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Revisiting corruption and social trust: an epidemiological approach

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Abstract. This paper empirically examines how corruption in the country of origin of second-generation immigrants residing in Europe affects their social trust. The paper follows an epidemiological approach using corruption as a proxy for culture and several time-fixed effects regressions to identify how differences in corruption can explain discrepancies in social trust. Data on social trust of second-generation immigrants in Europe is gathered from the European Social Survey. Testing the hypothesis that higher corruption in the country of origin will lead to lower social trust, we find that it is significant at the 1% level when both the respondent's parents are immigrants. When adding a set of socioeconomic control variables (and other control variables), we find that the relationship remains positive and significant. The same evidence is not found when only one parent is an immigrant, indicating that the cultural transmission of social trust is not strong enough in that scenario. While previous research has looked at potential drivers of social trust, and the relationship between corruption and social trust, no research has studied how corruption in the country of origin of a second-generation immigrant affects their social trust.

Keywords: Social trust, corruption, second-generation immigrants, epidemiological approach, cultural transmission.

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1. Introduction

This study aims to answer the research question whether the level of corruption in the country of origin of a second-generation immigrant residing in Europe is negatively related to the second-generation immigrant's level of social trust. Seeking an answer to this question is important in order to understand how corruption can be used as a determinant of social trust among second-generation immigrants within the context of public policy. This is of particular importance in the current political situation in Europe, as in the recent decennium, the continent has seen large waves of immigration (Ekonomifakta 2022). As Dinesen (2013) states, it is helpful to study whether there is a connection between corruption levels in the country of origin and social trust levels among second-generation immigrants to predict potential future threats towards a country's democratic functions due to differences in social trust, especially as the populations of several countries in Europe consist of increasingly large shares of immigrants.

This study follows the epidemiological approach, where corruption is used as a proxy for culture. In accordance with this approach, it is assumed that social trust is culturally transmitted. It is also assumed that second-generation immigrants are subject to the same economic and institutional environment in their country of residence. Therefore, using several fixed effects regressions and holding each country and year fixed, we can isolate the effect of corruption on social trust. Under this assumption, the differences in social trust among second-generation immigrants in the same institutional and economic environment should be related to the differences in corruption in the country of origin.

Corruption data is retrieved from Transparency International's Corruption Perception Index (CPI). This study uses the average CPI from 1995-2014 because this time period is deemed the most appropriate for determining social trust levels among second-generation immigrants. Regarding the data on social trust, European Social Survey's (ESS) data from 2014, 2016 and 2018 is used. ESS data is also used to control for a range of socioeconomic (and other) factors which are expected to affect social trust. Due to the data available, the ESS countries included in the paper are the pre 2004 EU-15 countries (except for Ireland), Iceland, Norway and Switzerland.

Several studies have looked specifically at second-generation immigrants when analysing cultural effects (e.g. Ljunge (2014a & 2014b) and Fernández & Fogli (2006 & 2009)). The main advantage of this approach is that it dismisses the possibility of reverse causality, as second-generation immigrants cannot presumably affect corruption in their country of origin. Three samples are created, one for when both parents are immigrants from the same country, one when only the mother is an immigrant, and one when only the father is an immigrant.

The main finding of the paper is that the level of corruption in the country of origin of a second-generation immigrant residing in Europe is negatively related to their level of social trust. This relationship, however, only holds true when both parents are immigrants. When only one parent is an immigrant, there is no evidence of cultural transmission of social trust, which suggests that the cultural transmission is not strong enough when it only comes through one parent. The study

also finds that education is a strong predictor of social trust, where higher education is associated with higher social trust. Another important aspect to note is that it is most likely not corruption in itself which directly reduces trust. It is more probable that corruption indirectly affects trust by shaping beliefs among parents which are transmitted to future generations.

Previous research has tried to identify the drivers of social trust. Knack and Keefer (1997) have found that corrupt behaviour decreases social trust among individuals experiencing the behaviour. Studying immigrants in Europe and social trust, Dinesen (2013) has identified that first-generation immigrants' social trust in their country of origin and corruption in their country of residence affect social trust; while, Ljunge (2014a) has shown that the level of democracy in the country of origin affects second-generation immigrants' social trust. With this study focusing specifically on corruption as a determinant of social trust among second-generation immigrants, we contribute with a new take in this field.

The rest of the paper will be structured in the following way. First, a literature review of relevant areas is presented. Second, the data and empirical strategy are introduced along with the relevant control variables. This is followed by a results section, complemented with a discussion of the results and a concluding section.

2. Literature review and our contribution

In this section, literature that concerns this thesis's core subjects will be reviewed. First, the concept of social trust is defined. Second, the paper seeks to explain the relationship between social trust, corruption, and growth. Third, an insight is given into the existing literature related to immigrants and social trust. Fourth, literature regarding the definition and transmission of social trust is discussed. Fifth, the epidemiological approach used in this paper is introduced. Last, we discuss the contribution of our thesis and present our hypothesis.

2.1 Literature review

2.1.1 Social trust

In the study *Does social trust determine the size of the welfare state? (2013)*, Bjørnskov and Svendsen discuss different types of trust. They state that, in particular, two types of trust exist; the first is 'social' trust and the second is 'particular' trust. Social trust, defined as "trust in other people in general" (Bjørnskov, Svendsen 2013) is, according to the authors, the most important part, as it includes people with whom the trusting party may have nothing more in common than a shared nationality. In several studies, 'generalised' trust, a concept synonymous with social trust, is used. Among others, Uslaner (2008) explains that generalised trust "is not shaped by immediate experiences and does not refer to faith in specific persons". Many researchers in the field, such as Dinesen (2013) and Ljunge (2014), use the term social trust, and for that reason, this study follows a similar approach. For the purpose of this study, the aforementioned definition of social trust is hereinafter what 'trust' refers to if it is not explicitly stated otherwise.

2.1.2 How is trust related to corruption and growth?

The topic of social trust has been a well-studied issue in the past. Earlier, it has been seen as part of a wider definition, namely social capital. A term which grew in popularity after Robert D. Putnam's book *Making democracy work (1993)*. In his book, Putnam originally noted that social trust either was "a defining part or a consequence of social capital" (Serritzlew, Sønderskov et al. 2014). Four years later, further research within the field by Stephen Knack and Philip Keefer showed that the trust and civic cooperation elements of social capital have the strongest impact on economic performance (Knack, Keefer 1997).

Adding to the conclusions drawn by Knack and Keefer (1997), Christian Bjørnskov published a review of research on the connection between social trust and growth. The review showed that "[o]f 12 studies, social trust is found to have a positive effect in eight or nine of them" (Serritzlew, Sønderskov et al. 2014). In all, there is seemingly a consensus among researchers that the presence of trust fosters economic growth.

Due to the evident importance of trust on an economy's prosperity, it is natural to try to identify the factors affecting trust. In contrast to the widespread consensus surrounding the positive impact trust has on economic growth, there is no such general agreement when it comes to explaining the actual relationship between the two variables. In their literature review *Do Corruption and Social Trust Affect Economic Growth? (2014)*, Søren Serritzlew, Kim Mannemar Sønderskov and Svendsen discuss two different views on this topic.

The first position is supported by, among others, Bjørnskov and Putnam, who suggest "that the effect of trust on growth is transmitted through effective state institutions and [...] through absence of corruption" (Serritzlew, Sønderskov et al. 2014). In other words, trust improves governmental organisations and reduces corruption, both leading to economic growth. The second position instead posits that growth and social trust are affected by institutions, but that "social trust mainly affects growth through citizens' behaviour" (Serritzlew, Sønderskov et al. 2014).

The two views described above point out corruption as an important factor to consider when discussing social trust. Transparency International, who compile a yearly Corruption Perception Index (CPI) for countries worldwide, define corruption as "the abuse of entrusted power for private gain" (Transparency International 2022). Previous literature has not only determined that social trust positively contributes to economic growth, it has also found a positive relationship between the absence of corruption and a prospering economy (Serritzlew, Sønderskov et al. 2014). Considering this, it is quite natural that the absence of corruption and social trust are positively correlated (see *Figure 1*). However, it is not obvious whether trust leads to reduced corruption, or vice versa.

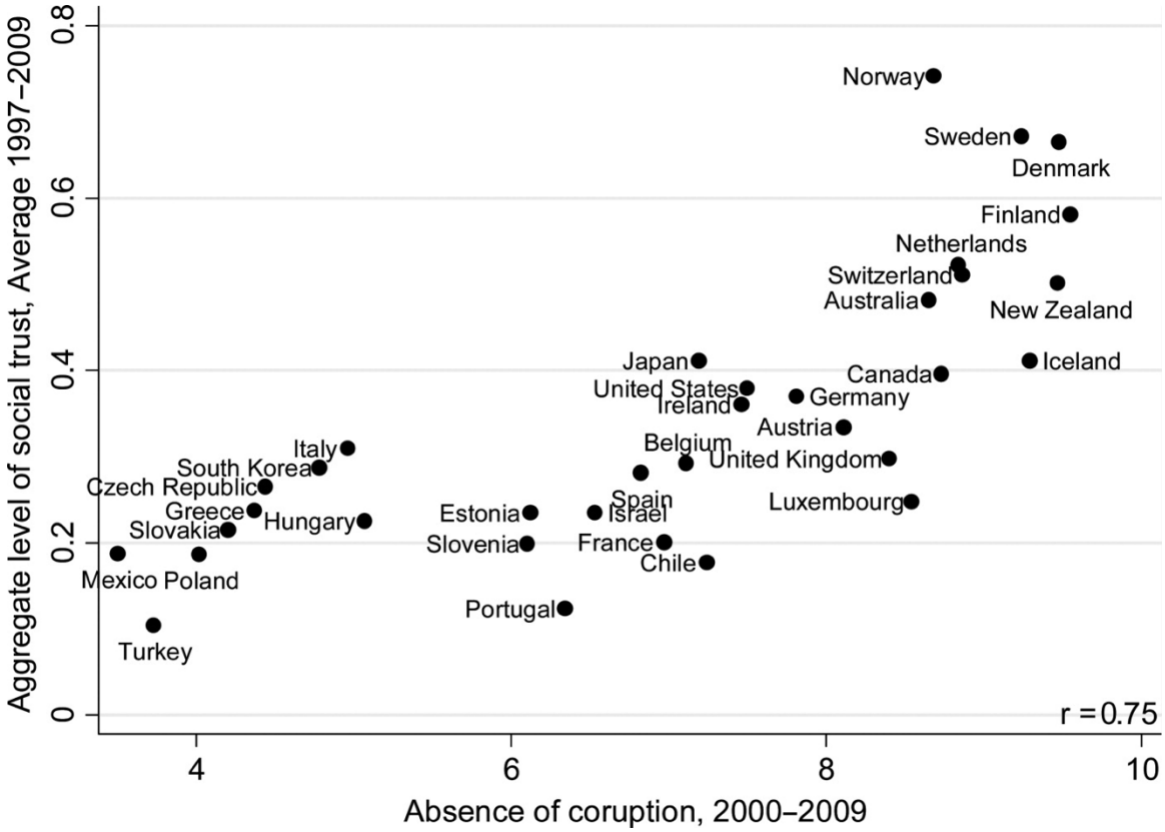

Figure 1: Social Trust and Absence of Corruption. Source: Serritzlew, Sønderskov et al. (2014).

Serritzlew, Sønderskov and Svendsen have observed both points of view in their literature review. Arguing for high levels of social trust leading to less corruption, Bjørnskov proposes a possible bureaucratic effect in *How does social trust lead to better governance? (2010)*. Simply put, in a society where citizens generally are regarded as trustworthy and honest, bureaucratic corruption is lower because bureaucrats do not want to be at odds with a society's norms.

In their article *All for All: Equality, Corruption, and Social Trust (2005)*, Rothstein and Uslaner argue for a different view; corruption increases distrust through three different mechanisms (Serritzlew, Sønderskov et al. 2014). First, it is possible that a person's expectation of how someone else will behave is based on the behaviour of a government worker. For example, if there is more bureaucratic corruption, people will feel less trust towards fellow citizens. Second, as a bureaucrat is expected "to be at least as honest as ordinary citizens" (Serritzlew, Sønderskov et al. 2014), personally experiencing corruption by a government worker will make that person aware of the same behaviour occurring outside of institutions. Third, a person who is corrupt may expect others to behave in a similar manner. Adding to this, Rothstein and Eek (2009) conducted a study in an experimental setting in which they found that experiencing corrupt behaviour affects the perceived trustworthiness of other people. According to Serritzlew, Sønderskov and Svendsen (2014), there are seemingly more reasons to believe that a less corrupt society fosters social trust among citizens even though the other side of the argument cannot be disregarded.

2.1.3 Immigrants and trust

With regards to the discussion above about how trust is related to corruption and growth, this section explores past research on immigrants and trust. Much previous research on immigrants has sought to answer the question of what impacts immigrants' behaviours and attitudes, or more specifically in this case, their trust. Some research highlights transmission of trust as the main reason. Other research has pointed towards factors in the immigrants' country of residence affecting their trust. Such factors could be institutions, norms, how the immigrant has been treated and other personal experiences.

Dinesen contributed to this field of research in 2013 with his article *Where you come from or where you live? (2013)*. The author studies first-generation immigrants to determine how so-called generalised trust is influenced by two factors; the culture in the country of origin (measured by level of trust in that country) and the quality of institutions in the country of residence (measured by the absence of corruption in that country). Data from 90 different countries of origin and 18 countries of residence in western Europe are examined using the ESS database. Both the cultural and institutional factors were found to have "a highly significant impact" on an immigrant's level of trust.

Another researcher in the field of immigration and trust is Martin Ljunge, who has among other articles written *Social capital and political institutions: Evidence that democracy fosters trust (2014)* and *Trust issues: Evidence on the intergenerational trust transmission among children of immigrants (2014)*. In both studies, Ljunge looks at second generation immigrants in Europe and finds evidence of cultural transmission of trust. In the first-mentioned study, Ljunge (2014a) studies the cultural transmission of trust among second-generation immigrants by looking at the democracy in the father's country. He finds that immigrants from countries with higher levels of democracy are more trusting towards other people in their countries of residence. In the second-mentioned study, Ljunge (2014b) regresses respondent's trust on average trust. He identifies that there is statistically significant transmission of trust from the mother to the child, whereas; the transmission from the father to the child is statistically insignificant. Also, Ljunge (2014b) finds

that the transmission of trust is more evident in high-trust countries. However, under the condition that there is high ancestral trust, transmission can also be strong in low trust countries. Lastly, the study finds that it takes generations to build trust in high-trust environments.

Compared to the mentioned studies, Moschion and Tabasso (2014) take a different approach and focus on the immigrants' trust in the country of origin and the social and economic factors in the country of origin, as a means of explaining trust in the country of residence. The study focuses on immigrants in the US and Australia. Following an epidemiological approach, the study controls for a set of social and economical variables such as crime rate, income inequality, perceived racial inequality and GDP growth, and proves the intuitive thought: that social and economical factors affect immigrants' trust. The study also looks at first-generation immigrants and finds that higher trust in the country of origin is associated with higher trust in the country of residence (Moschion, Tabasso 2014).

2.1.4 What is trust and how is it transmitted?

When it comes to the transmission of trust, there are varying bodies of literature. Some scholars, such as Putnam and Uslaner, argue that trust is static and remains constant over time; while others like Dinesen and Hooghe, believe that trust is formed by the surroundings and varies largely between individuals based on their experiences (Serritzlew, Sønderskov et al. 2014).

Considering the static view first, a study of US citizens using the General Social Survey between 1972 and 1976 finds that those with grandparents that migrated from Germany, Great Britain, and the Nordics (countries with higher levels of trust) are more trusting, showing that trust is culturally transmitted within families and remains constant over time (Uslaner 2008). However, Uslaner does not find the same evidence for second-generation immigrants from countries of origin where trust is low among citizens. For example, those respondents do not report low scores in trust, even though trust is originally low in their country of origin. In his study of US citizens, Uslaner concludes that, for policy reasons, it may be more relevant to focus on the culture of immigrants than the environment to which they are exposed in the US to understand how trusting immigrants are. However, he also mentions that the context has an effect too and should not be neglected (Uslaner 2008).

Taking an even more long-term approach, Putnam studied the economic development of northern and southern Italy, where he identifies social trust and civic participation as two factors contributing to northern Italy's superior economic performance. He argues that the foundation for this was laid in the 14th century, when social trust and civic participation started being "practised" in northern Italy (Serritzlew, Sønderskov et al. 2014). If only considering the static view, this would lead to the conclusion that generations of immigrants only slowly adapt to the norms of their new surroundings (their country of residence), as their levels of trust will remain similar to those in the home country.

The more dynamic view would argue that the cultural transmission from the country of origin demonstrates an incomplete picture, instead shifting the focus to the individual and the new set of norms that the individual is adapting to. In other words, an immigrant's trust levels will be more shaped by the new surroundings that the individual is adapting to than by the levels of

trust in the country of origin (Serritzlew, Sønderskov et al. 2014). In a study looking at western European countries, second-generation immigrants are better than first-generation immigrants at adapting to the trust levels in the country of residence, suggesting that the surrounding environment plays a role (Dinesen, Thisted, Hooghe 2010).

