Indeed, personality traits have not been included in research as moderators. Belonging to this gap, the authors argue that future research should examine in greater detail the intergenerational correlations of traits and behaviours defined by different levels of socio-economic status in a variety of countries. In fact,

the effects of non-cognitive abilities on children's outcomes are not clearly defined yet. To this end, it was decided to include **personality as a moderating variable** within the relationship between parents and children. More specifically, the effects of three personality traits, belonging to the BIG 5, on education and occupation will be analysed. These traits are neuroticism, conscientiousness and extraversion. Secondly, the introduction of **"Learning and Development"** as moderator, represents a mostly new contribution in the studies of intergenerational mobility. The studies already conducted on this variable suggest that it represents an important meaning of professional success (Mayrhofer et al., 2016). It embodies the will that an individual owns to increase his personal abilities, through both a continuous informal learning in the workplace and a formal learning with the acquisition of professional skills through formal education and training. Therefore, it is interesting to understand if the attitude of learning and development, as well as being an important meaning of career success, can also prove to be a key factor influencing the occupational and educational relationship between parents and children. More specifically, it is significant to understand if the willingness to learn and grow can weaken the influence that the **family background** causes on children's choices.

In addition, for what regards the country level variables, the role played by culture is not yet clear. Indeed, little is known about cultural influences on the socio-economic correlation between parents and children. As stated by Thiemann (2016), there are some elements that must be deeply considered. In fact, it is still essential to define, isolate and measure the cultural dimensions that guarantee a more mobile society. In particular, the author argues that research should be directed towards the need to describe, through a theoretical framework, "the exact mechanism behind the impact of certain cultural values on mobility" (2016, p. 28). The suggestion of the development of a more "culture-sensitive" model in parent-child relationship derives from the fact that culture seems to be particularly relevant for the interpretation children's educational and occupational decision. For this reason, I found meaningful to take into consideration some cultural dimension in order to expand and complete the analysis: **several cultural variables have been included in the model at the country level as moderators** in the relationship between parents and children. This could allow to understand the reason why some family backgrounds may have different impacts on children's socio-economic status belonging to societies with different cultural values, when they make career or study decisions.

Therefore, the objective of this chapter is to construct a **theoretically coherent model**, in order to narrow the research gap in mobility studies and to answer the research questions that will be subsequently addressed to. As a matter of fact, a model based on a complete framework has not

yet been developed and, at the same time, those few studies that take into account the relationships between individual and country level, suggest to investigate further on those crucial but complex interactions (Gugushvili, 2018; Heidrich, 2015).

4.2 THE GENERAL FRAMEWORK UNDER ANALYSIS

In the previous chapters the distinctive factors analysed by researchers have been identified with the final aim of recognizing the components that could affect the correlation between the socio-economic status of parents and their children. Based on this investigation of literature, the final model, on which the following analysis will be built, is presented. In detail, the study will focus basically on the main research question: which are the most significant factors that influence the extent of the parent-child relationship (or, in other words, the quality of the impact), express in terms of education and occupation. For this purpose, these factors will be presented as moderators in order to clarify what is the impact on the primary association between parents and children. More specifically, they will be separated in an individual-level and a country-level examination to grasp the main impulses of influence at each level of analysis. In the first phase, the analysis will concentrate on the educational correlation between parent-child, then it will move on to a comparison on the occupational relationship. Even though a point-by-point examination of the model will be examined in the following paragraphs, a diagram of the proposed structure is shown in Figure 4.1.

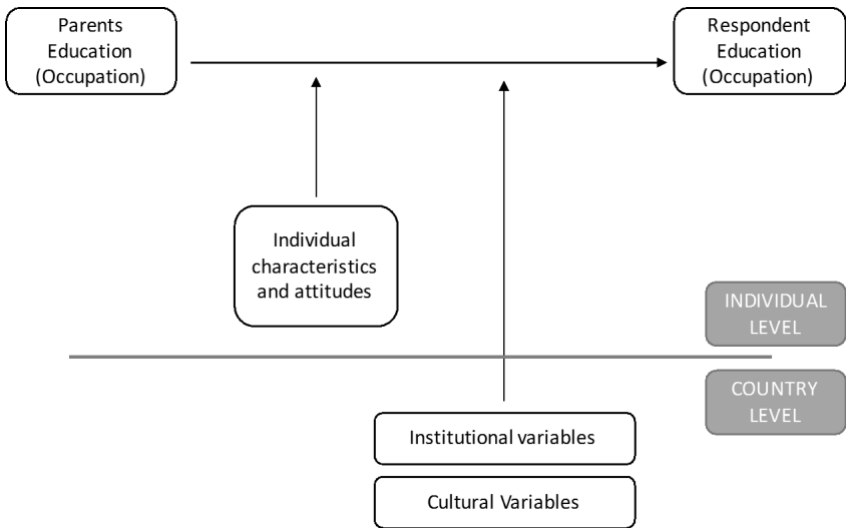


Figure 4.1 The general framework

4.3 RESEARCH DESIGN, DATA AND METHOD

As presented at the beginning of the chapter, the legitimacy of the model will be proven using data gathered by the 5C Group. Specifically, it is a worldwide non-profit consortium of researchers, interested in the study of careers and their variation. Their core objective, driven by their mutual enthusiasm for a more complete perspective of the determinants of career success, focuses on understanding how individuals understand their careers and professional advancements (Mayrhofer et al., 2016). In the same way, the group tries to figure it out if the perceptions of professional success are influenced by individuals' culture, by the way people live or by factors such as age (or "generation" as in the case under analysis), family background, ethnicity, sector, etc. The 5C project began in 2004 as a little congregation to investigate how people in various nations and worldwide culture bunches see their career achievement. Originally, the researchers directed interviews in 12 nations, drawn up in coherence with Schwartz's transnational cultural clusters, keeping in mind the final aim to join cultural variety. Considering qualitative research results, the group constructed and propelled a questionnaire, gathering comparable data from 25 nations, to enable specialists to extend their insight into career success. In the second quantitative phase of the project, the group followed a survey of around 15.000 people in around 30 countries. Nowadays, research has reached approximately 19.000 people in 31 countries (Mayrhofer et al., 2016).

Thanks to the wide range of variables available in the survey, the following analysis was inspired by the 5C Group's idea to explore career advancement, with particular attention to people's behaviours, personal situation and context in which they are located. Especially, the 5C project inspired the idea of analysing how - and to what extent - the family background and the role of parents influence children's socio-economic development and therefore, their future career.

4.4 THE PROPOSED MODEL AND RESEARCH QUESTIONS

The first objective of the research is to verify how moderators taken into analysis influence the main relationship between parents and children, both in educational and occupational terms. If so, it will therefore be possible to empirically examine the strength and direction of the observed impact. For this purpose, it will be possible to construct and test an empirical model that aims to investigate at individual level, the relationships between two variables linked to individual characteristics and attitudes: the respondent's personality and his/her "Learning & Development" attitude, on the main relationship; and, at country level, the relationship between institutional and cultural dimension on parents-children status (see Figure 4.2).

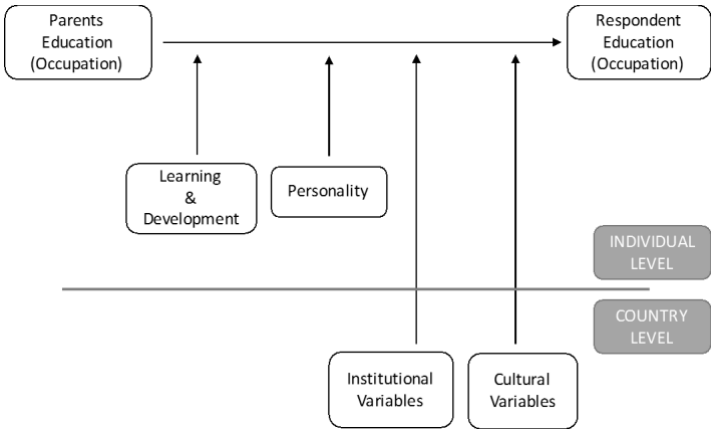


Figure 4.2 Conceptual diagram of the proposed model

The following paragraph will describe the research questions for the two proposed models. To simplify the reading, the questions related to the education model will be fully reported, on the other hand those related to the occupation model will be referred to in square brackets. The first research question that this analysis will address is presented as follows:

RQ1. *The main effect hypothesis: Is the level of education of the children (RE) [occupation (RO)] (positively) related with their parents' education (PE) [occupation (PO)]?*

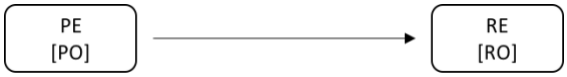


Figure 4.3 Main Relationship under analysis: ordinal regression model

Subsequently, the impact of individual characteristics on the main hypothesis under analysis will be studied. Therefore, two moderators will be added to comprehend if their influence strengthens or weakens the correlation that exists between parents and children. Indeed, the final goal is to understand how learning and development are often considered key factors that guide a person's behaviour and represent an important meaning of future professional success (Mayrhofer et al., 2016). Likewise, personality can also influence a individual's choices and attitudes. Therefore, the second research question is described as follows:

RQ2. *Which is the effect of individual's Learning & Development attitude (L&D) and Personality (P) on the main relationship under analysis?*

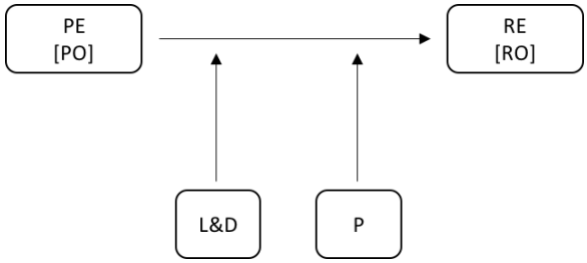


Figure 4.4 Ordinal regression model with individual level moderators

Finally, it is essential to consider respondents' context. Specifically, two fundamental moderators, which analyse the cultural and institutional dimensions are included in the analysis. Consequently, the tests on the model will consider a progression of institutional and social factors at national level. The final objective is to verify exactly whether they influence the path (through which individual's family circumstances shape professional and educational choices or not). Therefore, the last research question could be defined as follows:

RQ3. *Which is the effect of country level variables, in particular institutional and cultural ones (respectively IV and CV) on the main relationship under analysis?*

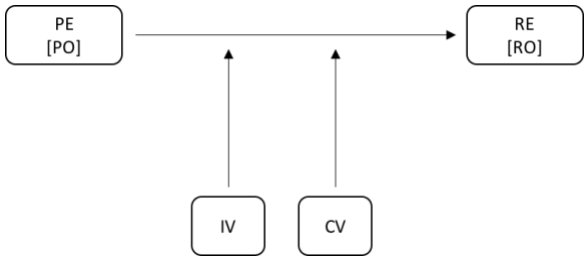


Figure 4.5 Multilevel ordinal regression model that considers country level variables

4.4.1 SAMPLE DESCRIPTION

The database used to test the empirical model is the one created by the 5C group. The reference survey was initially composed in English and subsequently converted into the different languages of countries surveyed by the network of researchers. However, when a translation on an acceptable scale was not available, the survey questions were reported in English. In each state, the questionnaire was pre-tested and adjusted correspondingly. As a result, a retrospective interpretation has been made: the team of specialists had reported the different languages in English through a back-translation to allow a comparable analysis and to validate the analysis survey. Subsequently, the questionnaire was launched using a convenience sample in each country, dissected according to the work experience of the respondents; specifically, the

individuals chosen had no less than two years of work involvement at the time the survey was dispensed.

Data were collected from five large groups of employees: managers, professionals, clerical and service workers, skilled labour and manual labour experts and about 100 people for each of these categories were targeted. The total sample size, collected from 2013 to 2018, is 19.470 distributed among 31 countries. However, the amount of responses used for the observational survey of this analysis was reduced to 8617 cases (44.3%) distributed among 28 countries (90.3%), due to absent or inadequate data and outliers. The decrease in the number of respondents is further supported by the fact that respondents with less than 25 years of age were excluded from the research. This is justified by the fact that they were not adequate for the support of the research under analysis, as it is believed that education results stable from 25 years onwards. The sample composition used in the following analysis is described in Table 4.1.