Another study that looks at cultural transmission was performed by Guiso and Sapienza (2006) through an instrumental variables approach. The authors only focus on those cultural aspects that are inherited such as ethnicity and religious background, excluding those that are not preassigned to the individual at birth, and find that the average level of trust among 14 US immigrant groups is correlated with the average level of trust in these immigrants' groups' respective countries of origin (Guiso, Sapienza et al. 2006). The result does not necessarily contradict or support the notion of cultural transmission being static, as the study does not include variables that are subject to individual experiences; nevertheless, the result clearly suggests that certain inherited cultural characteristics are deeply rooted. Given the lack of consensus on how culture is transmitted, this study will analyse to what extent the cultural transmission can be identified on the basis of the Corruption Perception Index, and the potential implications that this has from an economic standpoint.

2.1.5 The epidemiological approach

For this study, an epidemiological approach is used. The term was coined by Raquel Fernández and involves trying to "identify the effect of culture through the variation in economic outcomes of individuals who share the same economic and institutional environment, but whose social beliefs are potentially different" (Fernández 2010). Culture can be defined as "differences in the distribution of social preferences and beliefs" (Fernández 2010). Cultural transmission can be described as the process of acquisition of behaviours, attitudes, or technologies through imprinting, conditioning, imitation, active teaching and learning, or combinations of these (Cavalli-Sforza, Feldman et al. 1982).

Fernández (2010) notes that there are specifically three different reasonings behind this empirical strategy. First, cultural beliefs are transmitted from parents to their child. Second, cultural beliefs in different immigrant groups vary systematically in a way which connects back to the culture of the country of origin. Third, the economic and institutional environments are similar for every individual in a specific country or geographical region. If these three assumptions hold, Fernández states that the difference in culture can explain the different actions taken by two individuals in the same environment.

Although the epidemiological approach has been applied in different ways in economic literature, several studies have looked specifically at second-generation immigrants when determining cultural effects (Ljunge (2014a & 2014b) and Fernández & Fogli (2006 & 2009)). Fernández explains that one advantage when looking at second-generation immigrants is that certain confounding variables are naturally controlled for, including difficulties to speak the language and ties with family members who still live in the home country. These factors will feasibly have less of an impact on second-generation immigrants because they were born in their country of residence.

In the context of this study, we identify the effect of culture by looking at how trust differs based on differences in corruption, which we use as a proxy for culture. Assuming second-generation immigrants in Europe are faced by the same economic and institutional environment (which we also control for), we focus on cultural transmission of trust to isolate variation in immigrant's trust that arises because of cultural differences.

2.2 Our contribution and hypothesis

From the literature review, it can be concluded that trust among immigrants is a well-discussed topic. A few studies, such as Ljunge (2014a & 2014b), look specifically at second-generation immigrants, which is what this study aims to do. In addition, Dinesen (2013) studies the impact corruption in the country of residence and trust in the country of origin have on levels of trust among first-generation immigrants, concluding that it would be interesting to see how the trust levels transfer to second-generation immigrants. The aim of this study is to contribute with a new take on the existing field of literature. The following hypothesis is tested:

> ***Hypothesis:*** *Corruption level in the country of origin of a second-generation immigrant residing in Europe is negatively related to the second-generation immigrant's level of social trust.*

If the results from this study manage to prove the above relationship, it would further the conclusions made by several of the aforementioned researchers, implying that trust levels are culturally transmitted to second-generation immigrants. From a policy perspective, the large immigrant waves seen during the past decade have naturally increased the immigrant share of populations in Europe. Therefore, it is helpful to study whether there is a connection between corruption levels in the country of origin and social trust levels among second-generation immigrants to predict potential future threats towards a country's democratic functions due to differences in trust.

3. Empirical strategy and data

3.1 Empirical set-up

To test the hypothesis of this thesis, the following model is used:

$$y_{irct} = \beta_0 + \beta_1 corruption_c + controls_{irct} + \alpha_r + \alpha_t + \varepsilon_{irct} \quad (1)$$

where the dependent variable *y* denotes the level of social trust on a 0-10 scale for the individual, *i*, living in the country of residence, *r*, with ancestry from the country of origin, *c*, where c ≠ r, at period *t*. Our first independent variable corruption is the average 1995-2014 level of corruption on a 0-100 scale for each country of origin, *c*, as reported by Transparency International (more detail can be found in *Section 3.3*). Furthermore, we assume that other variables may affect the level of trust an individual reports. The variable *controls* denotes these different socioeconomic (and other) factors, which are further specified under *Section 3.4*. α_r indicates the institutional and economic factors for each country of residence, which are fixed over time. α_t represents the institutional and economic factors which may be different across each year of the survey, 2014, 2016 and 2018. ε is the idiosyncratic error term. It denotes variation in trust which is not explained by the variables included in the model.

The equation is run using an ordinary least-squares regression (OLS), using country of residence fixed effects and time-fixed effects. Due to the study using pooled cross-sectional data, time-fixed effects are used to control for potential differences in the samples across years. Two of the underlying assumptions when using fixed effects are homoscedasticity and no-serial correlation, hence, these variables should be controlled for by using appropriate standard errors.

In the sample, there is a risk of serial correlation as immigration often follows patterns that are correlated with political events. Even though the study focuses on second-generation immigrants, one can imagine that there will be a correlation between the ESS samples from 2014, 2016 and 2018 as a larger number of second-generation immigrants from a certain country in a certain year (for example the 2014 sample) will likely mean that a similar pattern is seen in another year (for example the 2018 sample). In other words, there is probably correlation between observations within the same cluster. Therefore, the study uses cluster-robust standard errors. Primarily, standard errors are clustered on the country of origin level since respondents from the same country of origin will presumably be more correlated than respondents in the same country of residence. This is in line with past research, for example Ljunge (2014a). However, for robustness check, the same regression will be run clustering standard errors at the level of the country of residence.

The approach described above is built on the epidemiological approach, which is originally based on the effect of culture (Fernández 2010) Thus, *corruption* is used as a proxy for culture. As put forward in *Section 2.1.2*, an experimental study has shown that corrupt behaviour does indeed decrease levels of trust among individuals experiencing the behaviour (Knack, Keefer 1997). However, it is unclear whether the lower levels of trust induced by experienced corruption is

transmitted to future generations. Naturally, it is not expected that corruption will explain the entire variation in culture, but the following assumption is made:

$$culture_c = \psi_0 + \psi_1 corruption + \upsilon_c \quad (2)$$

Here, υ_c represents variation in culture that is not included in *corruption*. For the original equation to be applicable, the error term ε is assumed to be uncorrelated with *controls*, α_r , α_t and *culture*. In addition, it is assumed that υ is uncorrelated with *controls*, α_r , α_t and *corruption*.

3.2 European Social Survey

Data on social trust among second-generation immigrants was collected from the last three rounds of the European Social Survey. The ESS is a cross-national survey which has been conducted with new respondents every other year since 2001. Collecting data from more than 30 nations in Europe, the survey measures respondents' attitudes, beliefs, and behavioural patterns (European Social Survey). The three rounds of the survey used in this study are from 2014, 2016 and 2018. In total, the number of respondents before cleaning the data was 134,117. One of the main reasons behind restricting the data to only three rounds is that results were reported differently in earlier rounds than in later ones. Also, the time period of the ESS data preferably has to correspond with the time period of the CPI data, which is another reason why the early ESS rounds are avoided (further discussed in *Section 3.3*).

In the survey, respondents were asked to answer on an 11-point scale (from 0 to 10) if "generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?", where answering a 10 signifies a high trust in people and a 0 signifies little to no trust in people. In this study, the variable ("ppltrust") is used to represent an individual's social trust. Past studies, such as the ones conducted by Dinesen (2013) and Ljunge (2014a) that use the ESS-dataset and study trust, also use this as the variable.

As mentioned by Dinesen (2013), a problem with certain countries in eastern Europe is that they have formerly been part of other country constellations such as former Yugoslavia, Czechoslovakia and the Soviet Union. The country of ancestry among second-generation immigrants in, for instance, Estonia is skewed towards Russia. Therefore, it is difficult to determine if the second-generation immigrant is actually a descendant of a parent who has moved from Russia or from a parent living in Estonia during the Soviet Union era. In the sample, results from all the countries that were recently part of other country constellations have low variance in CPI score. As this study focuses on the trust among actual second-generation immigrants, including respondents who might not be second-generation immigrants, is problematic when testing the hypothesis. To avoid potential complications involved with this issue, all sub-samples only consist of western European countries (the EU-15, Iceland, Norway and Switzerland). Among these countries, all have a sufficiently high variation in countries of origin and thus CPI score, apart from Ireland. This is potentially because of immigrants from Northern Ireland, which belongs to the United Kingdom, making up the largest share of total immigrants. Therefore, Ireland is also excluded.

ESS reports not only the individual respondent's country of birth; it also reports the country of birth for each of the respondent's parents (if known). This makes it possible to create three different sub-samples; one for individuals born in their country of residence who have a mother born in a foreign country and a father born in the same country as the respondent (the "Mother Sample"), one for individuals born in their country of residence with a father born in a foreign country and a mother born in the same country as the respondent (the "Father Sample"), and one for individuals born in their country of residence with foreign parents born in the same country (the "Parents Sample"). The Father Sample has 1,624 observations with 112 countries of origin, the Mother Sample has 1,409 observations with 95 countries of origin and the Parents Sample has 1,301 observations with 88 countries of origin. In a limited number of cases, continental regions instead of countries have been given as answers for country of origin. In those cases, the observations have been omitted.

The ESS has different sample designs depending on the country sampled. For instance, according to the ESS, more than half of the countries in most rounds used an "address-based sample" (Kaminska 2020). This particular design leads to selection probability issues as an individual living alone is more likely to be selected than those individuals living together in a household. Failing to correct for this issue will leave the sample heavily skewed towards the individuals who live alone. In addition, there are differences between countries when it comes to the non-response processes. This leads to differences in response rates, not only among countries, but also when it comes to other demographics among the respondents (Kaminska 2020). To correct for these issues, the ESS provides probability weights which are applied in this study.

3.3 Corruption Perception Index

Data on corruption is retrieved from the Corruption Perception Index, an index reported every year by the organisation Transparency International. The index ranks countries based on the perceived level of public sector corruption on a scale from 0-100, where 0 means "very corrupt" and 100 means "very clean". The CPI initiative started in 1995, and the number of countries reported has increased throughout the years, with corruption being reported for 41 countries in 1995, compared to 180 countries in 2018. The countries that are reported for each year vary slightly, especially in the early years, depending on the political situation in these countries. For example, no data is reported for a country at war or with large political instability, as it would be difficult to arrive at a consensus about what the CPI should be. Up until 2012, the index reported the CPI on a scale from 0-10, using the same reporting criteria but on a different scale. This study accounts for this by multiplying each rank from the older 0-10 scale by a factor of 10.

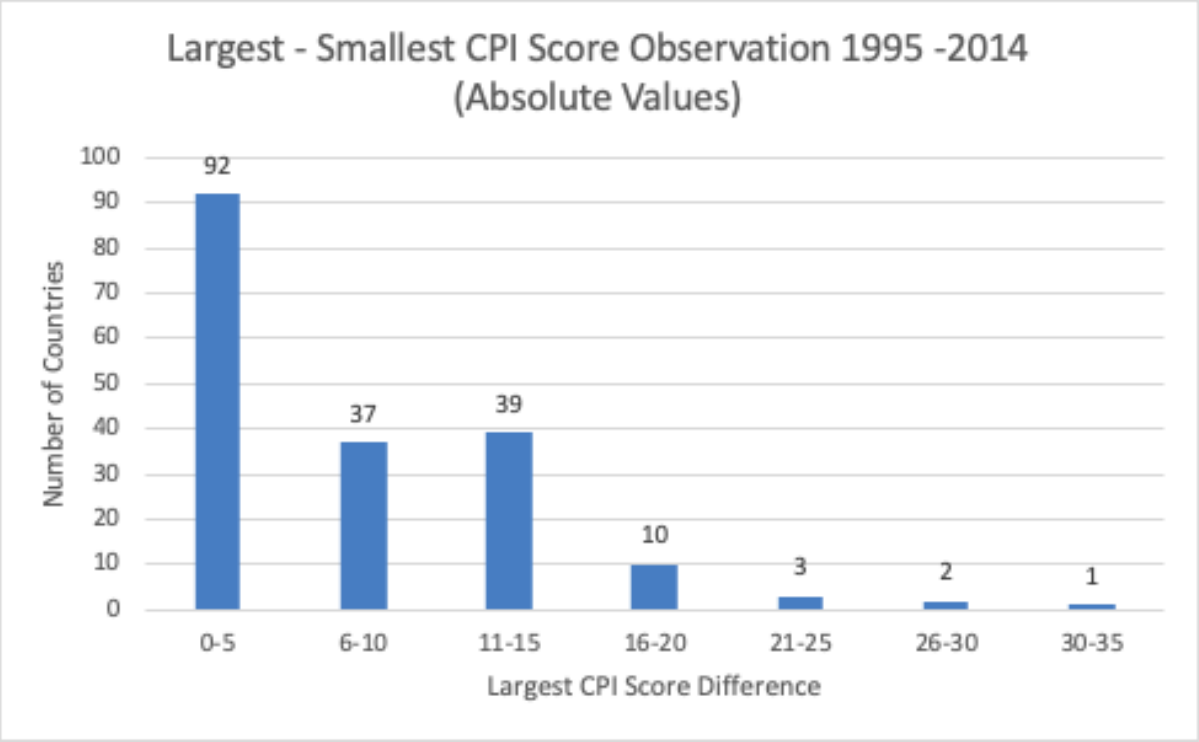

Figure 2: Largest difference in CPI during 1995-2014. Source: Transparency International (2022).

This study looks at the average CPI score from 1995-2014. Taking an average from this period is considered to be the most suitable corruption proxy for this study for several reasons. First, since the countries that the CPI is reported for every year vary, a corruption score can be retrieved for as many countries as possible by using an average. An alternative approach would have been to use the CPI from a year for which observations exist for a large number of countries; however, this would still be problematic as there are missing values for every year.

Second, by using an average, the study can account for certain risks that occur with the variation in the CPI. The graph above shows how the CPI scores vary during the time period. The difference between the largest and smallest values during the years 1995-2014 is more than six for 50% of the countries and more than sixteen for 8.7% of countries. If a CPI score from a specific year only was used instead of an average, this would increase the risk of the CPI scores for certain countries being extreme values that do not necessarily reflect the corruption in the country over a longer period.

Third, as immigration occurred during different years, it is difficult to determine the CPI score that is most relevant to use. For example, the CPI from 2004 may be best suited for the ESS wave from 2016; whereas, the CPI score from 2002 may be best suited for the ESS wave from 2014. Using an average partially solves this problem.

Fourth, as corruption is something that is often relatively stable over time, as can be seen by the fact that 50% of countries did not have a larger difference than five (see Figure 2), it is hard to determine which year's CPI score is most representative. Perhaps, a score from 1995 could be used as it can be assumed that many parents of second-generation immigrants migrated earlier than 1995 considering the average age of our sample (see Table 15, 17 & 19); however, this is

beset by the problem that the earlier the year, the less CPI observations there are. By taking an average, the CPI scores from the early years are incorporated in the average, without the problem of many missing observations. As the earliest ESS wave is from 2014, a CPI score average from 1995-2014 is considered reasonable. Even though many parents of second-generation immigrants migrated earlier than 1995, it is assumed that corruption is fairly stable and that these individuals still have strong ties with their countries of origin making the CPI from 1995-2014 a relevant proxy.

A problem is of course that the average for each country consists of CPI scores from different years, for example, data is missing for some years between 1995-2014 in certain countries. One could argue that it is an inconsistency that the paper is computing averages of CPI data from different years for most of the countries. Nevertheless, this will not have any significant effect on the CPI average because an average is used, and the CPI scores are fairly stable over time (see Figure 2).

Worth noting is the implication of looking at the perception of corruption. As corruption is subjective, there is no accurate way of measuring actual corruption, which is why perceived corruption is used. With this comes the risk that the CPI does not capture hidden corruption, corruption that may be having an effect even though it does not actually occur (Pani 1998). On the flipside, there is a risk that the perception index is capturing perception of other variables, such as poor economic growth, which due to correlation with corruption, may cause a higher perception of corruption (Serritzlew, Sønderskov et al. 2014).

It is important to be aware of the correlation that often exists between corruption and other economic factors. Often, corruption measures are highly correlated with other similar concepts which affect economic growth. For example, while corruption is related to growth, it is also related to instability, which in turn is related to growth (Serritzlew, Sønderskov et al. 2014). Although this means that the corruption index may be capturing other factors that are correlated with it, it does not undermine the value of the performed study because the study aims to evaluate whether corruption can be used as an indicator of trust in the context of public policy.

3.4 Controls

Multiple control variables will be used, with the goal to single out the relationship between corruption and trust. First, the choice of control variables is discussed. Second, how each control variable is computed is explained, and the final list of the control variables is then presented.

3.4.1 Choice of control variables

Socioeconomic status can be used as an indicator for determining trust. Trust can lead to a higher socioeconomic status, but more importantly for predicting levels of trust among second generation immigrants, the relationship between the two variables shows that socioeconomic status is more likely to be impacting trust (Brandt, Wetherell et al. 2015). Apart from parents being cultural transmitters, culture can be transmitted through institutions and environments, or through a larger social body (Fernández 2010). For that reason, this study controls for a range of socioeconomic factors that may have been transmitted through the parents or through institutions and environments. These are of importance as lower levels of trust are associated

with lower levels of socioeconomic status in childhood (Stamos, Altsitsiadis et al. 2019). By including such variables, the regression can control for certain differences in individuals' experiences which are mentioned in the dynamic view of cultural transmission (Dinesen, Hooghe 2010).

The socioeconomic factors that are controlled for are: *Married, Civil Union, Separated, Widowed, Lower Secondary, Upper Secondary, Advanced Vocational, Tertiary Education, Unemployed, M - Lower Secondary, M - Upper Secondary, M - Advanced Vocational, M - Tertiary Education, F - Lower Secondary, F - Upper Secondary, F - Advanced Vocational, F - Tertiary Education, Father unemployed when respondent aged 14, Father absent when respondent aged 14, Mother unemployed when respondent aged 14 and Mother absent when respondent aged 14*.

To control for marital status, four dummies were created: Married (where married = 1 and not married = 0), Civil Union (in a civil union = 1 and not in a civil union = 0), Separated (where separated or divorced = 1 and not separated or divorced = 0), Widowed (where widowed or civil partner died = 1 and not widowed or no death of civil partner= 0).

Highest level of education measures the education that the respondent has completed, which was gathered by asking the question "What is the highest level of education you have successfully completed?". Further, ESS categorises the education of the individual according to the International Standard Classification of Education (ISCED) system. In this study, the different levels of ISCED education are classified into five different levels, represented in the regression through four dummies. Primary education is set as the 0 value in the dummies as all respondents have completed primary education. The four dummies are: Lower Secondary, Upper Secondary, Advanced Vocational and Tertiary Education. Similarly, when measuring the fathers' and mothers' highest level of education, the question asked was "What is the highest level of education your father (mother) has successfully completed?", and the answers are demonstrated through the same four dummy variables as for the education of the respondent. The controls corresponding to the mother are marked with an initial M: M - Lower Secondary, M - Upper Secondary, M - Advanced Vocational and M - Tertiary Education. For the father they are marked with an F: F - Lower Secondary, F - Upper Secondary, F - Advanced Vocational and F - Tertiary Education.

When it comes to the occupational status of the respondent, it would be preferable to control for type of occupation (eg. employed, unemployed, student, retired, etc.). However, due to poor data in the ESS survey, this research only controls whether the respondent is employed or not employed, where the valid answers are employed, self-employed, family business or not applicable. We simply make a dummy variable where unemployed is equal to one and employed is equal to zero. This approach is consistent with how Dinesen (2013) controls for occupation in his study *Where you come from or where you live?*.

The data for parents' employment status when respondent was 14 was gathered by asking "when you were 14, did your father (mother) work as an employee, was he (she) self-employed, or was he (she) not working then?". Respondents could also respond that the father (mother) was dead/absent. Based on this, two dummies were created for each parent. The first dummy Father

(Mother) unemployed when respondent aged 14 takes on value 1 if unemployed and 0 if employed. The second dummy Father (Mother) absent when respondent aged 14 takes on value 1 if absent or dead and value 0 if present.

Other than socioeconomic factors, we also include the control variables: *Age, Age Squared and Male*. Controlling for age is natural since the older the respondent, the more experiences they have been through and the more time they have had to accustom themselves to certain cultural aspects, or distance themselves from these cultural aspects.

Lastly, gender is controlled to account for variation that may arise as a result of gender differences, especially considering the large variations in gender equality and gender norms that exist across cultures. Gender of the respondent is measured through the variable Male, which is a dummy where 1= male and 0= female.

3.5 Missing values

One problem identified when picking control variables was that some of them included missing values; excluding all of these would significantly reduce the number of observations available in all samples. For instance, the Parents Sample lost an additional 241 observations (from 1,418 obs. to 1,177 obs.) when excluding missing values from the data. This constitutes a large reduction of the number of observations that will be used for the results, in turn, reducing the power of the model.

In order to counteract the effects of missing a large amount of observations, a method called mean/mode imputation is used. For the procedure, a variable called region_c is the concatenation of two variables; region and country of origin. For control variables where there are missing values, the mean/mode within each created group is imputed in place of the missing value. The mean is imputed for numerical variables, such as age, while the mode (most frequent observation) is imputed for categorical variables, such as educational level.

Using this method still creates a number of missing values, especially when there is not a single category which is the most frequent for a group (for which the mode command reports a missing value). However, the missing values are significantly fewer compared to not using mean/mode imputation; using this method creates 116 missing values, which constitutes 8.3% of the sample (compared to 17% of the sample without). The remaining missing values in all samples are assumed to be missing at random (MAR). This implies that the missing data is independent of the unobserved factors which affect the dependent variable *y* (Wooldridge, 2012).

Sample	No. of observations without mean/mode imputation (percentage missing)	No. of observations with mean/mode imputation (percentage missing)
Parents	1,177 (17%)	1,301 (8.3%)
Mother	1,294 (17.3%)	1,409(10%)
Father	1,332 (24.4%)	1,624 (8.5%)

Table 1. Summary over missing values with and without mean/mode imputation. Source: European Social Survey (2014, 2016, 2018).

3.6 Excluded variables

Some variables were excluded due to GDPR policy, ambiguity, irrelevance, or lack of data in the ESS survey. Regarding GDPR policy, ethnic background could have been an interesting control variable to have if it were not sensitive information, as it could potentially be affecting trust.

One variable that was initially planned to be included, but at a later stage excluded, is household income. The first and main reason is that household income is a mediating variable as corruption in the home country is likely to affect household income, which in turn is likely to affect the level of trust. Second, household income is not a measure of wealth and socioeconomic status but rather an indication of how much the household earns at the time of the survey. A newly graduated student from a wealthy family living alone may not have a high income; hence, household income fails to capture the level of socioeconomic status. Third, household income has a lot of missing values despite using mean/mode imputation, which makes it problematic to include.

Certain variables are excluded because the questions in the ESS are ambiguous. Including such variables would lead to less precise results, as respondents may have interpreted the question in different ways. An example of this is questions about personal experiences, such as how often there were conflicts between people in the household when growing up, or how often there were severe financial difficulties in the family when growing up. Although these factors could also be indicators of socioeconomic status, the answers to these questions are subjective; thus, they are excluded in this research study. Variables that cannot be misunderstood, such as "highest level of education" allow for a more precise control.

Another set of excluded variables is the social and economic characteristics of the country of origin. As Moschion and Tabasso (2014) show in their research, these factors can serve as indicators of trust among second-generation immigrants. Though in this study, these variables are not controlled for due to the magnitude of this study.

4. Results

Before proceeding to the results, the purpose of this study is revisited. The question that the study seeks to answer is:

> *Is corruption level in the country of origin of a second-generation immigrant residing in Europe negatively related to the second-generation immigrant's level of social trust?*

To answer this question, the results section is divided into three parts. First, the results from the Parents Sample are presented and commented on. In the second and third section, the same is done for the Mother Sample and Father Sample respectively.

4.1 Results - "Parents Sample"

VARIABLES	(1) ppltrst	(2) ppltrst	(3) ppltrst	(4) ppltrst	(5) ppltrst	(6) ppltrst	(7) ppltrst	(8) ppltrst	(9) ppltrst	(10) ppltrst
CPI Average	0.015***	0.014***	0.015***	0.015***	0.016***	0.016***	0.017***	0.016***	0.016***	0.017***
	(0.0047)	(0.0042)	(0.0043)	(0.0044)	(0.0050)	(0.0050)	(0.0052)	(0.0052)	(0.0052)	(0.0050)
Age		-0.042**	-0.042**	-0.037	-0.057**	-0.047*	-0.048*	-0.049*	-0.049*	-0.048*
		(0.0168)	(0.0169)	(0.0237)	(0.0237)	(0.0247)	(0.0259)	(0.0263)	(0.0262)	(0.0258)
Age Squared		0.001***	0.001***	0.000*	0.001***	0.001**	0.001**	0.001**	0.001**	0.001**
		(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0003)	(0.0003)	(0.0002)
Male			0.338**	0.329***	0.337***	0.343***	0.314***	0.310***	0.311***	0.306***
			(0.1286)	(0.1201)	(0.1149)	(0.1145)	(0.1139)	(0.1142)	(0.1163)	(0.1152)
Married				-0.028	-0.057	-0.060	-0.031	-0.034	-0.032	-0.029
				(0.2610)	(0.2570)	(0.2548)	(0.2638)	(0.2610)	(0.2607)	(0.2567)
Civil Union				0.310	0.152	0.161	0.130	0.161	0.161	0.231
				(0.5525)	(0.5140)	(0.5158)	(0.4735)	(0.5000)	(0.5075)	(0.4984)
Separated				-0.471	-0.454	-0.454	-0.424	-0.437	-0.430	-0.449
				(0.3655)	(0.3706)	(0.3724)	(0.3585)	(0.3570)	(0.3650)	(0.3695)
Widowed				0.145	0.122	0.107	0.138	0.121	0.127	0.126
				(0.5962)	(0.5297)	(0.5322)	(0.5670)	(0.5586)	(0.5611)	(0.5900)
Lower Secondary					0.243	0.248	0.243	0.253	0.245	0.252
					(0.2531)	(0.2585)	(0.2324)	(0.2467)	(0.2459)	(0.2365)
Upper Secondary					0.331*	0.381*	0.361*	0.371*	0.370*	0.386**
					(0.1980)	(0.2117)	(0.1869)	(0.1948)	(0.1954)	(0.1935)
Advanced Vocational					0.472*	0.523**	0.475**	0.472**	0.469**	0.484**
					(0.2433)	(0.2478)	(0.2279)	(0.2347)	(0.2341)	(0.2310)
Tertiary Education					1.186***	1.233***	1.184***	1.212***	1.206***	1.216***
					(0.2379)	(0.2591)	(0.2348)	(0.2479)	(0.2477)	(0.2470)
Unemployed						0.300	0.307	0.287	0.289	0.296
						(0.2947)	(0.2805)	(0.2810)	(0.2837)	(0.2818)
M – Lower Secondary							-0.121	-0.106	-0.113	-0.090
							(0.2948)	(0.3457)	(0.3416)	(0.3361)
M – Upper Secondary							0.056	0.024	0.020	0.077
							(0.2563)	(0.2706)	(0.2732)	(0.2609)
M – Advanced Vocational							0.104	0.072	0.073	0.146
							(0.3832)	(0.3919)	(0.3976)	(0.4033)
M – Tertiary Education							0.499	0.486	0.484	0.534
							(0.3161)	(0.3540)	(0.3536)	(0.3557)
F – Lower Secondary								-0.167	-0.163	-0.155
								(0.2518)	(0.2514)	(0.2444)
F – Upper Secondary								0.059	0.066	0.082
								(0.2906)	(0.2877)	(0.2851)
F – Advanced Vocational								0.176	0.183	0.162
								(0.3227)	(0.3286)	(0.3290)
F – Tertiary Education								-0.115	-0.103	-0.088
								(0.2791)	(0.2800)	(0.2836)
Father unemployed when respondent aged 14									0.077	0.053
									(0.1829)	(0.1751)
Father absent when respondent aged 14									-0.078	-0.047
									(0.4363)	(0.4447)
Mother unemployed when respondent aged 14										0.200
										(0.1703)
Mother absent when respondent aged 14										-0.300
										(0.5730)
Observations	1,301	1,301	1,301	1,301	1,301	1,301	1,301	1,301	1,301	1,301
R-squared	0.038	0.044	0.051	0.055	0.081	0.083	0.087	0.088	0.089	0.091
Country dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Standard errors	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust
Weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 2. Regression of social trust on corruption, with and without control variables in the Parents' Sample. Source: European Social Survey (2014, 2016, 2018) and Transparency International (1995-2014).

Table 2 presents the main results, that is the results from the Parents Sample. (1) represents a simple OLS regression with only the y-variable trust and x-variable corruption, showing the nature of the relationship before any other variables are controlled for. In column 2-9, the same regression is run adding one new control variable per column. (10) shows the complete regression with all control variables being included.

The regression (1-10) shows that CPI is positively correlated with trust at the 1% significance level, validating the hypothesis that corruption level in the country of origin of a second-generation immigrant residing in Europe is negatively correlated with the second-generation immigrant's level of social trust. With every increase in CPI score (implying a decrease in corruption) by one unit (on a 0-100 scale), the trust level increases by 0.017 units (on a 0-10 scale), on average and all else fixed.

When adding all the control variables to the regression in (1), the CPI score coefficient only increases by 0.002 from 0.015 to 0.017, both coefficients being significant at the 1% level. This is accompanied by the standard error increasing by 0.0003, from 0.0047 to 0.0050. The effect of corruption on trust remains fairly stable despite all the control variables being added.

The significant control variables are: Male, Civil Union, Separated, Upper Secondary, Advanced Vocational, Tertiary Education and Unemployed.

The regression shows a positive coefficient for the male variable at the 10% significance level, indicating that being male is associated with being 0.306 more trusting than females. Moving on to education of the respondent, three of the four control variables are significant. Upper Secondary is significant at the 5% level with a coefficient of 0.386, Advanced Vocational is significant at the 1% level with a coefficient of 0.484, and Tertiary Education is significant at the 1% level with a coefficient value of 1.216. Apart from Lower Secondary, being more educated is associated with higher trust. On average and with all else equal, those who have completed upper secondary education are 0.386 more trusting, those who have completed advanced vocational education 0.484 more trusting, and those who have completed tertiary education are 1.216 more trusting. Considering that trust is measured on an 11-point scale, the coefficient of 1.216 explains a fairly large part of the variation in trust. Proceeding with the last significant variable, Unemployed, the regression shows that, on average and all else being equal, being unemployed increases trust by 0.296. This is significant at the 10% level.

4.2 Results - "Mother Sample"

As seen in *Table 3* (1-10), the results for CPI score are insignificant, failing to validate the hypothesis. The implication of this is that when only looking at the cultural transmission from the mother's side, there is no relationship between CPI score in the country of origin and trust among second-generation immigrants living in Europe.

While corruption is insignificant, a few control variables are significant. The four dummy variables controlling for the mother's highest level of education are all significant; whereas, for the father's highest level of education, only F - Upper Secondary Education is significant. M - Lower Secondary is significant at the 5% level with a coefficient value of 0.527, M - Upper

Secondary is significant at the 1% level with a coefficient value of 0.844, M - Advanced Vocational is significant at the 1% level with a coefficient value of 1.312, M - Tertiary Education is significant at the 1% level with a coefficient value of 1.075. On average and with all else equal, those whose mothers have completed lower secondary education are 0.527 more trusting, those whose mothers have completed upper secondary education are 0.844 more trusting, those whose mothers have completed advanced vocational education 1.312 more trusting, and those whose mothers have completed tertiary education are 1.075 more trusting. For each higher level of education completed, the trust level increases, except for Tertiary Education. For the father, only F - Upper Secondary education is significant. It has a coefficient value of -0.559, at 1% significance, meaning that having a father who has completed upper secondary education is associated with a trust decrease of 0.559.

4.3 Results - "Father Sample"

As seen in *Table 4* (1-10), just as in the Mother Sample, the results for CPI score are insignificant failing to support the hypothesis. Like the Mother Sample, when only looking at cultural transmission from the father's side, there is no significant relationship between corruption in the home country and trust among second-generation immigrants living in Europe.

For the education of the respondent, all four control variables are significant. Lower Secondary is significant at 5% with a coefficient value of 0.695, Upper Secondary is significant at the 1% level with a coefficient of 0.755, Advanced Vocational is significant at the 1% level with a coefficient of 1.481, and Tertiary Education is significant at the 1% level with a coefficient value of 1.692. More educated respondents are associated with higher trust. On average and with all else equal, those who have completed lower secondary education are 0.695 more trusting, those who have completed upper secondary education are 0.755 more trusting, those who have completed advanced vocational education 1.481 more trusting, and those who have completed tertiary education are 1.692 more trusting. Completing tertiary education explains a particularly large part of the variation in trust.

M - Tertiary Education is 10% significant with a value of 0.595, while all lower levels of education that the mother has completed are insignificant. If the mother has completed tertiary education, the regression predicts the respondent to be 0.595 more trusting.