Table 4.1 - Demographic composition of the sample

	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (%)		ABSOLUTE FREQUENCY	RELATIVE FREQUENCY (%)
GENDER			*AGE*		
Male	4094	47,50%	25 - 50	6928	80,40%
Female	4523	52,50%	>50	1689	19,60%
CLASSIFICATION MARITAL STATUS					
Single	2278	26,40%			
In relationship	6339	73,60%			
HEALTH			*OCCUPATION*		
Poor	112	1,30%	Managers	2214	25,70%
Fair	809	9,40%	Professionals	3360	39%
Good	2567	29,80%	Clerical and Service Workers	1660	19,30%
Very good	3439	39,90%	Skilled Labour	1179	13,70%
Excellent	1690	19,60%	Other/Manual Labour	204	2,40%
FATHER'S OCCUPATION			*MOTHER'S OCCUPATION*		
Manager	1846	21,40%	Manager	741	8,60%
Professional	2287	26,50%	Professional	2151	25%
Clerical	1099	12,80%	Clerical	2424	28,10%
Skilled labour	2391	27,70%	Skilled labour	1756	20,40%
Other labour	994	11,50%	Other labour	1545	17,90%
EDUCATION			*FATHER'S EDUCATION*		

Primary Education	60	7%	Primary Education	969	11,20%
Lower secondary	789	9,20%	Lower secondary	2058	23,90%
Upper secondary	1182	13,70%	Upper secondary	1569	18,20%
Post-secondary; Short-cycle tertiary	1692	19,60%	Post-secondary; Short-cycle tertiary	1284	14,90%
Bachelor	2334	27,10%	Bachelor	1465	17%
Master	2193	25,40%	Master	1024	11,90%
Doctorate	367	4,30%	Doctorate	248	2,90%
MOTHER'S EDUCATION					
Primary Education	1254	14,60%			
Lower secondary	2032	23,60%			
Upper secondary	1729	20,10%			
Post-secondary; Short-cycle tertiary	1247	14,50%			
Bachelor	1510	17,50%			
Master	751	8,70%			
Doctorate	94	1,10%			

Finally, the list of countries involved in the analysis is shown in Figure 4.6, which also describes the relative frequency of respondents belonging to the target countries. The latter will be useful for the development of the second part of the analysis, in which the "between countries" effects on the main relationship under analysis will be taken into consideration.

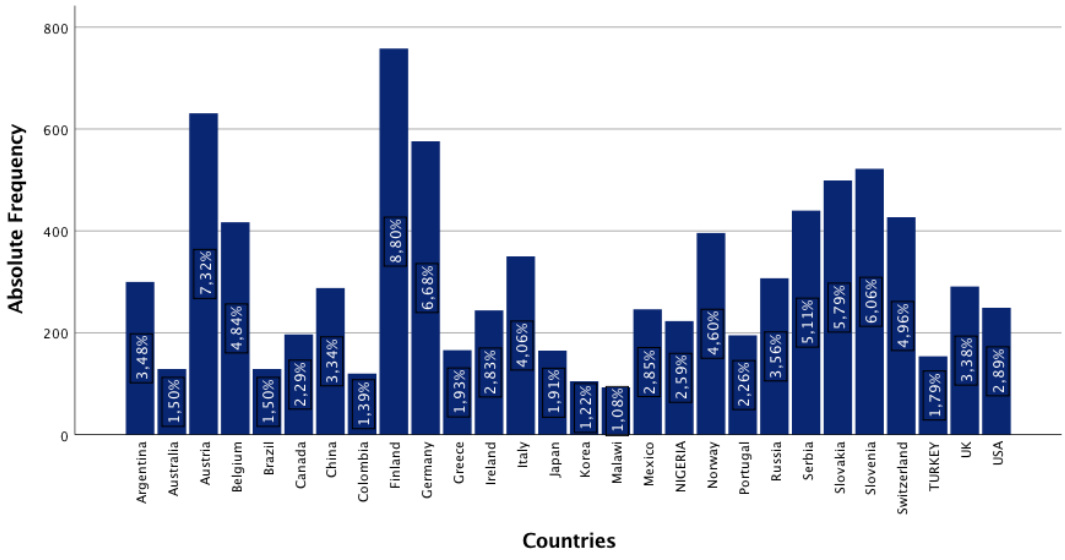


Figure 4.6 Countries sample composition

4.4.2 EXPECTATIONS, HYPOTHESIS AND MEASURES

Before starting with the analysis, theoretically consistent expectations on direct relationships between parents and children will be explained in the following paragraphs, together with their hypothesis. This section aims to illustrate the measures taken to estimate the main constructs and variables that will be used later in the multilevel statistical analysis. Therefore, the specific measures defining the variables used in the proposed model will be introduced. An overview of the empirical models and of the theories that will be articulated below is displayed in Figure 4.7 for the case of education and in Figure 4.8 for occupation.

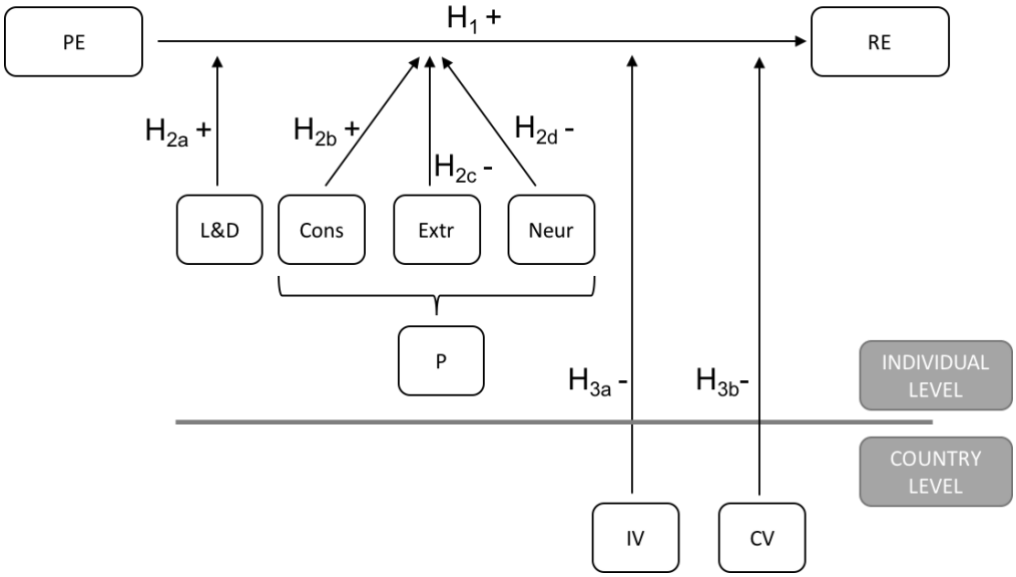


Figure 4.7 The educational proposed model: Hypothesis and expectations

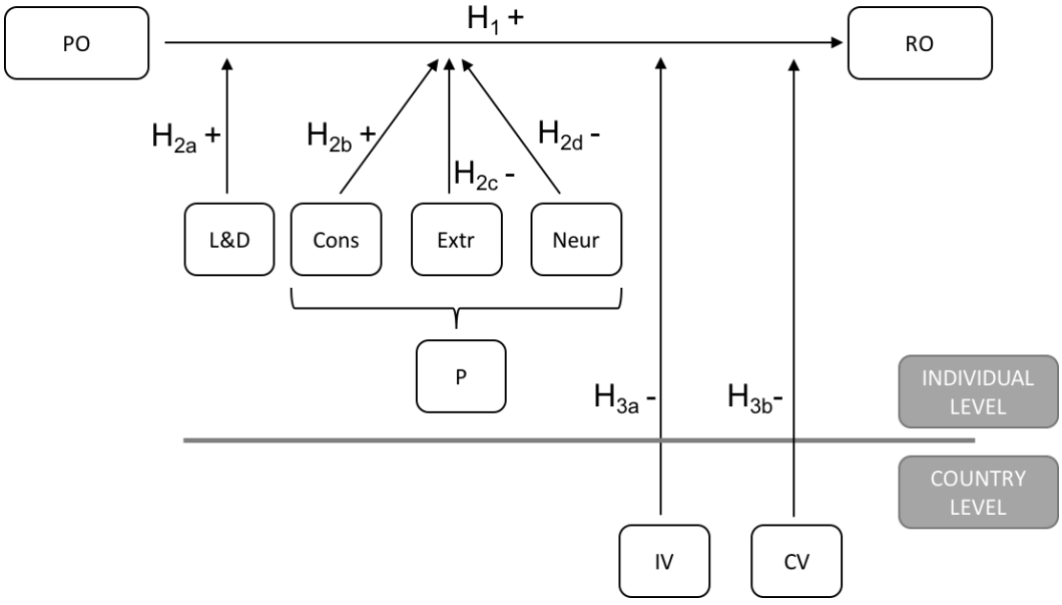


Figure 4.8 The occupational proposed model: Hypothesis and expectations

INDEPENDENT VARIABLES. As already seen, two models will be tested. The first one refers to education, while the second one refers to occupation. For what regards education the unique independent variable expressed in the model is parents level of education. In contrast, regarding occupation the explanatory variable will be the occupational level of parents.

Parents' education (PE) is the explanatory variable for the proposed model related to education. In order to measure parental educational level, the 5C Group asked to the respondents to indicate their parents highest completed level of education. In the database, education is considered a categorical variable ordered with a 7 point-scale from the lowest to the highest level ("early childhood and primary education" =1, "lower secondary" =2, "upper secondary" =3, "post-secondary non-tertiary or short-cycle tertiary" =4, "bachelor or equivalent" =5, "master or equivalent" =6 and "doctorate or equivalent" =7). In the survey, the level of education is reported separately for mothers and fathers. More specifically it is asked to the respondent: "Which is the highest level of education that your mother and father completed?". For the purposes of this study, in order to construct a unique measure of family educational level, as suggested and adopted by Hollingshead (1975), when more than one parent is present in the survey's answers, their educational scores are averaged. This procedure was carried out with the final objective of obtaining a single continuous scale of parents' education, since most studies on intergenerational mobility focus mainly on father-child relationship, ignoring the entire family background (Fox et al., 2016). According to literature's empirical findings, a higher level of parents' education leads to a consequent increase in their children schooling level (Erola et al., 2015). This is because a more educated family indirectly transmits higher skills, traits and cultural capital than families with poor education. Moreover, a higher level of education translates into higher occupations, which, in turn, leads to greater increases in family income and ultimately to greater investment in child development. From this perspective, it can be deduced that the expectation of the educational relationship between parents and children is positive, i.e. with the increase in the level of parents' education, consequently the level of their children also rises.

Parental Occupation (PO) is the explanatory variable adopted in the empirical model relative to occupation. As with the previous procedure, respondents were asked about their parents' occupation. In the survey, occupation is expressed through a categorical variable with an 8-point ordinal scale, from the highest level ("manager" =1) to the lowest level ("other" e.g. retired =8). The intermediate levels are ("professional" =2, "clerical and service workers" =3, "skilled labour" =4, "other labour" =5, Not employed e.g. home maker =6, Unemployed =7). Individuals who are unemployed or retired or whose primary activities are domestic education

and homemaker (scores equal to 6, 7 and 8), have not been considered in this study, with the final aim of creating a more reliable and coherent comparison with the current occupation of respondents at the moment in which the questionnaire was completed. As in the case of education, parents' occupation is reported separately for mothers and fathers and in order to create a single score of family professional career, when more than one parent is present, their occupational scores are averaged according to what suggested by Hollingshead (1975). Each of these professional categories can give importance to different elements when evaluating the impact on children's future decisions. Therefore, the results obtained by offspring can be perceived differently according to the specific position covered by parents. Furthermore, it is reasonable to expect managers and professionals to be more likely to invest further on child development than clericals and skilled labours. Empirical research supports these expectations, demonstrating that the higher the parental occupational level is, the larger the investment on children's educational will be and the higher the social prestige will be transmitted on them (Erola et al., 2015).

DEPENDENT VARIABLES. Two main outcomes have been considered. Respondent's level of education for the model related to education, and respondent's occupation for the one linked to professional career.

Respondent's education (RE) is the dependent variable taken into consideration for the first model. In order to measure the level of schooling, interviewed people answered to this question: "Which is the highest level of education that you completed?", with a 7 point-scale from the lowest to the highest level ("early childhood and primary education" =1, "lower secondary" =2, "upper secondary" =3, "post-secondary non-tertiary or short-cycle tertiary" =4, "bachelor or equivalent" =5, "master or equivalent" =6 and "doctorate or equivalent" =7). However, in order to facilitate the reading of the results, the 7 point-scale has been reclassified into three ordered categories: "Low", "Medium", "High", based on *ISCED classification* (UNESCO, 2011). The International Standard Classification of Education (ISCED) was developed by UNESCO, to further facilitate a comparative analysis of the various levels of education in the world and to reflect more accurately the changes matured within the education systems. According to this classification, in the current analysis, 1 and 2 points are traced back to a "low" level of education; 3 and 4 to a "medium" educational level; and 5, 6 and 7 to a "high" level. In Figure 4.9 is shown the percentage distribution of education reclassified into categories.

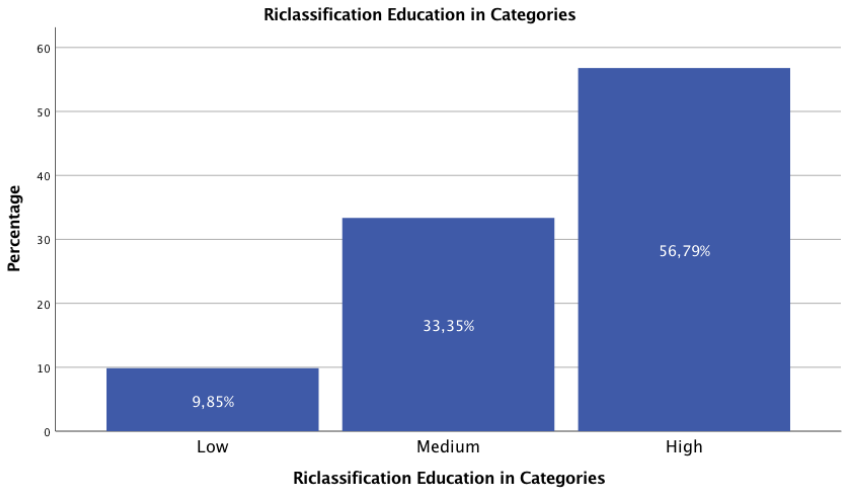


Figure 4.9 Percentage Education reclassified in Categories

Respondent's occupation (RO) is the dependent variable taken into consideration for the second model. In order to measure respondent's current occupation, interviewed people answered to this question: "Which is your current occupation?", with a 5 point-scale from the highest to the lowest level ("managers" =1, "professionals" =2, "clerical and service workers" =3, "skilled labour" =4, "other/manual labour" =5). For the purpose of the analysis, the classification has been converted from the lowest level ("other/manual labour" =1), to the highest one ("managers" = 5). Moreover, as done before, in order to facilitate the reading of the results, the 5 point-scale has been reclassified into three ordered categories: "Low", "Medium", "High". According to this classification, in the current analysis, 1 and 2 points are traced back to a "low" level of occupation; 3 to a "medium" occupational level; and 4, 5 to a "high" level. In Figure 4.10 is exhibited the percentage distribution of occupation reclassified into categories.

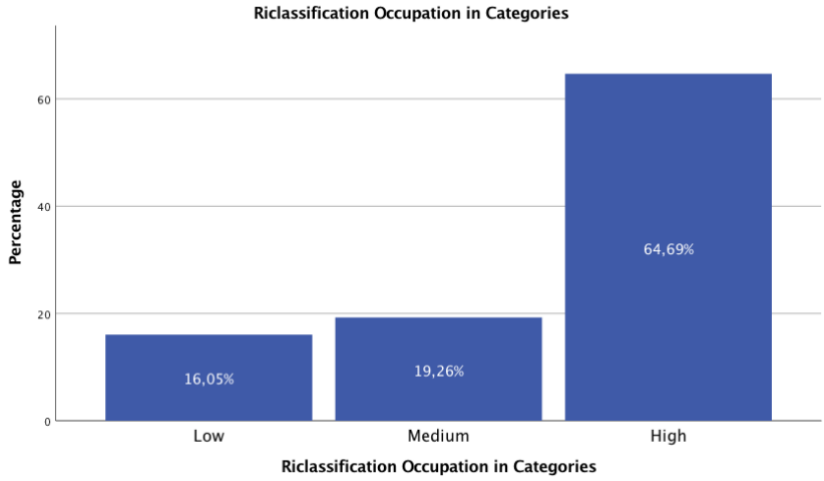


Figure 4.10 Percentage Occupation Reclassified in Categories

At this point, starting from RQ1, the first hypothesis for education and occupation can be enounced. Firstly, it is hypothesized that a higher parents' educational level will affect the respondent educational level by increasing it (Erola et al., 2015; Dubon et al., 2009; D'Addio 2007). Due to the fact that, most of the studies dealing with this relationship, consider only father-son relationship (Torche et al., 2016), this hypothesis aims also to test parents-children relationship, without gender or family distinction. Therefore, the hypothesis is the following:

H_{1E}: A higher parents' educational level is positively related with respondent's educational attainment.

Secondly, for the second model, it is hypothesized that a higher parents' occupational level will impacts on respondent occupational level by increasing it (Erola et al., 2015; D'Addio 2007). In particular, the hypothesis can be summarized as follows:

H_{1O}: A higher parents' occupational level is positively related with respondent's occupational level.

MODERATORS. Once the independent and dependent variables have been defined, the moderators at individual level must be examined to answer the second research questions previously formulated. To measure Learning & Development (L&D), four questions included in the survey were considered. The scale used ranges from 1 - "Not at all important" to 5 - "Very important". Specifically, the respondents had to indicate on a Likert 5-point scale the importance they attach to the following career aspects:

1. Continuously learning throughout one's career
2. Doing work that gives one the opportunity to learn
3. Having the opportunity to be innovative in one's work activities
4. Experiencing challenges in one's work

In order to test the reliability and the internal consistency of the scale adopted, I used the *Cronbach's alpha test*, whose coefficient expresses the internal reliability of the items included in the scales. High level of alpha values, in analysis examining attitudes, indicate that the individual has a consistent attitude regarding each item of the dimension considered. In the current investigation, the Cronbach's alpha is 0.662 and it could be considered quite reliable and thus, the scale adopted is appropriate to measure individual's learning & development. A summary of Cronbach's alpha test is shown in Table 4.2.

Table 4.2 - Cronbach's alpha test of Learning & Development (L&D)

SCALE		ITEM
Learning & Development (L&D)	Cronbach's Alpha 0.662	Continuously learning throughout one's career
		Doing work that gives one the opportunity to learn
		Having the opportunity to be innovative in one's work activities
		Experiencing challenges in one's work

Once the measurement for Learning & Development have been identified, it is important to explain how this variable will impact on the main relationships under analysis. More specifically, it is expected that an individual that has a high attitude of learning and development, will be more influenced by parents' socio-economic status, in terms of education and occupation. Hence, hypotheses regarding the individual-level moderating factor, in the two models, with respect to the Learning & Development are the following:

H_{2aE}: Learning & Development (L&D) strengthens the positive relationship between parents' education (PE) and respondent education (RE).

H_{2aO}: Learning & Development (L&D) strengthens the positive relationship between parents' occupation (PO) and respondent occupation (RO).

To measure Personality (P), nine questions included in the survey were considered. These questions were formulated based on the BIG 5 of personality: extraversion, neuroticism, conscientiousness, agreeableness, openness to experience on a 7 point-scale (Langford, 2003). These items are: openness ("uncreative-creative", "unartistic-artistic", and "down to earth-imaginative"); conscientiousness ("lazy-hardworking", "irresponsible-responsible" and "weak willed- self-disciplined"); extroversion ("shy-outgoing", "quiet-talkative", and "introverted-extroverted"); agreeableness ("headstrong-gentle", "disagreeable-agreeable", "vengeful-forgiving"); and neuroticism ("at ease-nervous", "not agitated-tense" and "calm-anxious"). For the current analysis, only the items referred to conscientiousness, extroversion and neuroticism were considered. This decision was taken according to the fact that only these three personality traits have a significant influence on educational and occupational attainment (Hakimi et al.,

2011; Damian et al., 2014; Judge et al., 1999). Indeed, as suggested by these authors, only conscientiousness, neuroticism and extraversions have a predict power on socio-economic status outcomes. More specifically, neuroticism and extraversion negatively affect educational results, while conscientiousness is positively related. In contrast, extraversion and conscientiousness positively predict career success, whereas neuroticism negatively affects career success. In order to test the reliability and the internal consistency of the scale adopted, *Cronbach's alpha test* was performed. In table 4.3 is presented of test's results applied on personality. In particular, the outcomes are respectively 0.620, 0.723 and 0.683, supporting the internal reliability and consistency of the items involved in the scale.

Table 4.3 - Cronbach's alpha test of Personality (P)

SCALE		ITEM
Conscientiousness	Cronbach's Alpha 0.620	Lazy - Hardworking
		Irresponsible - Responsible
		Weak willed - Self-disciplined
Extraversion	Cronbach's Alpha 0.723	Shy - Outgoing
		Quiet - Talkative
		Introvert - Extravert
Neuroticism	Cronbach's Alpha 0.682	At ease - Nervous
		Unagitated - Tense
		Calm - Anxious

Once the measurements for personality have been identified, it is important to explain how this variable will impact on the main relationships under analysis. Firstly, it is expected that an individual that has a high neuroticism, will be less influenced by parents' socio-economic status, in terms of education and occupation. Secondly, it is expected that an individual that has a high conscientiousness, the impacts of parents' socio-economic status will be higher. Thirdly, it is expected that an individual that has a high extraversion, will be less influenced by parents' level of education occupation. Hence, hypotheses regarding the individual-level moderating factors, in the two models, with respect to Personality are the following:

H_{2bE}: Conscientiousness (Cons) strengthens the positive relationship between Parents education (PE) and respondent education (RE).

H_{2cE}: Extraversion (Extr) weakens the positive relationship between Parents education (PE) and respondent education (RE).

H_{2dE}: Neuroticism (NEUR) weakens the positive relationship between Parents education (PE) and respondent education (RE).

H_{2bO}: *Conscientiousness (Cons) strengthens the positive relationship between Parents occupation (PO) and respondent occupation (RO).*

H_{2cO}: *Extraversion (Extr) weakens the positive relationship between Parents occupation (PO) and respondent occupation (RO).*

H_{2dO}: *Neuroticism (NEUR) weakens the positive relationship between Parents occupation (PO) and respondent occupation (RO).*

Finally, in order to run the multilevel ordinal regressions, two groups of country level variables have been considered: institutional and cultural dimensions. For what regards *institutional dimensions*, two indexes *were chosen with the aim* of explaining the level of supportiveness that a country has in improving an individual's development, to weaken the influence that family has. In particular, *educational expenditure,* and the *Social Progress Index* have been included in the analysis. Firstly, government educational expenditure is calculated as total current, capital, and transfers expenditure expressed as a percentage of GDP (UNESCO, 2017). This measure is useful for comparing spending on education among countries in relation to the size of their economy (The World Bank, 2018). The data are taken from a subset of the World Bank's Public Education Spending database, which has been collected in 2016. However, in countries for which values were missing, levels of investment in education is reported in the most recent year available (2012, 2014, 2015). Secondly, Social Progress Index (SPI) expresses the extent to which countries provide social and environmental needs. The index combines three dimensions: Basic human needs, fundamentals of well-being (including health, housing and sanitation) and Opportunity (see Figure 4.11). The index is developed by the non-profit Social Progress Imperative with the aim of focusing on actual life outcomes.

Figure 4.11 Social Progress Index

The decision to include this index in the empirical analysis is due to the fact that this measure summarizes key aspects that influence intergenerational mobility. In particular, the index assesses how much a country provides essential needs by measuring access to nutrition and basic medical care. It measures if citizens have access to basic education. Finally, it measures the degree to which citizens are able to make their own decisions and if the prejudices or hostilities within a society prohibit individuals from reaching their potential (Social Progress Imperative, 2018). The data used in the current empirical analysis are taken from the Social Progress Imperative database, which has been collected in 2017. For what regards *cultural dimensions*, three indexes were chosen with the aim of explaining the influence of cultural values and attitude in family environment. Indeed, from these measures, it could be understood the attitude of a specific culture, which could shape the relationship between a certain family situation and consequent educational and career decisions. These indices are selected from Hofstede ‘s cultural dimension, developed by Geert Hofstede (2011). These dimensions describe the effects of a society's culture on the values of its citizens and how these values influence their behaviour. The Hofstede model consists of six dimensions (Individualism VS Collectivism, Uncertainty Avoidance; Power Distance, Masculinity VS Femininity, Long-Term Orientation and Indulgence). Among those six dimensions, I selected three of them (Individualism, uncertainty Avoidance and Masculinity), since these dimensions, as suggested by literature, are the more meaningful in the analysis of intergenerational mobility.