Father unemployed when respondent aged 14 and father absent when respondent aged 14 are both significant with negative coefficient signs. Father unemployed when respondent aged 14 is significant at the 1% significance level, with a coefficient value of -0.743, which translates into those respondents who had an unemployed father being 0.743 less trusting, on average and all else being equal. The Father absent when respondent aged 14 coefficient is -0.616, at 10% significance. In other words, those respondents who had an absent father are, on average and all else being equal, 0.616 less trusting.

5. Discussion

The following discussion consists of four parts. The first part is a results discussion, where we discuss the main points from *Section 4* and compare them to past findings as well as discuss potential explanations for our results and what implications they might have. The second part focuses on the research design of this paper, focusing on the validity of our results. The third part discusses our studies main drawbacks as well as what could be improved upon in our study. The final part presents future research ideas on the topic.

5.1 Result Discussion

The results in the above section have shown that there is a negative relationship between the level of corruption in the parents' country of origin and their level of social trust, for second-generation immigrants in Europe with parents from the same country of origin. The same relationship is not found when only one parent of the respondent is an immigrant.

Regarding those with only one immigrant parent, the results suggest that the cultural transmission of trust is not strong enough when only one parent is an immigrant, as the hypothesis only holds true for the Parents Sample. On the one hand, it is reasonable that cultural transmission is more evident when both parents are from the same foreign country because the child is then more exposed to that culture. On the other hand, the static view which is argued for by scholars such as Uslaner (2008) would potentially suggest that cultural transmission should be evident as trust is static. Looking at the results in Ljunge (2014a & 2014b), it is unclear what effect corruption would have on trust when only looking at one parent's background. In the first mentioned study, Ljunge (2014a) finds evidence of cultural transmission on the father's side; while, in the second study, Ljunge (2014b) identifies cultural transmission on the mother's side but not the father's side. Nevertheless, as the results from the Father Sample and Mother Sample are insignificant, the rest of this section will focus on the results from the Parents Sample.

Considering those with immigrant parents from the same country of origin, the results from our study highlight an important area for many countries that have a significant immigrant population. Though the corruption coefficient of 0.017 may not cause a large difference when comparing two countries that are close to one another on the CPI spectrum, the difference is noticeable when comparing two countries at different ends of the spectrum, in this case Somalia and Finland. Somalia has a CPI score of 11, whereas Finland has a score of 94, which translates into a difference of 83 index points. This implies that the regression predicts that a second-generation immigrant from Finland has a social trust that is 1.41 (0.017*83) higher than a second-generation immigrant from Somalia.

These findings are useful when it comes to comparing different immigrant populations in a country, highlighting that there will be differences in trust across a country's population that can be attributed to the presence of second-generation immigrants from countries with different levels of corruption. This reiterates Dinesen's (2013) conclusion that the potential transmission of lower trust by immigrants to their offspring could signify a potential future threat towards a country's democracy. This is especially true when looking at recent immigration waves in Europe, where many refugees have come from countries in the Middle East (Syria, Afghanistan,

etc.) where CPI score is low. While the effect size is small, failing to prevent the negative effect cultural transmission has on trust within these groups could, in turn, inhibit economic growth in the country of residence.

Although this study has a different focus, the results are considered to be approximately in line with Ljunge's findings in the two mentioned studies. While he shows that democracy leads to higher trust, this study finds that using a similar epidemiological approach and the same ESS database (from a different year), studying corruption instead of democracy, cultural transmission of trust among immigrants is evident. Just as Ljunge (2014a) mentions in his study on the impact of democratic institutions on trust, it is important to note that it is most likely not the corruption in itself which reduces trust. It is more probable that the presence of corruption shapes individual beliefs which are then culturally transmitted to future generations.

As discussed in *Section 2.1.2*, there have been diverging opinions regarding the direction of the relationship between corruption and trust. While Rothstein and Eek (2009) in an experimental setting concluded that experiencing corrupt behaviour first hand does have an adverse effect on trust, no study has until now looked at the longevity and transmission of these effects to future generations who no longer belong to the same setting. The findings of our study further expand on the relationship between corruption and trust, indicating that the detrimental effect on trust that experiencing corruption can have may be transmitted to future generations. In addition, we conclude that it is corruption which impacts trust, not vice versa.

The results in the study to a certain extent support Uslaner's (2008) view that cultural transmission is mainly static but is also subject to the contexts that the individuals find themselves in. At the same time as corruption affects trust, the context that the respondents find themselves in is also found to influence trust, measured through the control variables. When it comes to the impact of our control variables, it is interesting to analyse how they affect trust, and if the findings are in line with past research.

We found that being male, on average, increased the trust reported compared to being female. Our result is also mirrored by Dinesen (2013) who also finds that males, on average, are more trusting than females. Zhao and Zhang (2016) suggest that it is reasonable that there is a difference between the genders. They find that trust towards strangers varies between genders. More specifically, females are more trusting towards females, than males are towards males, and in mixed gender situations both genders are more trusting towards those of the other gender. Although this does not measure the effect of gender on social trust, it indicates that there may be variation between genders.

As we expected based on the findings of Brandt and Wetherell (2015) and Stamos and Altsitsiadis (2019), several of the variables controlling for socioeconomic status had a significant relationship with trust. Education captured a large variation in trust, perhaps unsurprisingly as education has been shown to be a strong predictor of trust (Dinesen 2013). The results on education confirm what was expected in the regression: the higher the level of education, the more trusting the individual is on average, except for Lower Secondary, for which the same conclusion cannot be drawn as the value is insignificant. Perhaps the insignificance of this value

can be explained by the fact that Lower Secondary Education is a very low level of education, meaning that it has little evident impact on the trust of the respondent, unlike the other levels of education, which may have a more evident impact on trust as the levels of education are higher.

Certain other control variables fail to capture the effect of socioeconomic status on trust. For example, based on the assumption that being employed is associated with higher socioeconomic status, unemployment should lead to lower trust compared to being employed. Our results do not mirror our expectations, but due to how employment status is reported by the ESS, there is not much that can be concluded by this result which is significant only at the 10% level. For instance, many respondents may be unemployed by choice; retired, between jobs or studying, and therefore other socioeconomic variables that are also correlated to reported trust may be affecting the results in a biassed manner. Interestingly, none of the control variables for parents' level of education or occupation when respondent was aged 14 are significant. For the highest level of education *Figure 7* and *Figure 8* show that there is a lack of variance across educational levels, which could be a potential explanation for the insignificant result. Regarding employment status, we have already concluded that there may be a problem of confounding variables when it comes to how the status of Unemployed is measured. In addition, when it comes to remembering the parent's highest level of education and employment status when respondent was aged 14, some respondents may have given an inaccurate answer to the related questions in the survey.

An interesting thought is why the Corruption coefficient changes so little when all control variables are added to the regression presented in *Table 2* (1). Analysing this through the lense of the static view, one could argue that with cultural transmission being mainly static, adding control variables, which measures an individual's experiences, will have little effect. An opposing argument would simply be that the control variables used were poor and failed to capture the variation in trust. However, the lack of significant results among the controls may also be due to the lack of variance in these variables because of the use of country of residence fixed effects in our regression.

While both context and culture are of importance (Uslaner 2008), it is ambiguous how large a part each one explains. Though most control variables are insignificant, certain factors, especially Tertiary Education of the respondent can have a large effect on trust in the regression. This result highlights the positive impact education has on trust among immigrants. When it comes to integration policy, we should therefore seek to incentivise higher level education, especially for immigrants from countries with higher corruption.

5.2 Review of research design and validity of results

The discussion of our results leads us on to another interesting discussion, namely if our research design has helped us reach a result from which we can draw any conclusions. To begin with, we have chosen a design which has been used frequently since Fernández and Fogli first introduced it. However, as mentioned in *Section 2.1.5* and *3.1*, the approach is based on several assumptions that need to hold for the results to remain valid.

One of those assumptions is related to the use of fixed effects, where we assume that in every country of residence, the economic and institutional setting is the same for each respondent. In turn, isolating and attributing the rest of the effect towards cultural transmission. A potential problem could, for instance, be that there are unobserved regional differences when it comes to economic and institutional settings which are not captured by using the country of residence dummy or individual control variables. The economic and institutional environment that an immigrant faces when relocating due to a work placement and a refugee seeking asylum faces is possibly different, in which case the assumption does not hold if we have failed to control for these differences with our set of individual controls. Nevertheless, as with many assumptions in economic models, it is often difficult to ensure with full certainty that every assumption holds.

In addition, the sample sizes should be questioned. Compared to Ljunge (2014a & 2014b), who also uses the ESS dataset, we have not obtained the same number of observations. In particular, the relative lack of data poses a problem regarding the number of observations in each country of origin. As can be seen in *Table 14*, some countries of origin only have one respondent in the sample, thus there is a risk that the results are driven by small immigrant groups. Completing the same regression and excluding countries of origin with $N < 5$ reproduced very similar results (see *Table 8*), which indicates that smaller immigrant groups do not have a particularly large impact on our result.

The main reason why our sample size is relatively small is the removal of almost half of the countries surveyed in the ESS (see *Section 3.5*). Ideally, we would have liked to include all countries in our sample, but the risk of including respondents who we could not prove were second-generation immigrants was simply too large. However, removing the countries did pose another risk, namely that the likelihood of our results being driven by a specific feature in one destination country was likely to increase. In that case, the effect size of corruption on trust may be overstated or understated depending on the impact of the specific feature in one of the destination countries. While this risk cannot be written off completely, we are confident that we have enough destination countries in our sample to at least minimise this effect.

To counteract the effect of missing too many observations, mean/mode imputation was used. One problem with this method is the fact that interpretation of control variables becomes more difficult. In essence, we sacrifice precision in our controls to increase the sample size. Considering the precision of our controls, we have, however, not found any specific deviations from past literature which can be related to the size or sign of our control variables (as discussed above).

Another risk is that the remaining missing values after mean/mode imputation could be missing in a non-random fashion, but as Wooldridge (2012) discusses, sample selection based on explanatory variables (so-called exogenous sample selection) is only a problem if the missing values are related to the idiosyncratic error term. The MAR-assumption is of course difficult to test for due to the possible number of unobserved variables, therefore we cannot with complete certainty say that the MAR-assumption holds. If the MAR-assumption does not hold, our estimators could be both inconsistent and biassed.

The closest we can come to finding evidence for any potential violation of the MAR-assumption is to see if the missing values are correlated with variables that we observe, specifically we check to see if the missing values in our explanatory variables are systematically related to age and years of education. Our tests do not show a systematic relationship with observables for all our missing values, but missing values for education of father (see *Table 11*) and education of mother (see *Table 10*) are negatively related with years of education and the difference is statistically significant at a 1% level. The results imply that missing values are more likely for respondents with less years of education, which suggests that the MAR-assumption is possibly violated when we include these variables. Interestingly, reproducing the same results when we use mean imputation no longer returns the same significant results (see *Table 13* and *Table 14*), this can be explained by the lower amount of missing values. In all, using mean/mode imputation reduces the number of missing values in our explanatory variables and we then find no violation of the MAR-assumption.

For the sake of complete transparency and robustness, we decided to include the "raw" results (without mean/mode imputation) in the appendix (see *Table* 5, 6 & 7). From there, we observe no large differences to our original results, although the size of our CPI coefficient has increased which is to be expected in a smaller sample. Another robustness check is performed when clustering the standard errors at the level of the country of residence. The significance of the results remains fairly constant when changing the level of clustering (see *Table 9*).

Furthermore, our dependent variable trust is subjective. For instance, an individual may want to convey the image of being very trusting towards other people, but in reality, the individual may be less trusting than he/she has reported, which would result in social desirability bias. If there is social desirability bias, we will have a measurement error in the dependent variable. Typically, a measurement error in the dependent variable is only a problem if it is correlated with our independent variables (Wooldridge 2012). In our case, there is no way to prove this point, but one could argue that reporting trust more confidently or misinterpreting a question (hence giving an incorrect measurement) could be systematically correlated with socioeconomic variables such as education and employment status. If this is true, our results would be biassed. For instance, the overestimation could be prominent among those who have a lower socioeconomic status (lower education or unemployed), who may in turn be more likely to come from countries of origin with higher corruption. In that case, the adverse effect that corruption has on trust would be underestimated.

Building on the discussion of measurement errors, it is also important to mention the measurement of our explanatory variables. There is a possibility that corruption has been measured inaccurately and that the score in the CPI does not accurately represent true corruption. The score given on CPI is dependent on the parties asked in each country and while more than one party's answer is considered to increase precision, there is still a risk that the score is imprecise.

Also, when assigning corruption scores to countries, a country with strong economic growth may get a higher CPI score reported. Likewise, a country with weak economic growth may get a lower CPI score reported. Though corruption and growth are correlated, they do not have a 1:1

relationship which is more evident in some countries, for example China, where CPI score is low and growth is high (World Bank 2021). Thus, there may be a discrepancy between the actual and perceived corruption. A similar problem arises in countries where corruption and economic growth vary largely within the country. In such countries, the risk of a hidden effect increases as the CPI does not accurately reflect the corruption in the whole country. Since it is possible that perceived corruption does not accurately mirror true corruption in a country, we need to emphasise that the results, in effect, are only valid when it comes to the impact perceived corruption has on trust.

When trying to determine the validity of our results, one important consideration is of course whether we have failed to consider another potential variable affecting trust. In that case, there is a risk that our observed result is being biassed by this variable. In particular, we see that there are higher levels of trust in countries with low corruption (see *Figure 1*), thus it may actually be the higher levels of trust in the country of origin which affect the respondent's trust score positively, not the lower levels of corruption. Ideally, this would be controlled for in our model, but as data regarding trust is limited to European countries in the ESS we cannot control for trust in all countries of origin. Due to this limitation in our data, we look back at the conclusions from past research on the topic. Ljunge (2014a) integrates trust scores from the World Values Survey (WVS) and controls for it in his model, but finds that there is no large change in the result regarding the significance or size of the coefficient. Assuming a relationship between a country's score on the democracy index and corruption index, Ljunge's findings indicate that this should not be a large issue for us either. Guiso and Sapienza (2006) on the other hand find that trust in the country of origin is correlated with trust in the country of residence, suggesting that not controlling for this factor could be creating bias. However, they use a different research method (instrumental variables) and a different dataset, meaning that their findings would not necessarily hold true for our dataset.

In addition, we should also consider the potential issue of migrant selection. Migrant selection implies that the selection of second-generation immigrants in our sample is not completely random, rather their status as an immigrant is due to a decision to migrate made by their parents. As Ljunge points out, the choice to migrate could, in theory, be more common within different groups in a population (Serritzlew, Sønderskov et al. 2014). In our case, this could be that people with high levels of trust in a country where corruption is high are more likely to migrate than those with lower levels of trust, or vice versa. While we look at second-generation immigrants, their trust levels may be affected by the trust of their parents. If this is the case, our results may be affected in different ways depending on which groups in a country are more likely to migrate. If only higher trusting people migrate from corrupt countries, our results will be attenuated, while if only lower trusting people migrate from corrupt countries, our results will be overestimated, assuming trust is transmitted between generations.

When discussing which of the scenarios is most likely, it is, of course, not possible to come to a conclusion without studying this in detail, but one could argue that migrating from countries with high corruption requires a high level of trust in people the migrant does not know. This is especially true if migrants are fleeing from war as they may have to work with people smugglers and other people around them to successfully flee. In addition, it may be expensive to flee. Even

in a situation where a migrant is moving because of a new job and has a stable economic situation, migrating still requires adapting and trusting many people in a new environment. Therefore, the uncertainty and costs related to a migration decision could arguably require high levels of trust or at least scare off those with low levels of trust. With this in mind, we believe that this is a more likely scenario which would imply that the relationship found between trust and corruption, if anything, is attenuated rather than overestimated.

To conclude, it would be unrealistic to say that the validity of our results cannot be questioned. However, as the above discussion has shown, there is no reason to say that our results are invalid either. From the discussion above, we cannot conclude whether the effect size has been estimated correctly. It could be argued that we have found more reasons to believe that the effect has been attenuated through the characteristics of our sample, but at the same time we cannot confidently say that all our assumptions hold with 100% certainty. With this in mind, we believe our results should be interpreted with caution.

5.3 Potential criticisms and areas of improvement

It is worth discussing the data used and the choice of control variables. First, the use of the CPI is not optimal as it measures perceived corruption. However, as corruption cannot be measured in a better manner, there is a lack of viable alternatives. In the CPI, we cannot exclude the possibility that the variation between actual corruption and perceived corruption is larger in countries with high corruption than in countries with low corruption, due to lower transparency and higher measurement difficulty. This could potentially be causing some bias, though, this is not something we can control for. Also, one can question the choice of using an average for CPI, though we believe it is a more reasonable choice than using the CPI for a specific year.

Second, the sample size can be criticised. Though this issue was dealt with using mode/mean imputation, a larger sample would make the results more robust. An alternative would have been to incorporate more ESS waves. Though, the downside of this would be that the earlier ESS waves that we excluded used a different data format.