Once country level variables have been identified, RQ3 can be answered. In particular, hypotheses, on the moderating effect of national dimensions on the main relation under analysis, can be introduced. Firstly, it can be assumed that institutional policies geared to the development of education and human well-being can have effects on the main relationship being analysed. In fact, it is expected that a higher level of institutional support will weaken the effect that family background can have on restricting educational and career decisions. Therefore, the related hypotheses can be expressed as follows:

H3aE: A higher respondent development support of institutional policies (IV) will weaken the effect of parental education (PE).

H3aO: A higher respondent development support of institutional policies (IV) will weaken the effect of parental occupation (PO).

On the other hand, for what regards cultural dimension, expectations are based on the fact that an individualistic society encourages people to be more autonomous and independent and, at the same time, encourages them to undertake career aspirations (H3b). Thus, weakening the influence of the family. On the contrary, a risk-averse society tends to strengthen the relationship with the family (H3c), since individuals are more likely to behave in such a way as to reduce uncertain situations and entrepreneurial aspirations (Berthold and Grundler, 2014). Finally, the last cultural dimension involved in the analysis concerns masculinity. Although there is no clear association between gender and mobility, it is believed that male societies are less influenced by the family background (H3d) (Reeves and Venator, 2013). Therefore, the related hypotheses can be summarised as follows:

H_{3bE}: Higher effect of cultural dimension (CV), such as individualism will weaken the effect of parental education (PE).

H_{3cE}: Higher effect of cultural dimension (CV), such as uncertainty avoidance will strengthen the effect of parental education (PE).

H_{3dE}: Higher effect of cultural dimension (CV), such as masculinity will weaken the effect of parental education (PE).

H_{3bO}: Higher effect of cultural dimension (CV), such as individualism will weaken the effect of parental occupation (PO).

H_{3cO}: Higher effect of cultural dimension (CV), such as uncertainty avoidance will strengthen the effect of parental occupation (PO).

H_{3dO}: Higher effect of cultural dimension (CV), such as masculinity will weaken the effect of parental occupation (PO).

CONTROL VARIABLES. The following variables will also be included in the empirical analysis, as to control their potential effects on the dependent variables. In particular, it is expected that socio-demographic variables (gender, age), health and marital status are related to education and occupation. In order to verify the existence these effects; the following control variables have been introduced in the regression model:

- ***Gender*** ("male" = 1, "female" = 2): gender is controlled since, in the last decades, women have reduced the gap between men and women regarding school results, but sexual disparities still exist regarding occupational levels. This derives from the fact that individuals have different inclinations that identify themselves with different career decisions, confirming that women choose less high-status positions (Schoon and Polek, 2017). Furthermore, women and men are divergent for the significance that they attach to professional success (Scheerens et al., 2006).
- ***Age***: is another individual characteristic that can affect career decisions. Older people are more established in the organization and they are more likely to have a have higher status because they have more experience and they are more involvement than young workers (Scheerens et al., 2006). Moreover, age can also affect education. However, as suggested by literature, it becomes quite stable after 25 years old (Black et al. 2010).
- ***Health*** ("poor" = 1, "fair" = 2, "good" = 3, "very good" = 4, "excellent" =5): the relationship between well-being and intergenerational mobility is not obvious; however, empirical studies have shown a correlation (Robertson and O'Brien, 2018). Indeed, health, as suggested by literature, represents a key path for the transmission of the socio-economic status through the generations.
- ***Marital Status*** ("single" = 0, "In relationship" = 1): few studies have analyzed the relationship between marital status and intergenerational mobility. However, this variable may be a relevant element that people consider when made career decision.

4.5 ANALYTICAL PROCEDURE

The empirical analysis is basically divided into three main parts: they are based on the three research questions referred to the beginning of the chapter. The analysis consists of three multiple regressions for each model taken into consideration (i.e. education and occupation) with moderating variables. Firstly, the linear regression will be tested to understand the idea of the main correlation in analysis. In addition, multilevel ordinal regression will be used at individual level with two moderators; finally an ordinal multilevel regression will be applied to capture cross-level interactions when institutional and cultural moderators are added at country

level. Education and occupation can be found in relation to this method as well. The statistical software implemented in order to perform all the analyses is IBM SPSS 25.

In the previous paragraph, the first step was led: after the identification of the variables that compose the models, Cronbach's Alpha test on the scales were implemented to check their internal reliability and their one-dimensional nature. The results of the analysis revealed a fair reliability and internal consistency of the indicators that construct the scales.

As a second step, before performing the regressions, it was necessary to verify the multicollinearity problems of the variables included in the two models. To do this, the correlations among variables were analysed and the highly-correlated ones were eliminated (Pearson correlation index ≥ 0.65). However, no variable was strongly correlated. An overview of variables' correlation is displayed in Table 4.4.

As a third step, it is important to verify the *proportional odds assumption (PO)*, which is a fundamental hypothesis of ordinal regression models. It assumes that the explanatory variables have the same effect on each cumulative threshold of the ordinal dependent variable (National Centre for Research Method, 2011). The PO is tested in SPSS Statistics using a full likelihood ratio test by comparing the fitted location model with a model with variable location parameters (*parallel line test*). However, the problem with this test is that it can account violations that do not exist. Indeed, the test of PO assumption has been defined as *"anti-conservative, that is it nearly always results in rejection of the proportional odds assumption, particularly when the number of explanatory variables is large (Brant, 1990), the sample size is large (Allison, 1999; Clogg and Shihadeh, 1994) or there is a continuous explanatory variable in the model (Allison, 1999)."* (O"Connell, 2006; p. 29*)*. These cases are all satisfied by the variables taken into consideration to build the empirical model. As a matter of fact, the results of the ordinal regressions of the models show that the PO assumption is not satisfied ($p<.000$). To solve this problem, it is necessary to examine the data using a series of separate binomial logistic regressions to explicitly control if this hypothesis is met. For this purpose, I have dichotomised the ordinal dependent variable in three cut-off points (Category 1, 2 and 3) and I have run three separate binary logistic regressions. Due to the huge sample size, a $p<0.01$ level was used to direct conclusions with respect to non-proportionality assumption (National Centre for Research Method, 2011). The p values are described in the last column of Table 4.5. The findings showed that the proportional odds assumption appears to be rejected for "Health", "Parents' Education", "Parents' Occupation" and "Neuroticism" ($p<.000$). However, as argued above, continuous variables can cause biased errors due to a huge proportion of empty cells. As can be seen from table 4.4, the differences in Odds Ratio across the three categories appear to be

Table 4.4 - Variables correlation table

		MEAN	SD	1	2	3	4	5	6	7	8
	LEVEL 1										
1	Gender	1,52	0,499	1							
2	Age	39,93	10,495	0,004	1						
3	Health	3,67	0,937	-,024*	-,114**	1					
4	Marital Status	0,736	0,441	-,021*	,156**	0,004	1				
5	Education	4,57	1,385	0,013	-,103**	,075**	0,015	1			
6	Parents' Education	3,385	1,523	0,003	-,276**	,141**	-,074**	,438**	1		
7	Parents' Occupation	3,023	1,120	0,015	-,137**	,120**	-,030**	,291**	,572**	1	
8	Learning & Development	4,236	0,601	,022*	-,064**	,139**	0,004	,189**	,118**	,087**	1
9	Conscientiousness	5,769	0,965	,091**	,111**	,164**	,060**	,026*	-,035**	-0,013	,261**
10	Extraversion	4,622	1,281	,075**	0,021	,093**	,065**	-0,005	-0,019	,041**	,145**
11	Neuroticism	4,51	1,189	-,058**	,086**	,187**	0,017	-0,01	,047**	0	,090**
	LEVEL 2										
12	Expenditure on Education	5,309	1,065	,056**	,145**	,143**	,052**	-,111**	-,143**	-,032**	0,013
13	Social Progress Index	81,941	9,727	,077**	,215**	0,002	,090**	-,110**	-,158**	0,019	-,140**
14	Individualism	53,434	21,189	,035**	,120**	-0,001	,056**	,022*	0,007	,061**	-,048**
15	Masculinity VS Femininity	54,877	23,157	-,068**	-,068**	,074**	-,053**	,082**	,178**	,052**	-,046**
16	Uncertainty Avoidance	68,193	19,778	0,016	-,107**	-,054**	-,055**	-0,008	-0,01	-,043**	-,036**

* Correlation is significant at the 0,05 level (2-tailed). ** Correlation is significant at the 0,01 level (2-tailed). n (level 1) = 8617; n (level 2) = 28

Table 4.4 - Variables correlation table

		MEAN	SD	9	10	11	12	13	14	15	16
	LEVEL 1										
1	Gender	1,52	0,499								
2	Age	39,93	10,495								
3	Health	3,67	0,937								
4	Marital Status	0,736	0,441								
5	Education	4,57	1,385								
6	Parents' Education	3,385	1,523								
7	Parents' Occupation	3,023	1,120								
8	Learning & Development	4,236	0,601								
9	Conscientiousness	5,769	0,965	1							
10	Extraversion	4,622	1,281	,220**	1						
11	Neuroticism	4,51	1,189	,166**	,041**	1					
	LEVEL 2										
12	Expenditure on Education	5,309	1,065	,088**	,082**	,140**	1				
13	Social Progress Index	81,941	9,727	,035**	,100**	-,027*	,412**	1			
14	Individualism	53,434	21,189	,077**	0,008	,043**	,362**	,498**	1		
15	Masculinity VS Femininity	54,877	23,157	-,034**	-,141**	-,087**	-,504**	-,061**	,164**	1	
16	Uncertainty Avoidance	68,193	19,778	-,038**	,047**	-,127**	-,210**	-,136**	-,453**	-,219**	1

* Correlation is significant at the 0,05 level (2-tailed). ** Correlation is significant at the 0,01 level (2-tailed). n (level 1) = 8617; n (level 2) = 28

negligible (from 1.003 to 1.007 for Parents' Occupation; 1.94 to 1.96 for Parents' Education; and .850 to .857 for Neuroticism). On the other hand, for what regards Health, the odds ratio of .9617 estimated in the ordinal regression (see Table 4.6) slightly overestimates the representation of health in categories 2 and 3. It also slightly underestimates health in category 1. However, Health's coefficients are broadly consistent in direction and magnitude across all the groups (National Centre for Research Method, 2011). Moreover, the odd ratios are broadly similar to the average of the ordinal OR [(.974 + .921 + .953) / 3 = 0.95]. Therefore, the Health's OR (.96) of the ordinal model represents a reasonable summary of the general model.

Table 4.5 - Results of three separate binary logistic regression

	B Coefficients			Odds Ratio			Test of parallel lines p value
	Category 1	Category 2	Category 3	Category 1	Category 2	Category 3	
Intercept	-1.968	-1.41	.721	-	-	-	
Health	-.026	-.082	-.048	.974	.921	.953	**.000**
Gender	-.183	.128	-.061	.833	1.137	.941	.013
Age	-.004	.006	-.007	.996	1.006	.993	.301
Single or In Relationship	-.004	-.232	.245	.996	.793	1.277	.018
Parents Occupation	.005	.003	.007	1.005	1.003	1.007	**.000**
Parents Education	.671	.667	.674	1.95	1.94	1.96	**.000**
Learning & Development	.512	.504	.508	1.668	1.655	1.662	.061
Conscientiousness	.035	-.038	.018	1.036	.963	1.018	.298
Neuroticism	-.155	-.162	-.165	0.857	.85	.848	**.000**
Extraversion	0,061	.016	-.042	1.063	1.016	.959	.973

In conclusion, the investigation of the separate odd ratios for the three binary logistic regressions suggests that, it is realistic to assume that the ordinal model is a reasonable summary of the patterns in the data concerning the three thresholds.

At this point, the regression analysis can be applied. To verify the first hypothesis (RQ1) for education and occupation, it is necessary to run the simple ordinal regression. Therefore, the previously hypothesized model can be summarized with the following equation:

$$Ln(odds_j) = \beta_j - \beta_1 X_1$$

where j goes from 1 to the number of categories minus 1, *ln(odds)* is the ordinal dependent variable, β_j is the intercept, β_1 is the coefficient of the regression line and X_1 is the independent

variable. Ln(odds), called logit function, is the log of the odds that an event occurs, and it formally corresponds to:

$$Ln\left(\frac{prob(event)}{(1-prob(event))}\right) = Ln(odds)$$

The logit function is applied in order to transform the conditional probabilities (s-shaped curve) into a linear combination of log-odds (straight line). This procedure is useful for facilitating the reading of the findings (Sommet and Morselli, 2017).

The sign minus, in the regression equation, before the coefficients for the explanatory variables, means that higher values of β indicate an association with higher scores. More specifically, a categorical variable means that the highest scores are more likely to be performed in the first category. On the other hand, for a continuous variable, a positive coefficient indicates that, as the values of the variable increase, the odds of higher scores increase. Each logit has its term β_j, but the same coefficient β. This means that the impact of the independent variable is the same for the different logit functions *(*proportional odds assumption*)*. Nevertheless, the terms β_j, called threshold values, are often not considered.

Subsequently, to answer to the second questions (RQ2), it is necessary to include moderators at individual level in the main relationship under analysis. Firstly, before performing the regressions, it is important to prepare the data. In particular, the centering variables procedure has to be applied. The latter consists in subtracting from each value of a study variable (in this case the terms that constitute interactions) its average. The main objective of the centering procedure is to simplify the interpretation of the outcomes and to ensure that "the coefficients for the two variables that define the product will be interpretable in the data range" (Hayes, 2012, p.15). Furthermore, it is believed that centering can reduce multicollinearity issues between variables and their terms (Shieh, 2011). As suggested by researchers, I decided to center the variables with respect to their average (*grand-mean centering*). Therefore, I centered the explanatory variables (PE and PO) and the moderators (L&D, CONS, EXTR and NEUR). These new variables will have an average of zero and will maintain their original standard deviations. Subsequently, to calculate the interactions between independent variables and moderators, it is necessary to multiply the centered explanatory variables with the centered moderators, previously obtained. Finally, I performed the ordinal regression with individual level moderators in order to test hypothesis H_{2a}, H_{2b}, H_{2c}, H_{2d} both for education and occupation. Specifically, it was estimated, by including in the regression, the control variables, the independent variables, the moderators and the interaction terms in this order:

- Control variables: gender, age, health, marital status and parents' education (the last one variable appears only in occupation's model)
- Centered explanatory variable (PE and PO)
- Centered Moderators (L&D, CONS, EXTR and NEUR)
- Interaction terms for education: (centered PE * centered L&D; centered PE * centered CONS; centered PE * centered EXTR; centered PE * centered NEUR)
- Interaction terms for occupation: (centered PO * centered L&D; centered PO * centered CONS; centered PO * centered EXTR; centered PO * centered NEUR).

Therefore, the empirical models can be expressed by the following formula:

$$Ln(odds_j) = \beta_j + \beta_1 X_1 + \beta_M M + \beta_{X1M}(X_1 * M)$$

Where $ln(odds_j)$ is the dependent variable, β_j is the intercept, β_1 is the coefficient of the independent variable, M is the moderator, $(X_1 * M)$ is the interaction term, β_{X1M} is the coefficient of the interaction term.

As can be pointed out, an important difference between linear and ordinal logistic regression regards the concept of residuals. In linear regression models, the observed value can differ from the predicted value. This difference is called residual e and it is assumed to follow a normal distribution. However, with ordinal regression, a probability is predicted. Consequently, it is not possible to add a separate residual to level 1 equation since, as assumption, estimates follow a multinomial probability distribution (Heck et al., 2012). Furthermore, residuals are not homogeneous within the groups; instead, it depends on the value of the estimate of the result (Raudenbush et al., 2004). Therefore, residuals are not needed and do not appear in the ordinal regression equation (Sommet and Morselli, 2017).

Finally, to respond to the third research questions (RQ3), it is necessary to run multilevel ordinal regression models (MLM), that include moderators at country level in the main relationship under analysis. Multilevel analysis is adopted when data are multilevel or hierarchical in nature, such as in the case of cross-national investigations (Heck et al., 2012). More specifically, individuals are considered within groups, which can influence an individual's behaviours or attitudes. Therefore, the purpose of multilevel analysis is to untangle the within-group effects from the between-groups effects (Sommet and Morselli, 2017). A significant aspect of MLM is that, it violates the most important assumption of simple regression models: called the *assumption of independence* of the residuals (Bressoux, 2010). Indeed, data are interdependent: respondents clustered in the same country are more likely to behave in the same way than respondents in different countries. Therefore, in the current analysis the log-odds may vary

from one country to another. The intercepts are not the same in every country and level 2 residuals will provide information about intercept variation. Level 2 residual represents the deviation of the log-odds. The variance component of this deviation is the variance of the random intercept. This is a key element in the analysis of multilevel models: since the higher the variance the higher the chances of obtaining more scores in one country than another one (Sommet and Morselli, 2017).

In order to run the regressions, it is important to prepare the data (centering procedure as well) and to follow a procedure composed by three steps (Sommet and Morselli, 2017):

- Step 1: building an empty model in order to assess the log-odd's variation among countries;
- Step 2: Building a model with level 1 moderators, to assess the variation of level 1 effects among countries;
- Step 3: Building a final model with cross-level interactions (level 2 moderators).

Moreover, the Intraclass Correlation Coefficient (ICC) is calculated in every step, in order to understand the proportion of between-groups variation var(u_{0j}). Indeed, it measures the extent of homogeneity of the estimates within groups. The formula applied in a multilevel ordinal regression model is:

$$ICC = \frac{var\ (u_{0j})}{var\ (u_{0j}) + (\frac{\pi^2}{3})}$$

where var(u_{0j}) is the random intercept variance (level 2) and $(\frac{\pi^2}{3})$=3,29 refers to the standard logistic distribution assumed at level 1, as ordinal regression does not include level 1 variance components. Finally, to test the goodness of fit of the proposed models, a likelihood ratio test, marked as LRx2, should be performed. The deviance change (-2*(Log Likelihood)) significance has to be calculated by comparing Model n to Model n-1: considering that the distribution of the deviance statistic is chi-square with d.f. equal to the number of extra parameters in the new model proposed (Singer & Willett, 2003). The goal is to find out if outcomes or variance component of AIM (augmented intermediated model) accomplishes a better fit to the data than CIM (constrained intermediated model). In other words, the final objective is to understand whether the between-group effect variation improves the model (Sommet and Morselli, 2017).

Starting with the analysis, the first step consists in estimating an empty (null) model that contains only the intercept. This model aims to estimate the log-odd of obtaining a higher level

of education (or occupation), whereas no predictors are included. The empty model is shown below:

$$Ln(odds_j) = \beta_{0j} + \theta_2$$

where β_{0j} is the intercept for the *jth* group, θ_2 indicates the threshold (C-1 cut points). The intercept can vary across countries, while the second threshold is a fixed parameter. Again, as explained before, there is no Level 1 residual. Then, between-groups variation in random intercepts (β_{0j}) can be explained as:

$$\beta_{0j} = \gamma_{00} + u_{0j}$$

where γ_{00} is Level 2 fixed-effect coefficient and variability in group intercepts is represented by u_{0j}. By substituting, the combined level 2 intercept model can be described as:

$$Ln(odds_j) = \gamma_{00} + u_{0j} + \theta_2$$

In the second step, individual level predictors (parents' education in one model, and parents' occupation in the other one) are added. For each respondent *i* in country *j*, the proposed model can be expresses as:

$$Ln(odds_j) = \beta_{0j} + \beta_1 X_{1j} + \theta_2$$

As done before, the variation of the parameters is included in the equation at level 2. In particular, the intercept (γ_{00}) is allow to vary randomly, the slopes of the explanatory variable (γ_{10}) are fixed across countries:

$$\beta_{0j} = \gamma_{00} + u_{0j} \qquad \text{and} \qquad \beta_1 = \gamma_{10}$$

Through substitution of β_{0j} and β_1 into the previous equation, the within-effect model can be summarized as:

$$Ln(odds_j) = \gamma_{00} + u_{0j} + \gamma_{10} X_{1j} + \theta_2$$

Finally, in the last step, country level predictors are included in the model as well. Country variables are usually referred to as Z (Heck et al., 2012). Therefore, the country level model is described as follows:

$$\beta_{0j} = \gamma_{00} + \gamma_{10} Z_j + u_{0j}$$

By substituting this equation and rearranging it, the combined model with two level predictor variables can be written as:

$$Ln(odds_j) = \gamma_{00} + \beta_1 X_{1j} + \theta_2 + \gamma_{10} Z_j + u_{0j}$$

4.6 RESULTS

The results from the estimation of the regressions are shown from Table 4.6 to 4.13. I started reporting the outcomes regarding education (Table 4.6 to 4.9), then I reported the ones regarding occupation (Table 4.10 to 4.13). The results obtained, aimed at verifying the first research questions of the model (RQ1 and RQ2), are shown in Table 4.6. In detail, this model tested H1 hypotheses, which are based on the assumption that a higher level of education of the parents (PE) impacts on the educational approval of respondents (RE). In addition, it tested hypothesis H2a, H2b, H2c, H2d. As it could be seen from tables, hypotheses H1 has been verified. A higher level of parents' education corresponds to an increase in the log-odds of obtaining a higher level of education by .890 (about 2 times more). Overall, it is possible to see from Nagelkerke that, after considering parents' education, its level increases from .028 to .241. This value suggests that adding new variables has been useful for better explaining the data.

Table 4.6 Ordinal regression, Education

	Model 1		Model 2		Model 3		Model 4	
	Coeff	Odds Ratio	Coeff	Odds Ratio	Coeff	Odds Ratio	Coeff	Odds Ratio
CONTROL VARIABLES								
Gender	-.019	.982	-.025	.975	-.007	.993	-.008	.992
Age	-.028**	.972**	-.007*	.993*	-.005*	.995*	-.005*	.995*
Marital Status	-.092	.912	-.190**	.827**	-.189**	.828**	-.187**	.829**
Health	.069*	1.071*	-.027	.973	-.039	.962	-.035	.959
INDEPENDENT VARIABLE								
Parents' Education			.690**	1.993**	.686**	1.986**	.686**	1.986**
MODERATORS								
Learning & Development					.519**	1.680**	.466**	1.593**
Conscientiousness					-.004	.996	-.004	.996
Extraversion					-.041*	.959*	-.041*	.959*
Neuroticism					-.095**	.909**	-.094**	.910**
INTERACTION TERMS								
PE*L&D							-.104**	.901**
PE*CONSC								
PE*EXTR								
PE*NEUR								
Nagelkerke	.028		.241		.263		.264	

**p<.001 level; * p<.05 level; + p<.1 level; n= 8617 to 8617

Table 4.6 - Ordinal regression, Education (continues)

	Model 5		Model 6		Model 7		Model 8	
	Coeff	Odds Ratio	Coeff	Odds Ratio	Coeff	Odds Ratio	Coeff	Odds Ratio
CONTROL VARIABLES								
Gender	-.006	.994	-.007	.993	.003	1.003	.001	1.001
Age	-.005*	.995*	-.005*	.995*	-.005*	.995*	-.005*	.995*
Marital Status	-.189**	.828**	-.189**	.828**	-.190**	.827**	-.188**	.828**
Health	-.038	.962	-.038	.962	-.039	.962	-.035	.959
INDEPENDENT VARIABLE								
Parents' Education	.687**	1.988**	.686**	1.986**	.696**	2.006**	.696**	2.006**
MODERATORS								
Learning & Development	.519**	1.680**	.519**	1.680**	.523**	1.689**	.472**	1.603**
Conscientiousness	.016	1.016	.004	1.004	.002	1.002	.003	1.003
Extraversion	-.042*	.959*	-.035^{+}	.965^{+}	-.041*	.959*	-.03	.970
Neuroticism	-.094**	.910**	-.095**	.909**	-.129**	.879**	-.126**	.882**
INTERACTION TERMS								
PE*L&D							-.098**	.907**
PE*CONSC	-.027	.973					-.003	.997
PE*EXTR			.015	1.015			.024^{+}	1.024^{+}
PE*NEUR					-.076**	.927	-.071**	.931**
Nagelkerke	.263		.263		.266		.267	

**p<.001 level; * p<.05 level; + p<.1 level; n= 8617 to 8617

However, models, that include interaction between the independent variables and the moderators, are not always significant. Only interactions referrer to Learning & Development and Neuroticism are significant (respectively -.104 and -.076). Therefore, the respondent's L&D attitude directly influences his educational level. In particular, it affects and softens the way through which parents' education impacts on his educational attainment. The same can be assumed for neuroticism. As a consequence, hypothesis H2a were not supported because the effect is the opposite as assumed, however its relation is significant. Moreover, H2d were supported, whereas H2b and H2b have not been verified.