Third, instead of using mean/mode imputation, a more advanced model could be used to predict missing values. With mean/mode imputation, there were still 116 missing values. These values could potentially have been predicted by using a more advanced method that better predicts missing values. Such a method would also increase the accuracy of the prediction made by mean/mode imputation, making the results overall more robust.

Fourth, we did not include a control variable for trust in the country of origin, which could have helped explain some variation in trust. An area of improvement would be to incorporate the World Value Survey and use their data to better control for various beliefs that could be impacting trust.

Fifth, and most importantly, we cannot be certain that the CPI captures a hidden effect which impacts trust. Though we have based our method and choice of control variables on previous literature, there could be certain hidden effects affecting trust. Such a scenario, which is unlikely

and undesirable, would mean that we cannot conclude that the sole effect of corruption affects trust, but rather that corruption in combination with some hidden effect affects trust.

5.4 Future research ideas

Having answered the hypothesis of whether corruption level in the country of origin of a second-generation immigrant residing in Europe is negatively related to the second-generation immigrant's level of social trust, it would be interesting to further expand on this topic in line with previous research. As with our paper, much previous research within the field, for example Ljunge (2014a & 2014b) and Dinesen (2013), has focused on immigrants in Europe. As the European countries to some extent share a common set of cultural norms and characteristics, the results are not necessarily applicable for other parts of the world. To expand on the scope of our paper, it would be interesting to see if the same hypothesis holds in a different part of the world, for instance Asia or Africa. On average, immigrants moving to Europe move from a more corrupt country to a less corrupt country, whereas, if the same study were performed in a different part of the world, that dynamic would be different, potentially leading to other results.

Regarding the validity of the research paper, albeit we have found a relation between corruption and trust, this rests on the assumption that there is no hidden effect captured by corruption that is affecting trust. Also, we cannot confidently say that the relationship is causal. A future research idea would be to conduct a study with a different methodology to further prove that it is in fact corruption that affects trust and not some hidden variable. Perhaps this could be done by employing an instrumental variable approach as was done by Guiso and Sapienza (2006).

6. Conclusion

The aim of this thesis was to study the relationship between social trust and corruption. To do this, we studied a sample of second-generation immigrants and examined whether the presence of corruption (measured using the Corruption Perceptions Index) in their country of origin has an effect on their reported levels of trust. We hypothesised that the relationship would be negative, meaning that higher corruption in the country of origin leads to lower trust. Using an epidemiological approach and completing several different fixed-effects regressions, we found a positive and statistically significant relationship for our sample consisting of second-generation immigrants with parents from the same country of origin. The same relationship was maintained when adding socioeconomic control variables. Our null hypothesis could not be rejected in our two other samples where only one parent was an immigrant.

It is also important to note that, while our results highlight a relationship between social trust and corruption, it is more probable that corruption indirectly affects trust by shaping beliefs among parents which are transmitted to future generations. While necessary, this distinction does not make our study less relevant, on the contrary it gives us a direct insight into what factors may help shape the beliefs that are transmitted across generations.

Although previous research has investigated potential drivers of trust, no paper has, to our knowledge, looked at how corruption in the country of origin can impact trust among second-generation immigrants. With our paper, we attempt to bridge this gap, though we believe there is a need for the results to be reproduced in a larger sample exploiting a larger variation of countries of origin within each country of residence. Reproducing the results in a larger sample would hopefully add further validity towards our results as well as make it more relevant in the context of public policy. In addition, it would be valuable if the study could be enhanced and carried out in different countries and institutional settings in order to make the results more generally applicable.

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Appendix A – Results

VARIABLES	(1) ppltrst	(2) ppltrst	(3) ppltrst	(4) ppltrst	(5) ppltrst	(6) ppltrst	(7) ppltrst	(8) ppltrst	(9) ppltrst	(10) ppltrst
CPI Average	-0.002	-0.001	-0.002	-0.002	-0.001	-0.002	-0.002	-0.003	-0.003	-0.003
	(0.0054)	(0.0055)	(0.0055)	(0.0054)	(0.0055)	(0.0055)	(0.0050)	(0.0048)	(0.0048)	(0.0048)
Age		0.010	0.009	-0.014	-0.043*	-0.050*	-0.020	-0.022	-0.021	-0.022
		(0.0180)	(0.0180)	(0.0218)	(0.0247)	(0.0299)	(0.0304)	(0.0297)	(0.0292)	(0.0289)
Age Squared		-0.000	-0.000	0.000	0.000*	0.000*	0.000	0.000	0.000	0.000
		(0.0002)	(0.0002)	(0.0002)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)
Male			0.193	0.151	0.151	0.144	0.128	0.122	0.121	0.121
			(0.1468)	(0.1496)	(0.1396)	(0.1387)	(0.1309)	(0.1159)	(0.1172)	(0.1162)
Married				0.110	0.148	0.147	0.089	0.078	0.072	0.075
				(0.2385)	(0.2306)	(0.2294)	(0.2186)	(0.2071)	(0.2046)	(0.2057)
Civil Union				0.516	0.546	0.549	0.301	0.297	0.262	0.266
				(0.3469)	(0.3301)	(0.3333)	(0.4320)	(0.4187)	(0.4101)	(0.4133)
Separated				0.458	0.584	0.588	0.503	0.508	0.524	0.525
				(0.4198)	(0.4385)	(0.4357)	(0.4267)	(0.4020)	(0.3993)	(0.4000)
Widowed				-1.068***	-0.966***	-0.958***	-0.976***	-0.933***	-0.952***	-0.950***
				(0.2852)	(0.3060)	(0.3040)	(0.3040)	(0.3143)	(0.3150)	(0.3164)
Lower Secondary					0.252	0.234	0.247	0.263	0.284	0.289
					(0.3391)	(0.3305)	(0.3476)	(0.3469)	(0.3428)	(0.3551)
Upper Secondary					0.312	0.266	0.166	0.245	0.255	0.259
					(0.3609)	(0.3850)	(0.3919)	(0.3951)	(0.3882)	(0.3939)
Advanced Vocational					0.486	0.441	0.263	0.302	0.318	0.323
					(0.3572)	(0.3719)	(0.3797)	(0.3869)	(0.3799)	(0.3886)
Tertiary Education					1.020***	0.977**	0.620	0.590	0.591	0.596
					(0.3752)	(0.4075)	(0.4457)	(0.4570)	(0.4460)	(0.4567)
Unemployed						-0.210	-0.101	-0.150	-0.156	-0.153
						(0.5527)	(0.5074)	(0.5068)	(0.5031)	(0.5029)
M – Lower Secondary							0.386	0.540*	0.529	0.527
							(0.3182)	(0.3093)	(0.3190)	(0.3241)
M – Upper Secondary							0.692**	0.849***	0.845***	0.844***
							(0.2734)	(0.2958)	(0.3042)	(0.3134)
M – Advanced Vocational							1.267***	1.324***	1.316***	1.312***
							(0.3298)	(0.3243)	(0.3247)	(0.3318)
M – Tertiary Education							1.249***	1.080***	1.078***	1.075***
							(0.3230)	(0.3005)	(0.3019)	(0.3195)
F – Lower Secondary								-0.159	-0.151	-0.151
								(0.2979)	(0.3016)	(0.3007)
F – Upper Secondary								-0.528**	-0.557**	-0.559**
								(0.2500)	(0.2476)	(0.2517)
F – Advanced Vocational								-0.238	-0.279	-0.282
								(0.3207)	(0.3238)	(0.3225)
F – Tertiary Education								0.331	0.314	0.310
								(0.3008)	(0.3047)	(0.3045)
Father unemployed when respondent aged 14									-0.730*	-0.728*
									(0.4180)	(0.4169)
Father absent when respondent aged 14									-0.258	-0.242
									(0.3091)	(0.3241)
Mother unemployed when respondent aged 14										-0.014
										(0.1761)
Mother absent when respondent aged 14										-0.243
										(0.8297)
Observations	1,409	1,409	1,409	1,409	1,409	1,409	1,409	1,409	1,409	1,409
R-squared	0.052	0.053	0.055	0.069	0.091	0.092	0.124	0.140	0.144	0.144
Country dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Standard errors	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust
Weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 3. Main results Mother Sample. Source: European Social Survey (2014, 2016, 2018) and Transparency International (1995-2014).

VARIABLES	(1) ppltrst	(2) ppltrst	(3) ppltrst	(4) ppltrst	(5) ppltrst	(6) ppltrst	(7) ppltrst	(8) ppltrst	(9) ppltrst	(10) ppltrst
CPI Average	-0.001	-0.000	-0.000	-0.001	0.001	0.001	0.000	0.000	-0.000	-0.000
	(0.0052)	(0.0024)	(0.0050)	(0.0049)	(0.0052)	(0.0052)	(0.0051)	(0.0049)	(0.0050)	(0.0050)
Age		0.003	0.004	-0.002	-0.044	-0.035	-0.017	-0.017	-0.017	-0.018
		(0.0169)	(0.0271)	(0.0264)	(0.0270)	(0.0273)	(0.0297)	(0.0301)	(0.0297)	(0.0299)
Age Squared		-0.000	-0.000	-0.000	0.000	0.000	0.000	0.000	0.000	0.000
		(0.0002)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)
Male			-0.084	-0.064	-0.017	-0.017	-0.007	-0.014	-0.008	-0.016
			(0.1135)	(0.1190)	(0.1214)	(0.1220)	(0.1157)	(0.1139)	(0.1129)	(0.1131)
Married				0.191	0.096	0.089	0.033	0.036	0.017	0.046
				(0.1632)	(0.1645)	(0.1622)	(0.1619)	(0.1611)	(0.1641)	(0.1725)
Civil Union				0.257	-0.037	-0.021	-0.101	-0.095	-0.129	-0.123
				(0.4824)	(0.4877)	(0.4861)	(0.4708)	(0.4744)	(0.4723)	(0.4839)
Separated				-0.029	0.014	0.003	-0.027	-0.023	-0.037	-0.012
				(0.2895)	(0.2971)	(0.2935)	(0.2901)	(0.2823)	(0.2812)	(0.2875)
Widowed				0.280	0.142	0.150	0.137	0.146	0.133	0.151
				(0.3836)	(0.3887)	(0.3865)	(0.4000)	(0.4013)	(0.4063)	(0.4084)
Lower Secondary					0.603*	0.624*	0.690**	0.680**	0.665**	0.695**
					(0.3370)	(0.3385)	(0.3323)	(0.3287)	(0.3207)	(0.3137)
Upper Secondary					0.723**	0.774**	0.767**	0.748**	0.726**	0.755**
					(0.3248)	(0.3351)	(0.3352)	(0.3372)	(0.3229)	(0.3167)
Advanced Vocational					1.500***	1.545***	1.498***	1.487***	1.472***	1.481***
					(0.4069)	(0.4177)	(0.4216)	(0.4198)	(0.4173)	(0.4178)
Tertiary Education					1.836***	1.887***	1.760***	1.714***	1.667***	1.692***
					(0.3796)	(0.3898)	(0.3944)	(0.3875)	(0.3802)	(0.3684)
Unemployed						0.301	0.309	0.301	0.289	0.291
						(0.2872)	(0.2801)	(0.2800)	(0.2795)	(0.2793)
M – Lower Secondary							-0.146	-0.176	-0.175	-0.194
							(0.2485)	(0.2206)	(0.2098)	(0.2058)
M – Upper Secondary							0.285	0.242	0.254	0.207
							(0.2570)	(0.2427)	(0.2334)	(0.2505)
M – Advanced Vocational							0.163	0.099	0.106	0.044
							(0.2657)	(0.2732)	(0.2830)	(0.2997)
M – Tertiary Education							0.777***	0.668**	0.667**	0.595**
							(0.2710)	(0.2969)	(0.2830)	(0.2827)
F – Lower Secondary								0.095	0.027	0.000
								(0.3142)	(0.3308)	(0.3445)
F – Upper Secondary								0.056	-0.010	-0.015
								(0.3572)	(0.3867)	(0.3848)
F – Advanced Vocational								0.141	0.049	0.061
								(0.4011)	(0.4200)	(0.4226)
F – Tertiary Education								0.207	0.129	0.146
								(0.3273)	(0.3354)	(0.3366)
Father unemployed when respondent aged 14									-0.766***	-0.743**
									(0.2852)	(0.2927)
Father absent when respondent aged 14									-0.556*	-0.616*
									(0.3283)	(0.3480)
Mother unemployed when respondent aged 14										-0.185
										(0.1650)
Mother absent when respondent aged 14										0.433
										(0.6516)
Observations	1,624	1,624	1,624	1,624	1,624	1,624	1,624	1,624	1,624	1,624
R-squared	0.049	0.049	0.050	0.051	0.106	0.107	0.118	0.119	0.127	0.129
Country dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Standard errors	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust
Weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 4. Main results Father Sample. Source: European Social Survey (2014, 2016, 2018) and Transparency International (1995-2014).

VARIABLES	(1) ppltrst	(2) ppltrst	(3) ppltrst	(4) ppltrst	(5) ppltrst	(6) ppltrst	(7) ppltrst	(8) ppltrst	(9) ppltrst	(10) ppltrst
CPI Average	0.017***	0.016***	0.017***	0.017***	0.018***	0.018***	0.018***	0.017***	0.017***	0.019***
	(0.0053)	(0.0050)	(0.0050)	(0.0051)	(0.0057)	(0.0058)	(0.0060)	(0.0059)	(0.0059)	(0.0057)
Age		-0.043**	-0.044**	-0.039*	-0.060***	-0.047*	-0.047*	-0.048*	-0.048*	-0.048*
		(0.0181)	(0.0181)	(0.0225)	(0.0214)	(0.0238)	(0.0256)	(0.0256)	(0.0256)	(0.0253)
Age Squared		0.001**	0.001**	0.001**	0.001***	0.001**	0.001**	0.001**	0.001**	0.001**
		(0.0002)	(0.0002)	(0.0003)	(0.0002)	(0.0002)	(0.0003)	(0.0003)	(0.0003)	(0.0003)
Male			0.155	0.117	0.132	0.134	0.101	0.099	0.100	0.091
			(0.1344)	(0.1286)	(0.1258)	(0.1264)	(0.1241)	(0.1227)	(0.1266)	(0.1230)
Married				-0.062	-0.072	-0.073	-0.042	-0.055	-0.053	-0.044
				(0.2030)	(0.2103)	(0.2074)	(0.2141)	(0.2071)	(0.2089)	(0.2108)
Civil Union				0.186	0.023	0.035	0.017	0.027	0.027	0.150
				(0.6228)	(0.5552)	(0.5613)	(0.5261)	(0.5435)	(0.5409)	(0.5441)
Separated				-0.635*	-0.609	-0.609	-0.583	-0.608*	-0.599*	-0.610*
				(0.3622)	(0.3703)	(0.3724)	(0.3512)	(0.3491)	(0.3583)	(0.3657)
Widowed				-0.427	-0.277	-0.329	-0.312	-0.330	-0.318	-0.356
				(0.4755)	(0.4850)	(0.4799)	(0.4975)	(0.5071)	(0.5137)	(0.5409)
Lower Secondary					0.244	0.241	0.247	0.294	0.288	0.300
					(0.2475)	(0.2500)	(0.2299)	(0.2407)	(0.2452)	(0.2322)
Upper Secondary					0.342	0.416*	0.395*	0.434*	0.432*	0.450*
					(0.2271)	(0.2377)	(0.2190)	(0.2328)	(0.2350)	(0.2294)
Advanced Vocational					0.504*	0.577**	0.535**	0.576**	0.573**	0.584**
					(0.2592)	(0.2646)	(0.2483)	(0.2634)	(0.2654)	(0.2585)
Tertiary Education					1.227***	1.291***	1.236***	1.302***	1.298***	1.314***
					(0.2424)	(0.2485)	(0.2405)	(0.2597)	(0.2640)	(0.2630)
Unemployed						0.427	0.436	0.445	0.443	0.433
						(0.3108)	(0.2964)	(0.2960)	(0.2956)	(0.2892)
M – Lower Secondary							-0.152	-0.053	-0.059	-0.010
							(0.3048)	(0.3521)	(0.3448)	(0.3323)
M – Upper Secondary							0.100	0.158	0.157	0.257
							(0.2845)	(0.2801)	(0.2852)	(0.2738)
M – Advanced Vocational							0.223	0.238	0.239	0.386
							(0.4280)	(0.4141)	(0.4152)	(0.4230)
M – Tertiary Education							0.444	0.466	0.466	0.561
							(0.3272)	(0.3496)	(0.3520)	(0.3510)
F – Lower Secondary								-0.329	-0.326	-0.320
								(0.2606)	(0.2537)	(0.2405)
F – Upper Secondary								-0.148	-0.146	-0.137
								(0.2907)	(0.2874)	(0.2775)
F – Advanced Vocational								0.033	0.035	-0.017
								(0.3248)	(0.3273)	(0.3228)
F – Tertiary Education								-0.141	-0.136	-0.137
								(0.3078)	(0.3107)	(0.3109)
Father unemployed when respondent aged 14									0.028	-0.032
									(0.2069)	(0.2041)
Father absent when respondent aged 14									-0.112	-0.127
									(0.4152)	(0.4174)
Mother unemployed when respondent aged 14										0.295
										(0.1853)
Mother absent when respondent aged 14										0.201
										(0.9115)
Observations	1,177	1,177	1,177	1,177	1,177	1,177	1,177	1,177	1,177	1,177
R-squared	0.040	0.046	0.048	0.054	0.083	0.087	0.091	0.093	0.094	0.098
Country dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Standard errors	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust
Weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 5. Raw results Parents' Sample. Source: European Social Survey (2014, 2016, 2018) and Transparency International (1995-2014).

VARIABLES	(1) ppltrst	(2) ppltrst	(3) ppltrst	(4) ppltrst	(5) ppltrst	(6) ppltrst	(7) ppltrst	(8) ppltrst	(9) ppltrst	(10) ppltrst
CPI Average	-0.003	-0.002	-0.002	-0.003	-0.002	-0.002	-0.002	-0.003	-0.003	-0.003
	(0.0046)	(0.0047)	(0.0047)	(0.0047)	(0.0047)	(0.0048)	(0.0046)	(0.0045)	(0.0045)	(0.0045)
Age		0.003	0.002	-0.019	-0.063**	-0.051	-0.023	-0.022	-0.021	-0.022
		(0.0185)	(0.0186)	(0.0223)	(0.0260)	(0.0310)	(0.0312)	(0.0309)	(0.0320)	(0.0318)
Age Squared		-0.000	-0.000	0.000	0.001***	0.001*	0.000	0.000	0.000	0.000
		(0.0002)	(0.0002)	(0.0002)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)
Male			0.115	0.076	0.060	0.071	0.064	0.073	0.063	0.052
			(0.1605)	(0.1576)	(0.1431)	(0.1434)	(0.1321)	(0.1275)	(0.1305)	(0.1273)
Married				0.039	0.086	0.082	0.050	0.034	0.024	0.029
				(0.2383)	(0.2191)	(0.2200)	(0.2231)	(0.2173)	(0.2138)	(0.2133)
Civil Union				0.525	0.587*	0.586*	0.371	0.386	0.327	0.338
				(0.3442)	(0.3314)	(0.3281)	(0.4153)	(0.3868)	(0.3828)	(0.3822)
Separated				0.103	0.206	0.178	0.128	0.160	0.165	0.168
				(0.3615)	(0.3446)	(0.3429)	(0.3568)	(0.3624)	(0.3721)	(0.3679)
Widowed				-1.414***	-1.349***	-1.372***	-1.396***	-1.332***	-1.382***	-1.367***
				(0.2902)	(0.2929)	(0.2979)	(0.2818)	(0.2700)	(0.2705)	(0.2757)
Lower Secondary					0.115	0.161	0.164	0.197	0.218	0.223
					(0.3748)	(0.3698)	(0.3949)	(0.3968)	(0.3841)	(0.3942)
Upper Secondary					0.380	0.482	0.374	0.434	0.432	0.431
					(0.3569)	(0.3639)	(0.4104)	(0.4163)	(0.4101)	(0.4130)
Advanced Vocational					0.585	0.686*	0.509	0.545	0.548	0.563
					(0.3677)	(0.3688)	(0.4128)	(0.4180)	(0.4157)	(0.4315)
Tertiary Education					1.241***	1.345***	0.995**	0.990**	0.974**	0.972**
					(0.3627)	(0.3656)	(0.4532)	(0.4579)	(0.4537)	(0.4644)
Unemployed						0.407	0.443	0.411	0.402	0.412
						(0.4744)	(0.4458)	(0.4439)	(0.4366)	(0.4419)
M – Lower Secondary							0.159	0.326	0.335	0.334
							(0.3712)	(0.3596)	(0.3667)	(0.3757)
M – Upper Secondary							0.511	0.710**	0.732**	0.745**
							(0.3116)	(0.3326)	(0.3355)	(0.3487)
M – Advanced Vocational							1.101***	1.231***	1.268***	1.268***
							(0.3511)	(0.3697)	(0.3717)	(0.3806)
M – Tertiary Education							1.084***	1.047***	1.079***	1.097***
							(0.3476)	(0.3516)	(0.3478)	(0.3708)
F – Lower Secondary								-0.178	-0.178	-0.172
								(0.3522)	(0.3545)	(0.3583)
F – Upper Secondary								-0.577**	-0.635**	-0.629**
								(0.2790)	(0.2733)	(0.2752)
F – Advanced Vocational								-0.441	-0.507*	-0.516*
								(0.3006)	(0.2967)	(0.2967)
F – Tertiary Education								0.051	-0.000	-0.015
								(0.2842)	(0.2865)	(0.2877)
Father unemployed when respondent aged 14									-0.797*	-0.801*
									(0.4230)	(0.4209)
Father absent when respondent aged 14									-0.572*	-0.576**
									(0.2885)	(0.2870)
Mother unemployed when respondent aged 14										0.018
										(0.1884)
Mother absent when respondent aged 14										-1.044
										(0.9429)
Observations	1,285	1,285	1,285	1,285	1,285	1,285	1,285	1,285	1,285	1,285
R-squared	0.062	0.063	0.064	0.080	0.116	0.119	0.145	0.156	0.163	0.165
Country dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Standard errors	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust
Weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 6. Raw results Mother Sample. Source: European Social Survey (2014, 2016, 2018) and Transparency International (1995-2014).

VARIABLES	(1) ppltrst	(2) ppltrst	(3) ppltrst	(4) ppltrst	(5) ppltrst	(6) ppltrst	(7) ppltrst	(8) ppltrst	(9) ppltrst	(10) ppltrst
CPI Average	-0.002	-0.002	-0.001	-0.002	-0.001	-0.001	-0.001	-0.001	-0.002	-0.002
	(0.0056)	(0.0033)	(0.0056)	(0.0057)	(0.0057)	(0.0057)	(0.0055)	(0.0054)	(0.0054)	(0.0054)
Age		-0.006	-0.006	-0.003	-0.047*	-0.036	-0.016	-0.011	-0.012	-0.012
		(0.0166)	(0.0244)	(0.0224)	(0.0245)	(0.0259)	(0.0284)	(0.0273)	(0.0275)	(0.0274)
Age Squared		0.000	0.000	0.000	0.000*	0.000	0.000	0.000	0.000	0.000
		(0.0002)	(0.0003)	(0.0002)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)
Male			-0.264*	-0.245*	-0.191	-0.191	-0.183	-0.199	-0.190	-0.189
			(0.1420)	(0.1438)	(0.1442)	(0.1433)	(0.1339)	(0.1249)	(0.1219)	(0.1233)
Married				0.158	0.153	0.141	0.073	0.058	0.052	0.073
				(0.2333)	(0.2223)	(0.2217)	(0.2291)	(0.2248)	(0.2249)	(0.2335)
Civil Union				0.038	-0.198	-0.168	-0.261	-0.217	-0.177	-0.171
				(0.5487)	(0.5390)	(0.5356)	(0.5152)	(0.5475)	(0.5496)	(0.5462)
Separated				-0.607	-0.536	-0.544	-0.604*	-0.600*	-0.619*	-0.591*
				(0.3897)	(0.3681)	(0.3654)	(0.3471)	(0.3470)	(0.3421)	(0.3544)
Widowed				0.217	0.120	0.119	0.105	0.086	0.082	0.095
				(0.4005)	(0.3940)	(0.3922)	(0.4065)	(0.4033)	(0.4209)	(0.4235)
Lower Secondary					0.016	0.056	0.023	-0.022	-0.005	0.023
					(0.4479)	(0.4490)	(0.4592)	(0.4664)	(0.4441)	(0.4511)
Upper Secondary					0.134	0.215	0.095	0.007	0.043	0.058
					(0.4276)	(0.4499)	(0.4650)	(0.4709)	(0.4555)	(0.4620)
Advanced Vocational					1.016**	1.097**	0.951*	0.868	0.901*	0.913*
					(0.5009)	(0.5252)	(0.5595)	(0.5636)	(0.5319)	(0.5369)
Tertiary Education					1.275***	1.354***	1.107**	0.992*	1.010**	1.024**
					(0.4495)	(0.4663)	(0.5127)	(0.5116)	(0.4910)	(0.4932)
Unemployed						0.367	0.380	0.342	0.341	0.335
						(0.3473)	(0.3404)	(0.3444)	(0.3434)	(0.3449)
M – Lower Secondary							0.086	-0.082	-0.064	-0.099
							(0.2539)	(0.2666)	(0.2718)	(0.2744)
M – Upper Secondary							0.464	0.230	0.238	0.184
							(0.2870)	(0.3054)	(0.3011)	(0.3237)
M – Advanced Vocational							0.225	-0.007	-0.019	-0.104
							(0.3455)	(0.3878)	(0.3873)	(0.4210)
M – Tertiary Education							0.820***	0.541*	0.550*	0.464
							(0.2703)	(0.3147)	(0.3120)	(0.3281)
F – Lower Secondary								0.252	0.182	0.176
								(0.3074)	(0.3272)	(0.3322)
F – Upper Secondary								0.474	0.407	0.405
								(0.2969)	(0.3286)	(0.3254)
F – Advanced Vocational								0.337	0.270	0.283
								(0.3779)	(0.3990)	(0.3947)
F – Tertiary Education								0.484	0.390	0.415
								(0.3073)	(0.3178)	(0.3235)
Father unemployed when respondent aged 14									-0.914***	-0.900***
									(0.2798)	(0.2840)
Father absent when respondent aged 14									-0.015	-0.029
									(0.4721)	(0.4788)
Mother unemployed when respondent aged 14										-0.168
										(0.1854)
Mother absent when respondent aged 14										0.260
										(0.5188)
Observations	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310	1,310
R-squared	0.042	0.042	0.046	0.054	0.106	0.108	0.119	0.124	0.132	0.133
Country dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Standard errors	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust
Weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 7. Raw results Father Sample. Source: European Social Survey (2014, 2016, 2018) and Transparency International (1995-2014).

VARIABLES	(1) ppltrst	(2) ppltrst	(3) ppltrst	(4) ppltrst	(5) ppltrst	(6) ppltrst	(7) ppltrst	(8) ppltrst	(9) ppltrst	(10) ppltrst
CPI Average	0.014***	0.012***	0.012***	0.013***	0.015***	0.014***	0.014***	0.014***	0.014***	0.015***
	(0.0050)	(0.0044)	(0.0044)	(0.0045)	(0.0047)	(0.0048)	(0.0048)	(0.0046)	(0.0046)	(0.0043)
Age		-0.043**	-0.044**	-0.033	-0.054**	-0.048*	-0.047*	-0.046*	-0.046*	-0.044*
		(0.0164)	(0.0167)	(0.0242)	(0.0234)	(0.0243)	(0.0251)	(0.0260)	(0.0260)	(0.0255)
Age Squared		0.001***	0.001***	0.000*	0.001***	0.001**	0.001**	0.001**	0.001**	0.001**
		(0.0002)	(0.0002)	(0.0003)	(0.0002)	(0.0002)	(0.0002)	(0.0003)	(0.0003)	(0.0002)
Male			0.462***	0.442***	0.443***	0.447***	0.415***	0.407***	0.409***	0.406***
			(0.1355)	(0.1249)	(0.1132)	(0.1124)	(0.1141)	(0.1188)	(0.1222)	(0.1212)
Married				-0.121	-0.191	-0.188	-0.144	-0.136	-0.135	-0.138
				(0.2641)	(0.2573)	(0.2588)	(0.2681)	(0.2658)	(0.2658)	(0.2582)
Civil Union				0.232	0.009	0.021	0.033	0.060	0.060	0.122
				(0.5524)	(0.5151)	(0.5138)	(0.4603)	(0.4894)	(0.4969)	(0.4912)
Separated				-0.627*	-0.654*	-0.651*	-0.600	-0.614*	-0.610	-0.635*
				(0.3697)	(0.3734)	(0.3760)	(0.3584)	(0.3628)	(0.3682)	(0.3710)
Widowed				-0.030	-0.081	-0.087	-0.035	-0.023	-0.019	-0.027
				(0.5742)	(0.5094)	(0.5091)	(0.5577)	(0.5454)	(0.5479)	(0.5751)
Lower Secondary					0.352	0.354	0.360	0.349	0.342	0.350
					(0.2628)	(0.2669)	(0.2372)	(0.2520)	(0.2511)	(0.2401)
Upper Secondary					0.429**	0.460**	0.428**	0.420**	0.420**	0.431**
					(0.1827)	(0.2024)	(0.1814)	(0.1847)	(0.1853)	(0.1831)
Advanced Vocational					0.605**	0.634**	0.592**	0.551**	0.547**	0.568**
					(0.2542)	(0.2619)	(0.2352)	(0.2355)	(0.2352)	(0.2324)
Tertiary Education					1.369***	1.392***	1.328***	1.306***	1.302***	1.311***
					(0.2440)	(0.2671)	(0.2280)	(0.2361)	(0.2366)	(0.2391)
Unemployed						0.186	0.212	0.163	0.163	0.174
						(0.3369)	(0.3066)	(0.3214)	(0.3221)	(0.3173)
M – Lower Secondary							-0.175	-0.239	-0.244	-0.226
							(0.3157)	(0.3817)	(0.3783)	(0.3737)
M – Upper Secondary							0.234	0.100	0.095	0.142
							(0.1995)	(0.2554)	(0.2550)	(0.2436)
M – Advanced Vocational							0.246	0.121	0.121	0.184
							(0.4119)	(0.4288)	(0.4344)	(0.4394)
M – Tertiary Education							0.523	0.387	0.386	0.418
							(0.3518)	(0.3764)	(0.3787)	(0.3796)
F – Lower Secondary								-0.008	-0.005	0.004
								(0.2367)	(0.2377)	(0.2304)
F – Upper Secondary								0.227	0.234	0.255
								(0.2696)	(0.2625)	(0.2604)
F – Advanced Vocational								0.471	0.477	0.455
								(0.2996)	(0.3061)	(0.3042)
F – Tertiary Education								0.059	0.066	0.080
								(0.3301)	(0.3375)	(0.3397)
Father unemployed when respondent aged 14									0.061	0.042
									(0.1864)	(0.1775)
Father absent when respondent aged 14									-0.066	-0.032
									(0.4364)	(0.4455)
Mother unemployed when respondent aged 14										0.194
										(0.1778)
Mother absent when respondent aged 14										-0.613
										(0.6451)
Observations	1,215	1,215	1,215	1,215	1,215	1,215	1,215	1,215	1,215	1,215
R-squared	0.040	0.047	0.059	0.065	0.097	0.098	0.105	0.108	0.108	0.111
Country dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Standard errors	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust
Weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 8. Results Parent's Sample (N country of origin > 5). Source: European Social Survey (2014, 2016, 2018) and Transparency International (1995-2014).