The next research question focuses on cross-level interactions of institutional and cultural dimensions (RQ3). More specifically, it is examined whether the positive relationship between parents' education and respondent's education will be weaker if institutional policies (IV) invest in educational expenditure and if social progress increases (hypothesis H3a). On the other hand, it is tested if cultural values (CD) that emphasize the role of individual can weaken the relationship between PE and RE (hypothesis H3b). Models 3-8 in tables 4.7, 4.8 and 4.9

represent the results obtained by the application of multilevel ordinal regression for education. As can be seen, four of the five hypotheses have been verified including cross-level interaction moderators. In detail, variables involving institutional dimension (Expenditure on Education and Social Progress Index) have a significant effect on the relationship between parents and respondents' education. It is verified that educational spending (-.002; p<.005) and social progress index (-.008; p<.000) softens the influence of parents' level of education on RE. Thus, H3a and H3b were supported. On the other hand, for what regards models that involve cultural dimension, the analysis verified that cultural variables, such as Individualism and Uncertainty Avoidance, have a significant effect on the main relationship. In particular, it is verified that individualism affects the way through which parental education impacts on respondent educational attainment. Indeed, it softens the influence of parents' level of education on RE. Additionally, interaction between PE and uncertainty avoidance dimension is significant (.006). It strengthens the impact of parental education on respondent education. Therefore, hypothesis H3c and H3d are supported. Finally, model 8, that considers interaction between PE and Masculinity, is not significant. Thus, hypothesis H3e is not verified.

Table 4.7 - Multilevel models predicting Education

	Model 1		Model 2		Model 3	
	Coefficient	Odds Ratio	Coefficient	Odds Ratio	Coefficient	Odds Ratio
INTERCEPT						
Cutpoint =1	-2.818	.06	-2.752	.064	-2.532	.079
Cutpoint=2	-.594	.552	-.502	.605	-.053	.948
LEVEL 1						
Gender			-.069	.933	-.080	.923
Age			-.014*	.986*	.003	1.003
Marital Status			-.218**	.804**	-.241*	.785*
Health			.210**	1233**	.144**	1.154**
Parents' Education					.685**	1.984**
VARIANCE COMPONENTS						
Variance (Within)	3.29		3.29		3.29	
Variance (Between)	.704**		.707**		.570**	
Deviance	69162		69451		73478	
Deviance Change	0		-289**		-4316**	
ICC	.176		.176		.147	

Table 4.8 - Multilevel models with cross-level interactions (M=IV)

	Model 3		Model 4		Model 5		Model 5	
	Expenditure on Education		*Expenditure on Education*		*Social Progress Index*		*Social Progress Index*	
	Coeff	Odds Ratio	Coeff	Odds Ratio	Coeff	Odds Ratio	Coeff	Odds Ratio
INTERCEPT								
Cutpoint =1	-3.583	.028	-3.725	.024	-2.489	.083	-2.497	.082
Cutpoint=2	-1.104	.332	-1.248	.287	-.01	.99	-0.022	.978
LEVEL 1								
Gender	-.081	.922	-.081	.922	-.081	.922	-.078	.925
Age	.004	1.004	.003	1.003	.004	1.004	.003	1.003
Marital Status	-.242*	.785*	-.252**	.777**	-.242*	.785*	-.252**	.778**
Health	.145**	1.156**	.143**	1.154**	.143**	1.154**	.143**	1.154**
Parents' Education	.685**	1.983**	.698**	2.01**	.685**	1.983**	.691**	1.995**
LEVEL 2								
Institutional dimension	.001	1.001	.002	1.002	-.018	.982	-.020	.980
CROSS-LEVEL INTERACTION								
PE* Institutional dimension			-.002*	.998*			-.008**	.993**
VARIANCE COMPONENTS								
Variance (Within)	3.29		3.29		3.29		3.29	
Variance (Between)	.592		.598		.550		.554	
Deviance	73497		73457		73482		73403	
Deviance Change	-4335**		-4295**		-4320**		-4241**	
ICC	.152		.154		.143		.144	

Table 4.9 - Multilevel models with cross-level interactions (M=CV)

	Model 6 *Individualism*		Model 6 *Individualism*		Model 7 *Uncertainty Avoidance*		Model 7 *Uncertainty Avoidance*		Model 8 *Masculinity*		Model 8 *Masculinity*	
	Coeff	Odds Ratio	Coeff	Odds Ratio	Coeff	Odds Ratio	Coeff	Odds Ratio	Coeff	Odds Ratio	Coeff	Odds Ratio
INTERCEPT												
Cutpoint =1	-2515	.081	-2,561	0,077	-2.523	.08	-2.551	.078	-2.535	.079	-2.537	.079
Cutpoint=2	-.036	.965	-0,077	0,926	-.044	.957	-.067	.936	-.056	.945	-.06	.942
LEVEL 1												
Gender	-.081	.923	-.077	.925	-.08	.923	-.079	.924	-.08	.923	-.079	.924
Age	.004	1.004	.003	1.003	.004	1.004	.003	1.003	.003	1.003	.003	1.003
Marital Status	-.242*	.785*	-.254**	.775**	-.242**	.785**	-.250**	.779**	-.241*	.786*	-.241*	.786*
Health	.144**	1.155**	.141**	1.151**	.144**	1.155**	.144**	1.155**	.144**	1.155**	.143**	1.154**
Parents' Education	.685**	1.985**	.690**	1.995**	.685**	1.985**	.691**	1.996**	.686**	1.985**	.687**	1.988**
LEVEL 2												
Cultural dimension	-.005	.995	-.006	.994	.008	1.008	.01	1.01	-.007	.993	-.007	.993
CROSS-LEVEL INTERACTION												
PE* Cultural dimension			-.005**	.995**			.006**	1.006**			.001	1.001
VARIANCE COMPONENTS												
Variance (Within)	3.29		3.29		3.29		3.29		3.29		3.29	
Variance (Between)	.578		.582		.563		.525		.574		.600	
Deviance	73493		73460		73498		73764		73495		73640	
Deviance Change	-4331**		-4298**		-4336**		-4602**		-4333**		-4478**	
ICC	.149		.150		.146		.137		.142		.154	

After the empirical analysis, the proposed model can be summarised as follows in Figure 4.12. The signs in the lines represents the verified direction of the relationship, where "n.s." represents the non-significant findings.

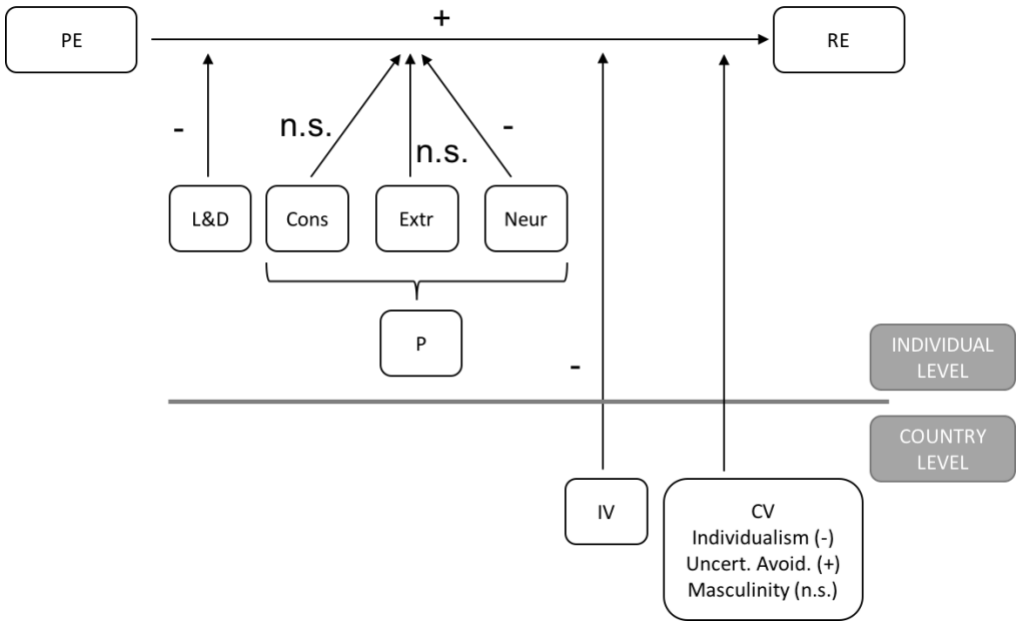


Figure 4.12 The proposed model (education): empirical findings

The same procedure conducted above is applied for occupation. Findings regarding the first research questions (RQ1 and RQ2) are shown in Table 4.10. As it could be pointed out, hypotheses H1 has been verified. A higher level of parents' occupation corresponds to an increase in the log-odds of obtaining a higher level of occupation by .348 (about 1 times and half more). Overall, it is possible to see from Nagelkerke that, after considering parents' occupation, its level rises from .069 to .096. However, a higher increase in Nagelkerke value is obtained after having included moderator variables (.125). Moreover, results suggest that models that involve interaction between the independent variables and the moderators are in neither case significant. As a consequence, hypothesis H2a, H2b, H2c and H2d were not supported. Finally, in order to answer to the third research question (RQ3), country level dimensions are involved in the analysis. Models 3-8 in tables 4.11, 4.12 and 4.13 represent the results obtained by the application of institutional and cultural variables.

Table 4.10 - Ordinal regression, Occupation

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7		Model 8	
	Coeff	Odds Ratio	Coeff	Odds Ratio	Coeff	Odds Ratio	Coeff	Odds Ratio	Coeff	Odds Ratio	Coeff	Odds Ratio	Coeff	Odds Ratio	Coeff	Odds Ratio
CONTROL VARIABLES																
Gender	-.071	.931	-.061	.941	-.022	.978	-.022	.978	-.023	.977	-.022	.978	-.023	.977	-.023	.977
Age	.019**	1.019**	.018**	1.018**	.02**	1.020**	.02**	1.020**	.02**	1.020**	.02**	1.020**	.02**	1.020**	.02**	1.020**
Marital Status	-.450**	.638**	-.442**	.643**	-.430**	.650**	-.430**	.650**	-.430**	.650**	-.430**	.650**	-.430**	.650**	-.430**	.650**
Health	.127**	1.135**	.108**	1.114**	.079*	1.082*	.079*	1.082*	.079*	1.082*	.079*	1.082*	.079*	1.082*	.079*	1.082*
Parents' Education	.305**	1.357**	.158**	1.171**	.155**	1.168**	.155**	1.168**	.155**	1.168**	.155**	1.168**	.155**	1.168**	.155**	1.168**
INDEPENDENT VARIABLE																
Parents' Occupation			.348**	1.416**	.339**	1.403**	.338**	1.402**	.339**	1.403**	.339**	1.403**	.339**	1.403**	.339**	1.403**
MODERATORS																
Learning & Development					.504**	1.655**	.502**	1.652**	.503**	1.654**	.504**	1.655**	.504**	1.655**	.500**	1.649**
Conscientiousness					.04	1.041	.04	1.041	.042	1.043	.04	1.041	.04	1.041	.043+	1.044+
Extraversion					.059**	1.061**	.059**	1.061**	.059**	1.061**	.058*	1.060*	.059**	1.061**	.058*	1.060*
Neuroticism					-.096**	.909**	-.096**	.909**	-.096**	.909**	-.096**	.909**	-.095**	.909**	-.095**	.909**
INTERACTION TERMS																
PO*L&D							-.008	.992							-.012	.988
PO*CONSC									.009	1.009					.011	1.011
PO*EXTR											-.004	.996			-.005	.995
PO*NEUR													.005	1.005	.004	1.004
Nagelkerke	.069		.096		.125		.125		.125		.125		.125		.125	

**p<.001 level; * p<.05 level; + p<.1 level; n= 8617 to 8617

Table 4.11 - Multilevel models predicting Occupation

	Model 1		Model 2		Model 3	
	Coefficient	Odds Ratio	Coefficient	Odds Ratio	Coefficient	Odds Ratio
INTERCEPT						
Cutpoint =1	-1.672	.188	-,339	0,713	-0,418	0,658
Cutpoint=2	-.586	.557	,830	2,293	0,762	2,143
LEVEL 1						
Gender			,033	1,034	0,038	1,038
Age			,021**	1,021**	0,021**	1,021**
Marital Status			-,363**	0,696**	-0,368**	0,692**
Health			,185**	1,203**	0,171**	1,187**
Parents' Education			,482**	1,62**	0,35**	1,419**
Parents' Occupation					0,263**	1,301**
VARIANCE COMPONENTS						
Variance (Within)	3.29		3.29		3.29	
Variance (Between)	.253		.390		.345	
ICC	.071		.106		.095	