VARIABLES	(1) ppltrst	(2) ppltrst	(3) ppltrst	(4) ppltrst	(5) ppltrst	(6) ppltrst	(7) ppltrst	(8) ppltrst	(9) ppltrst	(10) ppltrst
CPI Average	0.015***	0.014***	0.015***	0.015***	0.016***	0.016***	0.017***	0.016***	0.016***	0.017***
	(0.0024)	(0.0029)	(0.0031)	(0.0036)	(0.0052)	(0.0053)	(0.0053)	(0.0049)	(0.0048)	(0.0048)
Age		-0.042	-0.042	-0.037	-0.057	-0.047	-0.048	-0.049	-0.049	-0.048
		(0.0244)	(0.0240)	(0.0323)	(0.0364)	(0.0418)	(0.0389)	(0.0404)	(0.0403)	(0.0378)
Age Squared		0.001*	0.001*	0.000	0.001*	0.001	0.001	0.001	0.001	0.001
		(0.0003)	(0.0003)	(0.0003)	(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.0004)
Male			0.338**	0.329**	0.337*	0.343*	0.314*	0.310*	0.311*	0.306*
			(0.1398)	(0.1415)	(0.1597)	(0.1629)	(0.1514)	(0.1542)	(0.1658)	(0.1611)
Married				-0.028	-0.057	-0.060	-0.031	-0.034	-0.032	-0.029
				(0.2039)	(0.1745)	(0.1695)	(0.1745)	(0.1607)	(0.1602)	(0.1588)
Civil Union				0.310	0.152	0.161	0.130	0.161	0.161	0.231**
				(0.2504)	(0.1582)	(0.1415)	(0.1428)	(0.1061)	(0.0918)	(0.0828)
Separated				-0.471	-0.454	-0.454*	-0.424	-0.437	-0.430	-0.449*
				(0.2775)	(0.2579)	(0.2549)	(0.2534)	(0.2489)	(0.2454)	(0.2488)
Widowed				0.145	0.122	0.107	0.138	0.121	0.127	0.126
				(0.5144)	(0.3648)	(0.3609)	(0.3661)	(0.3213)	(0.3248)	(0.3425)
Lower Secondary					0.243	0.248	0.243	0.253	0.245	0.252
					(0.1755)	(0.1638)	(0.1927)	(0.1821)	(0.1951)	(0.2120)
Upper Secondary					0.331*	0.381**	0.361*	0.371**	0.370**	0.386**
					(0.1681)	(0.1691)	(0.1797)	(0.1551)	(0.1556)	(0.1617)
Advanced Vocational					0.472***	0.523***	0.475***	0.472***	0.469***	0.484***
					(0.1561)	(0.1630)	(0.1500)	(0.1284)	(0.1300)	(0.1334)
Tertiary Education					1.186***	1.233***	1.184***	1.212***	1.206***	1.216***
					(0.1774)	(0.1771)	(0.0954)	(0.1290)	(0.1237)	(0.1199)
Unemployed						0.300	0.307*	0.287*	0.289*	0.296*
						(0.1910)	(0.1714)	(0.1414)	(0.1450)	(0.1408)
M – Lower Secondary							-0.121	-0.106	-0.113	-0.090
							(0.1485)	(0.2508)	(0.2460)	(0.2423)
M – Upper Secondary							0.056	0.024	0.020	0.077
							(0.2882)	(0.2904)	(0.2762)	(0.3191)
M – Advanced Vocational							0.104	0.072	0.073	0.146
							(0.5607)	(0.5239)	(0.5233)	(0.5744)
M – Tertiary Education							0.499	0.486	0.484	0.534
							(0.5356)	(0.4279)	(0.4245)	(0.4598)
F – Lower Secondary								-0.167	-0.163	-0.155
								(0.2720)	(0.2644)	(0.2550)
F – Upper Secondary								0.059	0.066	0.082
								(0.3650)	(0.3603)	(0.3640)
F – Advanced Vocational								0.176	0.183	0.162
								(0.4525)	(0.4638)	(0.4755)
F – Tertiary Education								-0.115	-0.103	-0.088
								(0.4252)	(0.4434)	(0.4482)
Father unemployed when respondent aged 14									0.077	0.053
									(0.2943)	(0.2681)
Father absent when respondent aged 14									-0.078	-0.047
									(0.3210)	(0.3082)
Mother unemployed when respondent aged 14										0.200
										(0.1360)
Mother absent when respondent aged 14										-0.300
										(0.5983)
Observations	1,301	1,301	1,301	1,301	1,301	1,301	1,301	1,301	1,301	1,301
R-squared	0.038	0.044	0.051	0.055	0.081	0.083	0.087	0.088	0.089	0.091
Country dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Standard errors	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust	Cluster robust
Weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight	Probability weight

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 9. Results Parents' Sample (Clustering at Country of Residence). Source: European Social Survey (2014, 2016, 2018) and Transparency International (1995-2014).

Testing MAR-assumption

VARIABLES	(1) Years of education
Missing value dummy	-0.895**
	(0.354)
Observations	1,409
R-squared	0.005

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 10. Missing education mother on years of education, raw results.
Source: European Social Survey (2014, 2016, 2018).

VARIABLES	(1) Years of education
Missing value dummy	-0.756**
	(0.295)
Observations	1,409
R-squared	0.005

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 11. Missing education father on years of education, raw results.
Source: European Social Survey (2014, 2016, 2018).

VARIABLES	(1) Years of education
Missing value dummy	-0.421
	(0.501)
Observations	1,409
R-squared	0.001

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 12. Missing education mother on years of education, mean imputed results.
Source: European Social Survey (2014, 2016, 2018).

VARIABLES	(1) Years of education
Missing value dummy	-0.544
	(0.415)
Observations	1,409
R-squared	0.001

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 13. Missing education father on years of education, mean imputed results. Source: European Social Survey (2022).
Source: European Social Survey (2014, 2016, 2018).

Appendix B - Descriptives

Parents Sample

Country of origin	No. of respondents in sample	CPI Average	Social trust (mean)
Azerbaijan	1	22	3.00
Brazil	1	38	5.00
Cuba	1	42	7.00
Denmark	1	95	8.00
Ecuador	1	25	5.00
United Kingdom	1	82	7.00
Guinea	1	21	2.00
Equatorial Guinea	1	19	3.00
Honduras	1	25	5.00
Israel	1	66	4.00
Kyrgyzstan	1	22	2.00
Laos	1	23	5.00
Luxembourg	1	85	4.00
Moldova	1	29	5.00
Madagascar	1	29	3.00
Mozambique	1	28	3.00
Norway	1	87	8.00
Rwanda	1	39	5.00
Slovakia	1	42	3.00
Senegal	1	33	2.00
Thailand	1	34	7.00
Argentina	2	31	4.09
Bulgaria	2	38	6.20
DR Congo	2	20	4.33
Ivory Coast	2	24	4.53
Cameroon	2	22	3.47
Cape Verde	2	54	3.36
Eritrea	2	25	3.23
Georgia	2	34	4.58
Guinea-Bissau	2	21	6.35
Kenya	2	22	4.08
Comoros	2	25	3.25
Mali	2	30	6.56
Mauritius	2	50	3.76
Palestine	2	27	6.28
Ukraine	2	24	5.27

Country of origin	No. of respondents in sample	CPI Average	Social trust (mean)
Armenia	3	30	5.32
Angola	3	20	3.59
Congo	3	22	3.56
Estonia	3	62	7.77
Egypt	3	32	3.77
Ghana	3	38	2.02
Iraq	3	18	3.97
Somalia	3	11	5.52
Syria	3	26	6.11
Afghanistan	4	14	4.80
Peru	4	38	4.72
Belgium	5	69	6.19
Chile	5	71	5.57
Kazakhstan	5	26	3.48
China	6	34	5.99
Nigeria	6	19	4.32
Netherlands	6	88	5.37
Iran	7	26	4.56
Albania	8	29	3.83
Bangladesh	8	20	5.70
Slovenia	8	61	5.27
Vietnam	8	27	5.35
Jamaica	9	36	4.20
Philippines	9	28	6.18
Lebanon	10	29	6.77
North Macedonia	10	35	4.52
Greece	11	43	3.03
Russia	12	25	5.05
Austria	13	78	6.80
Czech Republic	13	46	4.68
Suriname	13	35	5.01
Tunisia	13	46	5.21
Romania	15	34	5.38
Sri Lanka	18	34	4.64
Hungary	19	50	5.88
Indonesia	21	24	5.49
Serbia	22	36	4.38
Finland	23	94	6.68
France	23	69	4.98
Croatia	23	39	5.61

Country of origin	No. of respondents in sample	CPI Average	Social trust (mean)
Pakistan	26	24	4.68
Kosovo	27	31	5.26
Bosnia and Herzegovina	28	34	4.02
India	28	31	4.98
Germany	33	79	6.46
Spain	38	63	4.45
Ireland	43	76	5.58
Portugal	45	63	4.46
Poland	47	47	4.92
Algeria	48	31	4.61
Morocco	123	36	4.30
Italy	180	45	4.78
Turkey	200	39	4.38

Table 14. Descriptive statistics for country of origin. Source: Transparency International (1995-2014), European Social Survey (2014, 2016, 2018).

Country of residence	No. of respondents in sample	Age (mean)
Austria	143	33
Belgium	194	37
Switzerland	210	36
Germany	181	32
Denmark	23	34
Spain	23	34
Finland	9	36
France	209	42
United Kingdom	109	41
Iceland	6	21
Italy	22	26
Netherlands	89	30
Norway	21	24
Portugal	11	35
Sweden	51	37

Table 15. Descriptive statistics for country of origin. Source: European Social Survey (2014, 2016, 2018).

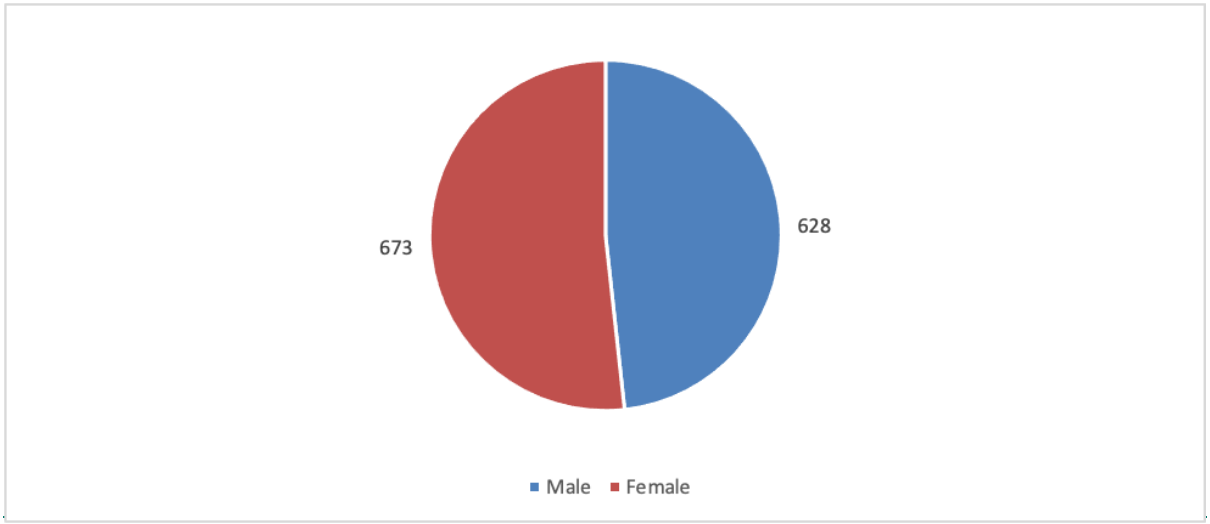

Figure 3. Gender Distribution. Source: European Social Survey (2014, 2016, 2018).

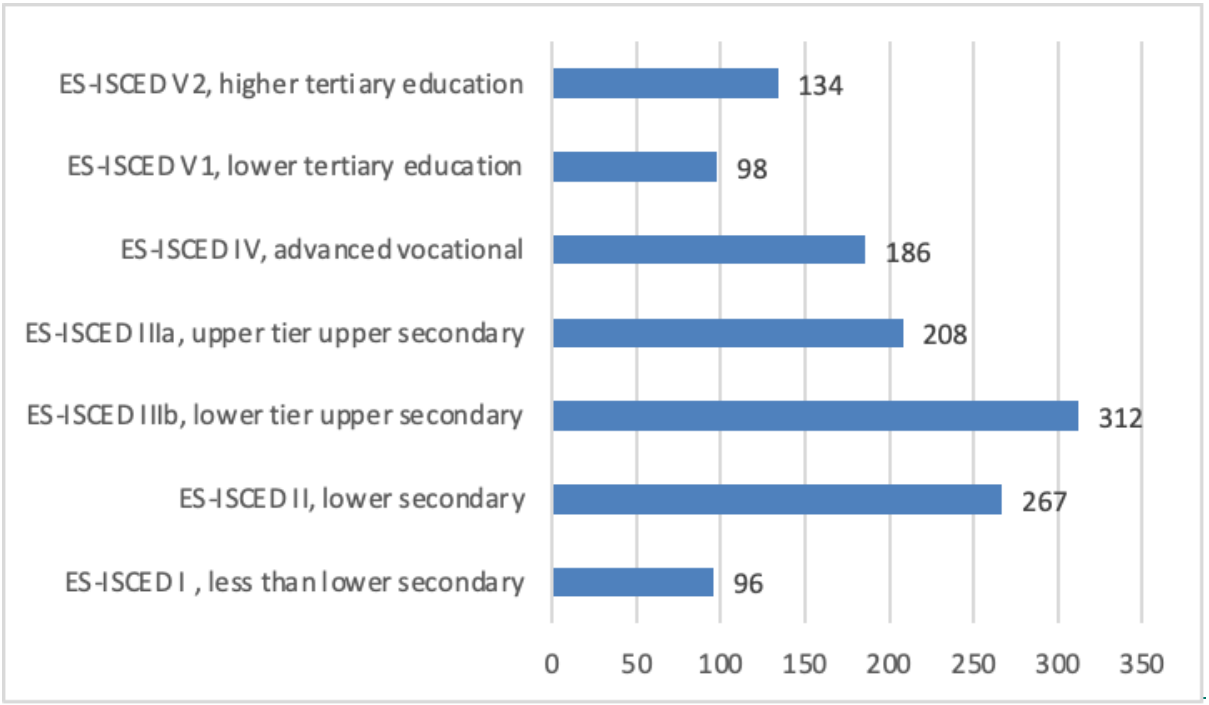

Figure 4. Distribution of the highest level of education attained. Source: European Social Survey (2014, 2016, 2018).

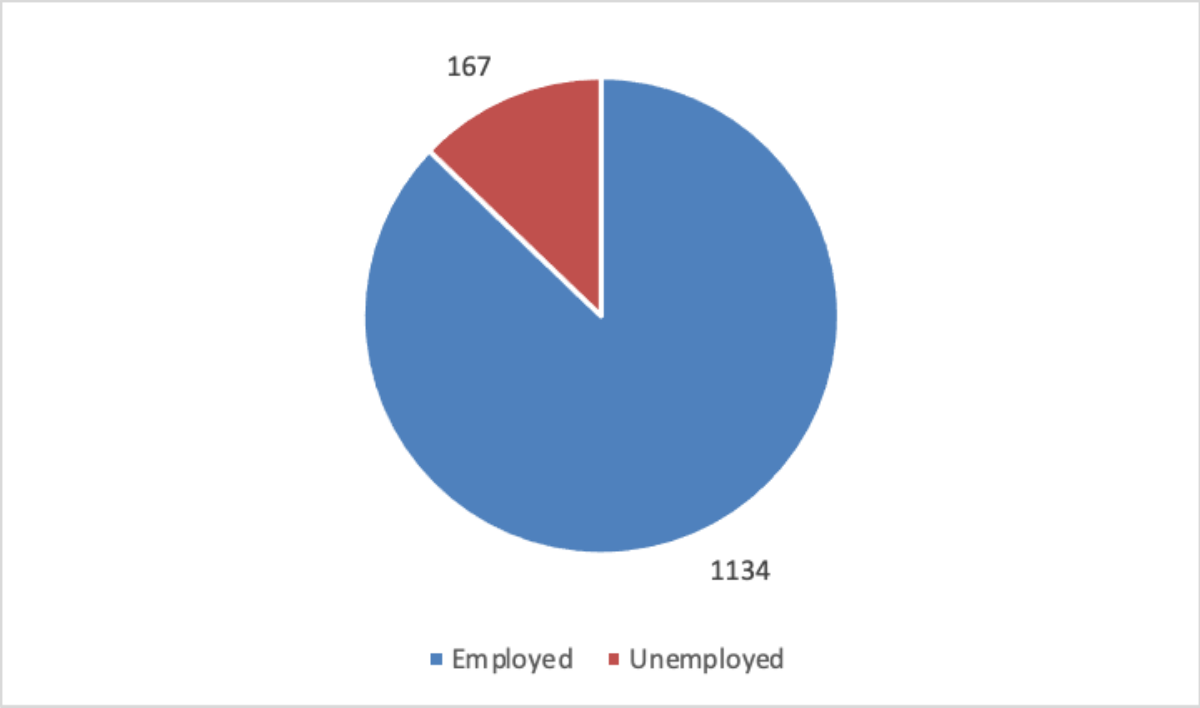

Figure 5. Distribution of employment status. Source: European Social Survey (2014, 2016, 2018).

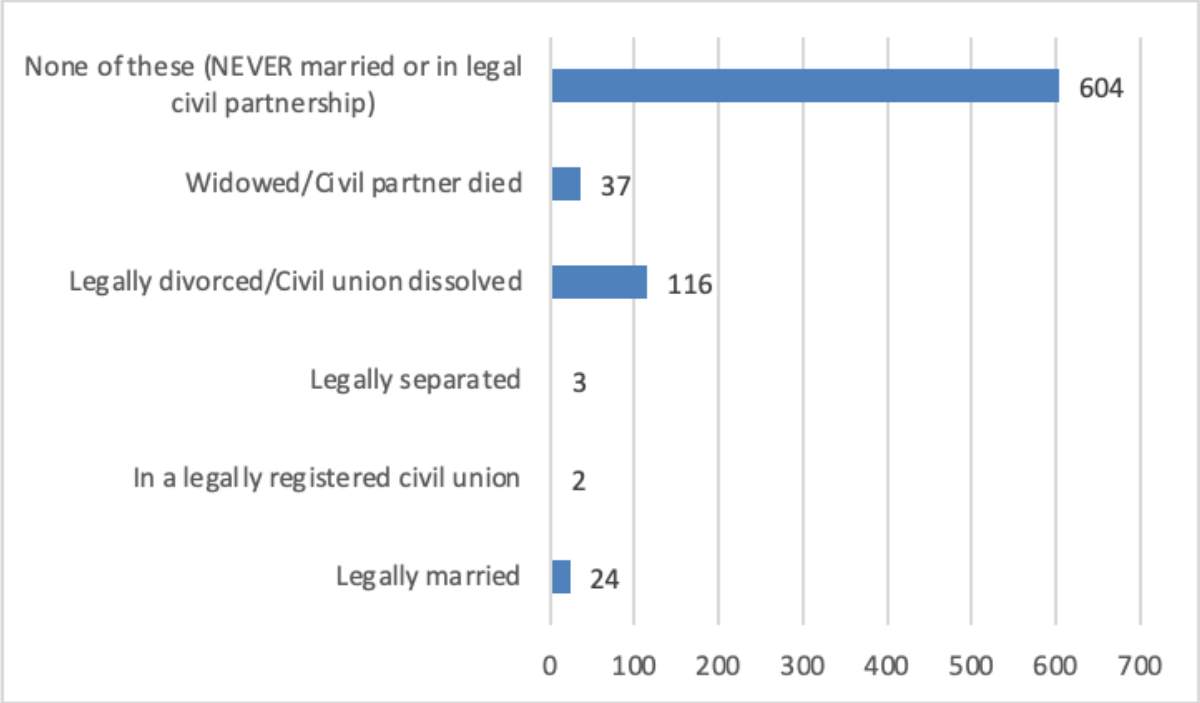

Figure 6. Distribution of legal marital status. Source: European Social Survey (2014, 2016, 2018).