Table 4.12 - Multilevel models with cross-level interactions (M=IV)

	Model 3 *Expenditure on Education*		Model 4 *Expenditure on Education*		Model 5 *Social Progress Index*		Model 5 *Social Progress Index*	
	Coef	Odds Ratio	Coef	Odds Ratio	Coef	Odds Ratio	Coef	Odds Ratio
INTERCEPT								
Cutpoint =1	-.163	.849	-.222	.801	.412	1.51	.268	1.307
Cutpoint=2	1.017	.766	.961	2.615	1.593	4.918	1.452	4.272
LEVEL 1								
Gender	.039	1.04	.042	1.043	.039	1.039	.043	1.044
Age	.021**	1.021**	.021**	1.021**	.021**	1.021**	.02**	1.021**
Marital Status	-.367**	.693**	-.368**	.692**	-.368**	.692**	-.374**	.688**
Health	.172**	1.188**	.173**	1.189**	.171**	1.187**	.172**	1.188**
Parents' Education	.35**	1.42**	.347**	1.415**	.351**	1.42**	.347**	1.415**
Parents' Occupation	.263**	1.3**	.381**	1.464**	.263**	1.3**	1.072**	2.921**
LEVEL 2								
Institutional dimension	.006**	1.006**	.004+	1.004+	.01	1.011	0,009	1.009
CROSS-LEVEL INTERACTION								
PE* Institutional dimension			-.002**	.998**			-0,01**	0.99**
VARIANCE COMPONENTS								
Variance (Within)	3.29		3.29		3.29		3.29	
Variance (Between)	.328		.328		.346		.340	
Deviance	63792		63765		63794		63787	
Deviance Change	-3179**		-3152**		-3181**		-3174**	
ICC	.091		.091		.095		.094	

Table 4.13 - Multilevel models with cross-level interactions (M=CV)

	Model 6 *Individualism*		Model 6 *Individualism*		Model 7 *Uncertainty Avoidance*		Model 7 *Uncertainty Avoidance*		Model 8 *Masculinity*		Model 8 *Masculinity*	
	Coeff	Odds Ratio	Coeff	Odds Ratio	Coeff	Odds Ratio	Coeff	Odds Ratio	Coeff	Odds Ratio	Coeff	Odds Ratio
INTERCEPT												
Cutpoint =1	-.43	.651	-.444	.641	-.418	.659	-.418	.658	-.422	.655	-.424	.655
Cutpoint=2	.751	2119	.737	2.09	.763	2.145	.763	2.144	.758	2.134	.757	2.132
LEVEL 1												
Gender	.038	1.039	0,039	1.04	.038	1.039	.037	1.038	.039	1.039	.035	1.035
Age	.021**	1.021**	.021**	1.021**	.021**	1.021**	.021**	1.021**	.021**	1.021**	.021**	1.021**
Marital Status	-.368**	.692**	-.373**	.689**	-.368**	.692**	-.368**	.692**	-.368**	.692**	-.368**	.692**
Health	.171**	1.187**	.171**	1.187**	.171**	1.187**	.172**	1.187**	.171**	1.187**	.173**	1.189**
Parents' Education	.35**	1.42**	.348**	1.416**	.351**	1.42**	.350**	1.419**	.351**	1.42**	.347**	1.415**
Parents' Occupation	.263**	1.301**	.262**	1.299**	.263**	1.301**	.263**	1.301**	.263**	1.301**	.267**	1.306**
LEVEL 2												
Cultural dimension	.003	1003	.003	1.003	.000	1.000	.000	1.000	-.011+	.989+	-.011*	.989*
CROSS-LEVEL INTERACTION												
PO* Cultural dimension			-.003+	.998+			.001	1.001			-.003*	.997*
VARIANCE COMPONENTS												
Variance (Within)	3.29		3.29		3.29		3.29		3.29		3.29	
Variance (Between)	.354		.353		.360		.359		.301		.299	
Deviance	63795		63773		63791		63797		63784		63902	
Deviance Change	-3182**		-3160**		-3178**		-3186**		-3171**		-3289**	
ICC	.097				.099		.099		.083		.083	

As can be seen, four of five hypotheses have been verified including cross-level interaction moderators. More specifically, both variables involving institutional dimension have a significant effect in the relationship between parents and respondent occupation. Expenditure on Education and Social Progress Index soften the impact of parents' occupational level on respondent occupation (-.002 and -.010 respectively). Thus, H3a and H3b were supported. On the other hand, in models that involve cultural dimension, the investigation verified that cultural variables, such as Individualism and Masculinity, have a significant effect in the main relationship (both -.003). In particular, it is verified that these two dimensions affect the way through which parental occupation impacts on respondent occupation. Indeed, they soften the influence of PO on RO. Therefore, hypothesis H3c and H3e are supported. However, model 7, that considers interaction between PO and Uncertainty Avoidance, is not significant. Thus, hypothesis H3d is not supported.

Again, after the empirical analysis, the proposed model can be summarised as follows in Figure 4.13.

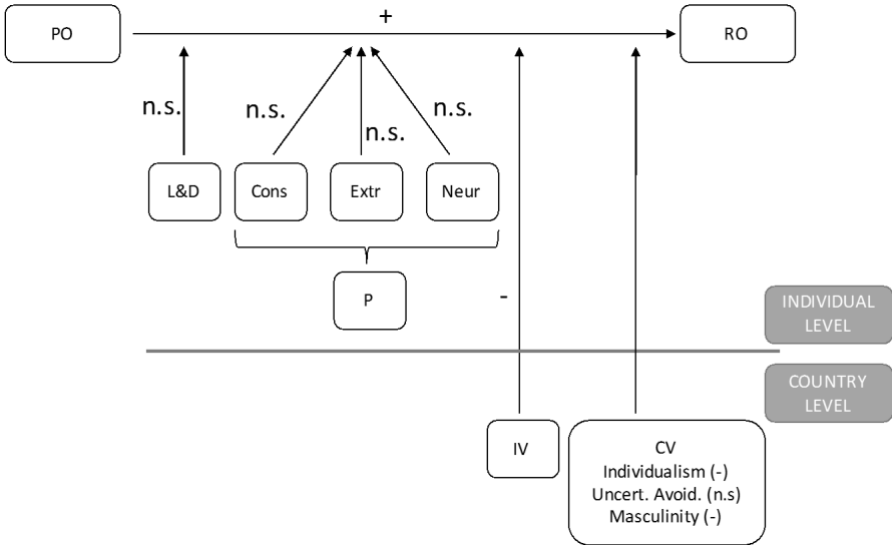


Figure 4.13 The proposed model (occupation): empirical findings

4.7 DISCUSSION OF THE RESULTS

This section deeply discusses the results obtained in the previous analysis. The aim is to interpret the results taking into consideration also the most important theoretical findings highlighted in literature. Furthermore, the interpretation of the data will be also articulated

through a comparison between occupation and education. The following discussion will be articulated on three points of analysis, respectively related to the three research questions stated at the beginning of the chapter.

For what regards the first research questions, the proposed models confirmed what suggested by literature (some examples Erola et al., 2015; Dubon et al., 2009; D'Addio 2007): parental occupation and education **significantly** affects respondents' level of education and occupation. The focus of the empirical investigation was to understand the direction and the strengths of the relationship. However, the main contribution of the current research was to consider, in the major correlation under analysis, not only father-son relationship, but both parents (mother and father) socio-economic status as independent variable and to not make gender distinction in the choice of respondent (dependent variable). Firstly, hypothesis expectations (H1) were based on the theories believing that a higher level of parents' education (occupation) corresponds to an increase in the respondent educational (occupational) level as well (Erola et al., 2015). The decision of testing this assumption was inspired by the suggestion of Torche et al. (2016), whose claimed that further analysis on gender and family structure was needed. Therefore, considering both parents, in the main relationship, was motivated in order to obtain a more comprehensive framework of intergenerational mobility. The results of the first ordinal regression models have verified that parents' education (occupation) positively affects respondents' level of education (occupation). In particular, an increase in parental education corresponds to an increase in the odds of obtain a higher level of education by 1.993 times ($p<.001$). Similarly, an increase in parental occupation corresponds, as well, to an increase in the odds of achieve a higher occupation by 1.416 times ($p<.001$). These findings suggest that family background, in terms of occupational career and education, has a positive and significant impact on the future development of their children. These first results of the empirical analysis could suggest that an individual, that has a high-family background level, is overall more prone to achieve a higher development. This is due to the fact that he/she could be more stimulated by family environment to a greater commitment in school and professional career. Moreover, findings suggest that both parents have a positive relationship on respondents' attitude and that gender differences are not so important as could be thought, since in none models gender is significant.

For what regards the second research questions, the attention was on considering the effects of individual behaviours and characteristics with respect to the main relationship under analysis. More specifically, the objective was to understand the impact that respondents' personality could have on their educational (occupational) attainment. Therefore, it was important to

consider the effects of parental background; nevertheless, to understand the influences that Learning & Development attitude could cause among family relationships. For this purpose, L&D and personality (Neuroticism, Conscientiousness and Extraversion) were involved as moderators. The expectations hypothesized about L&D were that an individual with a high attitude in learning and development, both in educational and in career terms, will probably achieve higher results and will soften the impact of family background (H2a). Expectations on the moderating role of this variable were satisfied in models regarding education. Indeed, a unit change in L&D increase the log-odds of achieve a greater of education by .466 ($p<.001$). Model 4 considers interaction between PE and L&D and were significant (-.104). This means that L&D affects and soften the way through which parent's education impacts on respondent educational attainment. However, for the model regarding occupation, empirical results do not support the moderating role of L&D. Even though the estimate of the interaction term was negative, as predicted, its term was not significant. Therefore L&D positively affects respondent's occupation, but it does not have an impact on the extent to which parental occupation influences his occupational achievement. On the other hand, also hypothesis H2b, H2c, H2d (respectively conscientiousness, extroversion and neuroticism) produced discordant results for the two models under analysis. Looking at the results, conscientiousness was not verified in either model (H2b). Although the direction of interaction terms was negatively, as predicted, the moderator was not significant. For what regards extraversion (H2c), the direction of the effect was the opposite, as suggested by literature (Hakimi et al., 2011; Damian et al., 2014; Judge et al., 1999). Indeed, extraversion was negatively and significantly related to academic achievement (-.041), whereas it was positively and significantly related to occupational career (.059). However, interaction terms were not supported in either cases. These findings suggest that extraversion affects respondent's development, but it does not affect the way through which parental background impacts on his attainment. Finally, the interaction terms regarding neuroticism (H2d) were statistically significant in the model considering education (-.071) and it had a direct effect on the dependent variable (-.094). However, empirical results for occupation did not support the moderating role of neuroticism, despite it had a direct effect on respondents' occupational level. As a consequence, Neuroticism has a negatively direct effect in both cases, but it softens the way through which parents' background affects respondent's development only in educational model.

Finally, the last level of analysis focuses on the role of country level variables in the relationship between parents and respondent. In particular, two main groups of variables were introduced at

country level and multilevel ordinal analysis allowed to verify whether these institutional and cultural dimensions moderated the relationship between family background and respondents' result. The introduction of national dimensions is motivated by the fact that, as analysed in literature review, it is important not to overlook the social context in which individuals live, as it could significantly shape the way in which family situations influence their decisions. Therefore, the current study considered several institutional and cultural variables to empirically exam whether they impact on the way parents influence children's outcomes. The hypotheses focusing on the moderating effect of the institutional variables (Expenditure on Education and Social Progress Index, respectively H3a and H3b) were based on the assumption that institutional policies, geared to individual's development, weaken the influence that parents have on their children, so as to ensure an increase in intergenerational mobility. However, empirical analysis supported only hypothesis regarding occupation's models. In particular, results showed that hypotheses concerning the moderation between PO and RO have been verified (-.002 for Expenditure on Education and -.010 for Social Progress Index). In contrast, if we consider education, country-level variables were not significant in moderating the relationship between PE and RE, even though the estimates were negative for institutional dimensions, as expected. On the other hand, focusing on cultural dimension, expectations were based on the fact that an individualistic social culture encourages people to be more autonomous and independent and, at the same time, encourages them to undertake career aspirations (H3c). Thus, weakening family's influence. In contrast, a risk-averse society tends to strengthen the relationship with family (H3d), as individuals are more likely to behave in ways that reduce uncertain situations and entrepreneurial aspirations (Berthold and Grundler, 2014). Finally, the last cultural dimension involved in the analysis concerns masculinity. Although there is no clear association between gender and mobility, it is believed that male societies are less influenced by their family background (Reeves and Venator, 2013). The H3e hypothesis aimed to test this theory. In models considering education, Individualism and Uncertainty Avoidance were significant in moderating the relationship between PE and RE. In particular, Individualism softens the way through which family influences respondents' academic achievement (-.005), whereas Uncertainty Avoidance strengthens the impact of family background (.006). On the other hand, Masculinity was not significant. Thus, hypothesis H3e were not supported. Finally, in models considering occupation, Individualism and Masculinity were significant as moderators. As expected, they soften the way through which parents influence on respondents' occupation (both -.003). However, Uncertainty avoidance was not significant, although the

direction of the moderating effect was positive as expected. In conclusion, the following table 4.14 is aimed at summarizing the results obtained from the empirical analysis.

Table 4.14 - Summary table of the results

		EDUCATION	OCCUPATION
RQ1	*H1*	**Significant and Positive**	**Significant and Positive**
RQ2	*H2a (L&D)*	**Significant and Negative**	Not Significant and Negative
	H2b (CONSC)	Not Significant and Negative	Not Significant and Negative
	H2c (EXTR)	Not Significant and Positive	Not Significant and Negative
	H2d (NEUR)	**Significant and Negative**	Not Significant and Negative
RQ3	*H3a (EDUC)*	**Significant and Negative**	**Significant and Negative**
	H3b (SPI)	**Significant and Negative**	**Significant and Negative**
	H3c (INDIV)	**Significant and Negative**	**Significant and Negative**
	H3d (AVOID)	**Significant and Positive**	Not Significant and Positive
	H3e (MASC)	Not Significant and Positive	**Significant and Negative**

4.8 THEORETICAL AND PRACTICAL IMPLICATIONS

After having analysed the models and verified the hypotheses developed in the fourth chapter, in this paragraph, the results obtained will be compared with those of recent studies on intergenerational mobility, in order to understand if they coincide, diverge or lead to new conclusions. Subsequently, I will translate these findings into practical implications.

Firstly, the present study could give a new contribution in the field of intergenerational mobility, to break down the influences of family background in child development, focusing on the impacts that individual and national characteristics have on this relationship. Indeed, although the association between family and children has been analysed by many researchers in recent decades, there is still no definitive solution to clearly understand the determinants of this relationship, as highlighted by Black and Devereux (2010), and Breen (2005). In fact, initially researchers focused on obtaining precise estimates of correlations and elasticity of mobility, and only recently they have begun to put more emphasis on the causal mechanisms that underlie this relationship. As a matter of fact, contrary to the presence of various researches on the definition of family-children correlation, the point of this investigation was to investigate the solid effect of individual characteristics, such as personality and learning and development attitude, as well as country effects, on educational and professional choices.

In this analysis, another factor, that has been ignored in the mobility studies, has been considered: the main relationship taken in analysis was built **without gender distinctions**, in fact the respondents are both male and female. Also from family background side, not only the status of the father was taken into consideration, but that of **both parents**. As suggested by Torche et al., (2015), empirical analysis needs a greater global view of the role of family in order to obtain more comprehensive and comprehensive results. This analysis showed that there are no substantial gender differences, both in terms of education and employment. Furthermore, both parents contribute to influence the results and choices of their children. Another contribution of this analysis was the introduction of the variable "**marital status**", which summarized the respondent's emotional situation. In particular, if the individual at the time questionnaire's compilation, was single or in relationship with someone (married, cohabiting). The analysis showed that individuals who are single are less likely to achieve a higher level of education or occupation than in relationship ones.

In addition to this, another contribution of this analysis in the field of mobility is a **first comparison between education and occupation.** As suggested by Torche et al. (2015), it is necessary to consider mobility from multiple disciplinary perspectives in order to understand the greater discrepancies that exist. The results of the present analysis have found that there are differences and similarities between the two models. Although the influence of parents is present in both studies, the impact of parents' education on children is greater than that of occupation. Furthermore, while for education age is not significant, for occupation is. Obviously, as expected, as the age increases, the probability of achieving higher employment increases. However, the greatest discrepancy can be seen in significant moderating variables. In fact, in the case of education, the individual's attitude to learn and develop and neuroticism greatly diminish the impact that parents have on their children. Vice versa, in the case of occupation, no moderating variable is significant. Finally, institutional and cultural differences were also examined, for both models the role of institutional policies was significant in order to reduce the influence of the family background. While in terms of culture, differences have emerged. Individualism was negatively significant for both models, but masculinity and uncertainty avoidance produced opposite results.

Furthermore, a contribution provided by the present analysis is the **introduction of individual and country level variables as moderators of the main relationship**. Indeed, it is fundamental to understand the value attributed by individuals' characteristics in order to comprehend the effects that they might have on career and educational decisions. As already said, the introduction of "Learning & Development" and "Personality" as moderators, is a new

contribution in the study of intergenerational mobility. Likewise, the adoption of variables at country level, involved in the investigations, made it possible to understand more clearly the role of institutions and culture, as suggested by Torche et al. (2015).

Secondly, understanding the mechanisms of intergenerational mobility is crucial for the elaboration of appropriate public policy. Indeed, without knowing the determinants of mobility is difficult to understand how to stimulate change (Black and Devereux, 2010). As a matter of fact, current analysis' findings may also have **practical implications** for family and policy makers, that should be aware of the potential effects of family interdependencies on academic and career decisions. First of all, it emerged that the role of education is fundamental for children's future development. For this purpose, parents should **invest more on children's human capital development**, particularly on their education. Indeed, limitations to human capital investment are interpreted as one of the most important sources promoting socio-economic status correlation across generations. Investing resources in children academic achievement means increasing the level of knowledge, which, in turn, will increase the level of employability and income over time (Feinstein et al., 2004). As a matter of fact, education can be seen as an investment resource, as the family renounces, in part, its salary in exchange for their children who obtain higher income prospects, which are firmly linked to the occupational position they will obtain. The extra investment in education is related to the motivating force for better business prospects and wages. Indeed, future career should remunerate past investments.

Thirdly, for what regards **public policy interventions**, findings suggest that investments in public education policies can weaken the effects of family background influences. Therefore, policy makers should give their attention in providing adequate incentives, which aimed to improve the educational system. In particular, it is important to guarantee the equality of access to schooling. Indeed, as research suggested, equality of access would weaken the effect of social origins. The same educational opportunities can give reasonable chances and it makes feasible for everyone to be inspired to succeed. Since, a fair and high-quality public education system can provide higher opportunities for individuals from disadvantage backgrounds (Feinstein et al., 2004). Some Nordic countries evidence has shown that these types of policies can lead to reductions in intergenerational persistence. Indeed, the latter can be strongly influenced by educational policy reforms, for example through policies that extend the duration of compulsory education and delayed monitoring (Black and Deveruex, 2010).

However, the results of the analysis suggest that attention should not only be turned to investment in education and equality of access, but also to a **health care perspective**. In fact, it has emerged that the role of health is significant in determining the outcomes that an individual will reach as adult. The greater the health is, the greater the probability of achieving a high educational or occupational level will be. Therefore, policies aimed at greater access to health, wellbeing and personal care can guarantee a greater equality of opportunity (OECD, 2010). As support, health care, or other policies belonging to the welfare state, influence the persistence between the socio-economic status between parents and children.

Finally, as to the impact of culture on intergenerational mobility, the consequences of the following analysis can be valuable for **future cultural approaches**. Not only in education policy, but also in occupation policy, because of the solid connection between education and occupation. Given that mobility likewise relies upon social measurement, political consideration ought not just concern the design of adequate incentives for training and labour market, yet additionally the improvement of values and beliefs in infancy. Youngsters from disadvantage families can be propelled by the conviction that they have free decision and control over their lives. As confirm by the analysis, a more autonomous and independent society (high individualism) helps to diminish the effects that family background has on children. On the other hand, a society that aims to accept challenges and is not risk-averse (low uncertainty avoidance) can contribute to increasing the intergenerational gap. Nonetheless, there is considerably more research to do in this field, particularly in isolating and defining, as well as measuring cultural values, that are crucial for the development of a more mobile society (Thiemann, 2016).

CONCLUSIONS

The main object of this research was to verify the process by which the main relationship between parents and children (in terms of occupation and education) can be influenced by individual's characteristics and country's dimensions, included as moderators. In particular, the models built in this analysis, empirically examine the strength and direction of the observed impacts. Likewise, the current investigation provides a theoretically coherent framework, which combines hypotheses proposed in literature, as well new suggestions, with the final aim of constructing a unique and intelligible investigation model. Results showed that parents' socio-economic status has a significant impact on children's future development, supporting the hypotheses contained in the proposed model. However, individual and national characteristics can moderate the influence of the family background. More specifically, the empirical results can be summarized as follows:

- Parental occupation and education significantly and positively affects respondents' level of education and occupation: the higher the parents' socio-economic status is, the greater the respondent's probabilities will be of achieving a higher socio-economic status.
- Health and Marital Status (expressed as single or in relationship) influences educational and occupational attainment. In details, analysis showed that individuals who are single are less likely to achieve a higher level of education or occupation than in relationship ones. On the other hand, a good health increases the probabilities of improving socio-economic status.
- A first comparison between education and occupation shows that there are differences and similarities between the two models. Although the influence of parents exists in

both models, the impact of parents' education is greater than that of occupation. Furthermore, while for education age is not significant, for occupation it is. However, the greatest discrepancy can be seen in significant moderating variables at individual and country level.

- Learning & Development attitude, Extraversion and Neuroticism have a direct effect on future respondent's development. In particular, L&D increases the probabilities of achieving a higher academic and occupational outcome. On the other hand, Extraversion decreases the chances of obtaining a better educational level, but increases the chances of attaining a higher occupation. Finally, for both models, neuroticism diminishes the probabilities of higher respondent's future outcomes.
- Moreover, individual's characteristics, such as Learning & Development attitude and Neuroticism weaken the influence of family background in term of academic achievement. In contrast, for what regards occupation, findings do not suggest any significant moderating effect.
- The institutional context (expressed as Expenditure on Education and Social Progress Index) moderates the relationship between family background and respondents' future educational and career decisions. More specifically, the role of institutional policies, geared to individual's development, is significant in order to weaken the influence of parents' characteristics. In fact, it shapes the way through which family situations impact on their choices. Indeed, more adequate public education's incentives can provide higher opportunities able to buffer the effect of disadvantage social origins.
- Likewise, cultural dimension (Individualism, Uncertainty Avoidance and Masculinity) moderates the nature and the strength of family background influences over future decisions. In details, a more individualistic society incentivized individual to take their own decisions and to be more autonomous and independent. As a consequence, a high level of individualism weakens the impact of parents' socio-economic status. On the other hand, a more risk-adverse society, with a high level of uncertainty avoidance, strengthens the influence of family background, since individuals are less encouraged to takes risks and new opportunities, as they prefer to maintain a certain degree of stability. Finally, findings show that a more masculine society is less affected by parents' socio-economic characteristics.

This study presents some *limitations* that could be addressed in *future research*. Firstly, it is important to highlight that, although the number of observations is large, the statistical power

of the multilevel analysis is limited to the small sample of Level-2 countries (i.e. 28). Moreover, it was not possible to check for all possible confounds, since a specific association can be incorrectly determined by a common factor (e.g. family income) that influences both the independent and dependent variables. Secondly, in this study it is not possible to evaluate the causality of these relationships. Indeed, a common problem in intergenerational mobility studies is to determine the causality of relationships (Fox et al., 2016). However, this research could still be considered significant, since it used a sample of more than 8,600 individuals spread across 28 countries. This sample examined both new research questions theoretically and empirically and verified the relevant findings suggested by researchers. Finally, through this investigation, the aim was to understand the changes of achieving a higher level of education of occupation, but it does not examine precisely the starting and the ending category that the respondent will reach. Therefore, my suggestion to future scholars is to complete the results of this study by conducting a broader investigation, which introduces additional moderating variables within the research. Given the large number of variables, suggested by literature, that can affect parents-child relationship, future studies should explore the presence and the consequences of other kinds of interactions, especially cultural ones. Moreover, additional research could be useful in order to understand how organizations and institution can support individuals in developing sustainable educational and careers paths that weakens the effects of disadvantage social origins. In conclusion, because of a first multidisciplinary analysis was introduced in this investigation a deep analysis on education-occupation comparison would be helpful in order to get a more complete comprehension of intergenerational correlations.

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