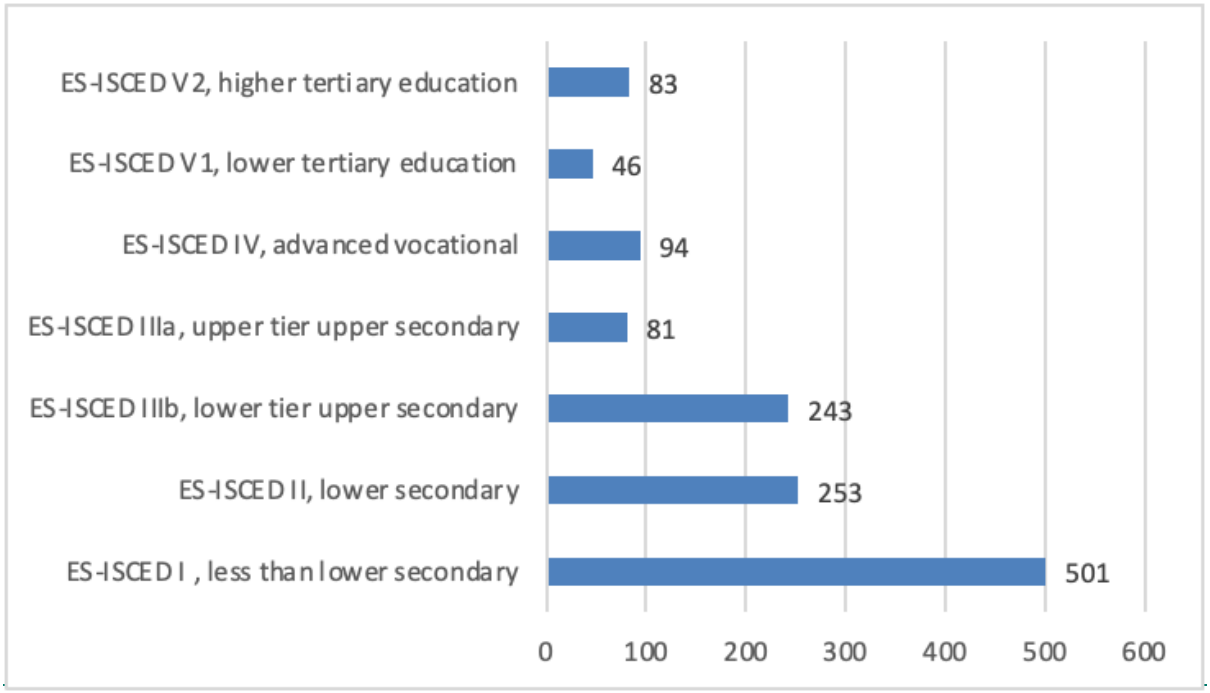

Figure 7. Distribution of father's highest level of education attained. Source: European Social Survey (2014, 2016, 2018).

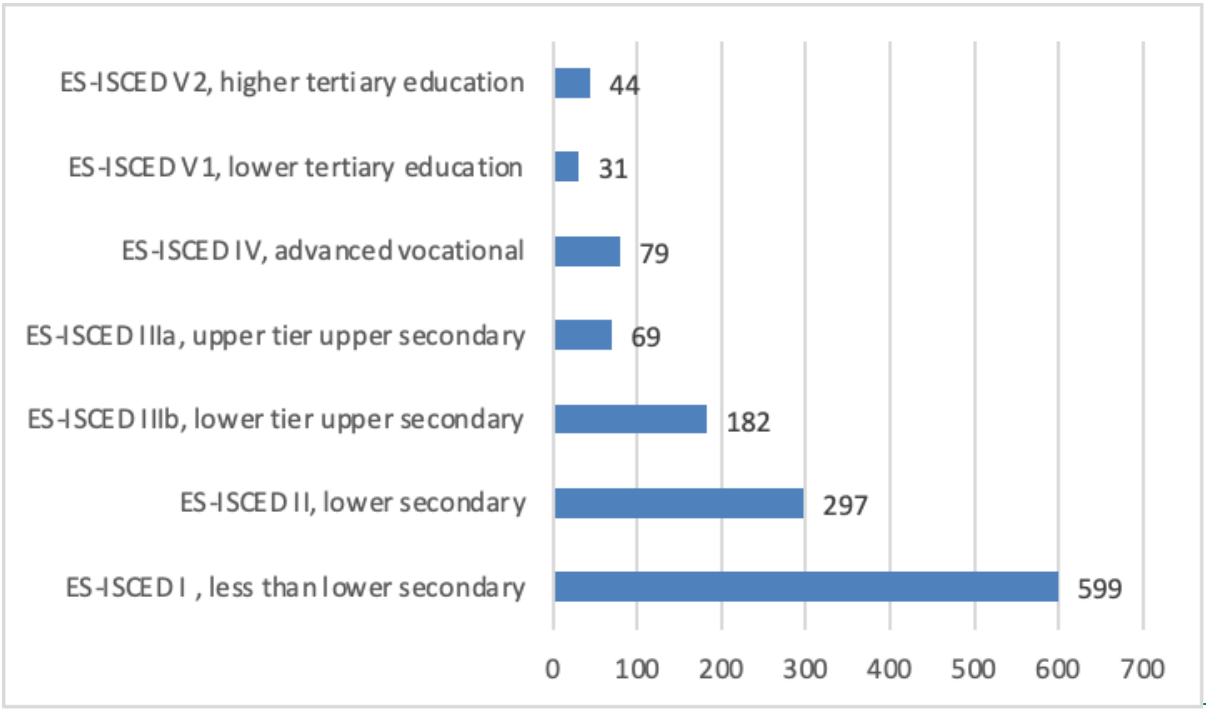

Figure 8. Distribution of mother's highest level of education attained. Source: European Social Survey (2014, 2016, 2018).

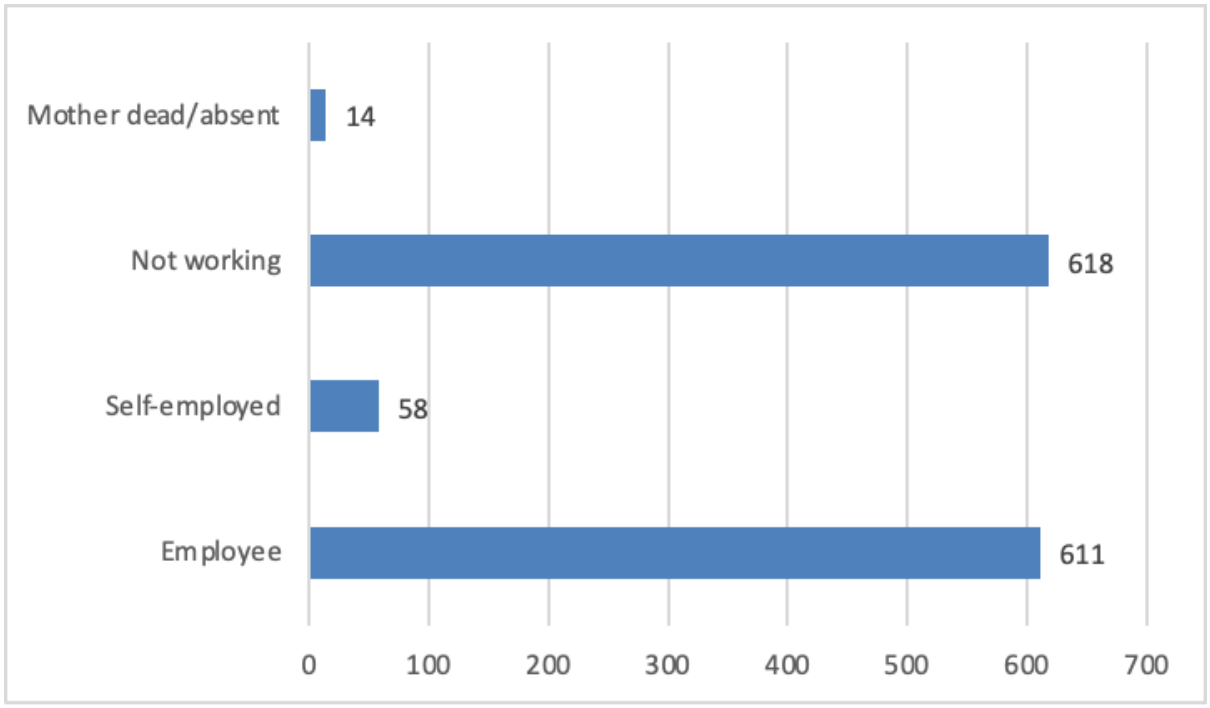

Figure 9. Distribution of mother's employment status when respondent aged 14. Source: European Social Survey (2014, 2016, 2018).

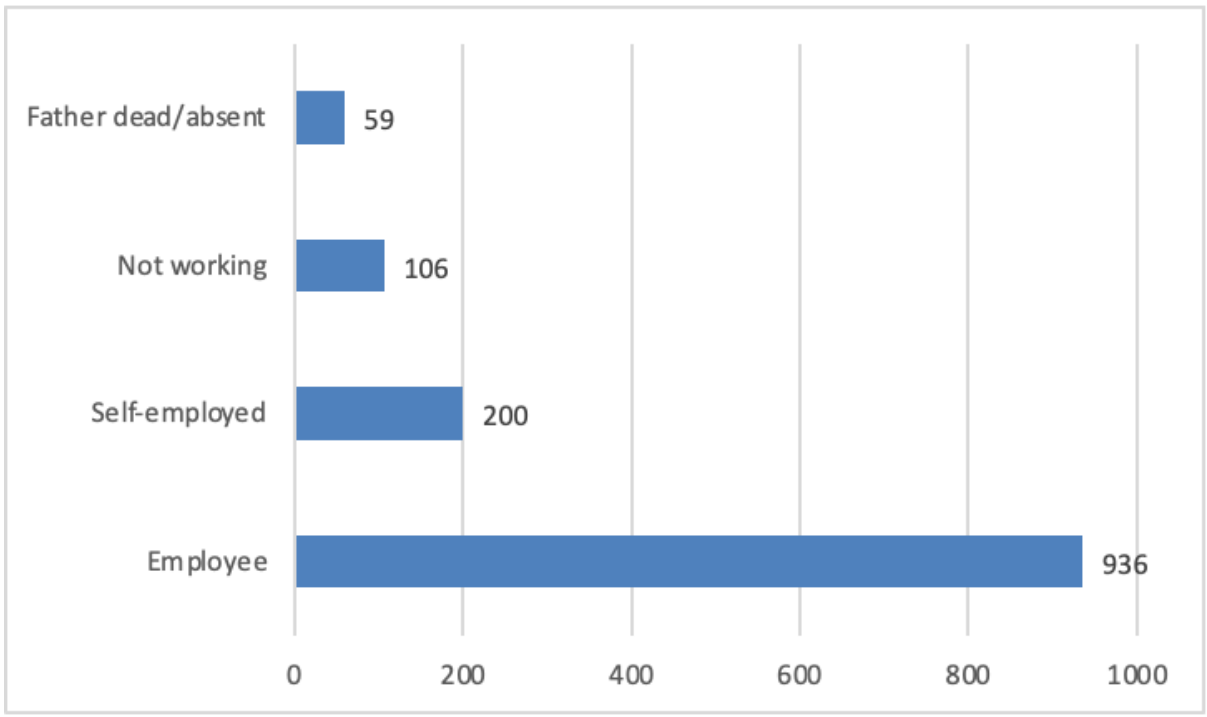

Figure 10. Distribution of father's employment status when respondent aged 14. Source: European Social Survey (2014, 2016, 2018).

Mother Sample

Country of origin	No. of respondents in sample	CPI Average	Social trust (Mean)
Albania	1	29	7.00
Angola	1	20	6.00
Argentina	1	31	8.00
Austria	1	78	4.00
Australia	1	86	6.00
Azerbaijan	1	22	3.00
Bosnia and Herzegovina	1	34	6.00
Belgium	1	69	8.00
Burundi	1	21	7.00
Brazil	1	38	8.00
Belarus	1	31	3.00
Canada	1	87	8.00
Democratic Republic of Congo	1	20	6.00
Republic of Congo	1	22	7.00
Switzerland	1	88	8.00
Ivory Coast	1	24	5.00
Chile	1	71	5.00
Colombia	1	34	5.00
Cuba	2	42	6.90
Czech Republic	2	46	6.00
Germany	2	79	5.48
Denmark	2	95	7.27
Dominican Republic	2	30	6.28
Algeria	2	31	3.37
Ecuador	2	25	7.54
Estonia	2	62	4.45
Egypt	2	32	7.25
Spain	2	63	8.00
Ethiopia	2	28	8.00
Finland	3	94	4.33
France	3	69	6.40
United Kingdom	3	82	5.50
Georgia	3	34	2.51
Greece	3	43	3.87
Guinea-Bissau	3	21	2.45
Guyana	3	27	5.03
Croatia	3	39	7.53
Haiti	3	18	4.41

Country of origin	No. of respondents in sample	CPI Average	Social trust (Mean)
Hungary	3	50	4.33
Indonesia	3	24	5.73
Ireland	3	76	4.89
Israel	3	66	6.65
India	3	31	4.89
Iran	3	26	6.65
Iceland	4	89	4.59
Italy	4	45	5.68
Jamaica	4	36	4.57
Japan	4	71	4.36
South Korea	4	48	0.26
Lebanon	5	29	6.78
Sri Lanka	5	34	4.79
Lithuania	5	48	7.98
Luxembourg	6	85	5.78
Latvia	6	42	5.83
Morocco	6	36	4.26
Madagascar	6	29	5.53
Macedonia	6	35	6.89
Mauritius	6	50	6.38
Mexico	7	34	7.80
Mozambique	7	28	7.85
Netherlands	7	88	4.12
Norway	8	87	3.67
Nepal	8	26	6.12
New Zealand	9	94	6.57
Peru	12	38	5.31
Philippines	12	28	5.47
Pakistan	13	24	3.38
Poland	15	47	6.90
Palestine	15	27	4.90
Portugal	16	63	5.31
Romania	17	34	6.37
Serbia	18	36	3.96
Russia	19	25	6.05
Rwanda	21	39	5.36
Sweden	21	92	5.07
Singapore	23	91	5.12
Slovenia	26	61	6.41
Slovakia	26	42	5.93

Country of origin	No. of respondents in sample	CPI Average	Social trust (Mean)
Suriname	28	35	4.93
Sao Tome and Principe	31	34	5.91
Syria	34	26	5.31
Swaziland	36	34	5.87
Thailand	37	34	6.69
Tunisia	37	46	5.06
Turkey	37	39	5.61
Taiwan	38	57	5.51
Ukraine	39	24	5.61
United States of America	43	75	4.74
Venezuela	43	23	4.58
Vietnam	43	27	6.07
South Africa	43	48	6.07
United States of America	84	75	5.16
Venezuela	87	23	4.60
Vietnam	110	27	5.06
South Africa	234	48	5.41

Table 16. Descriptive statistics for country of origin. Source: Transparency International (1995-2014), European Social Survey (2014, 2016, 2018).

Country of residence	No. of respondents in sample	Age (mean)
Austria	168	44
Belgium	136	45
Switzerland	233	45
Germany	171	44
Denmark	53	46
Spain	41	39
Finland	28	47
France	151	44
United Kingdom	74	44
Iceland	27	45
Italy	27	36
Netherlands	114	47
Norway	55	39
Portugal	41	33
Sweden	90	41

Table 17. Descriptive statistics for country of residence. Source: European Social Survey (2014, 2016, 2018).

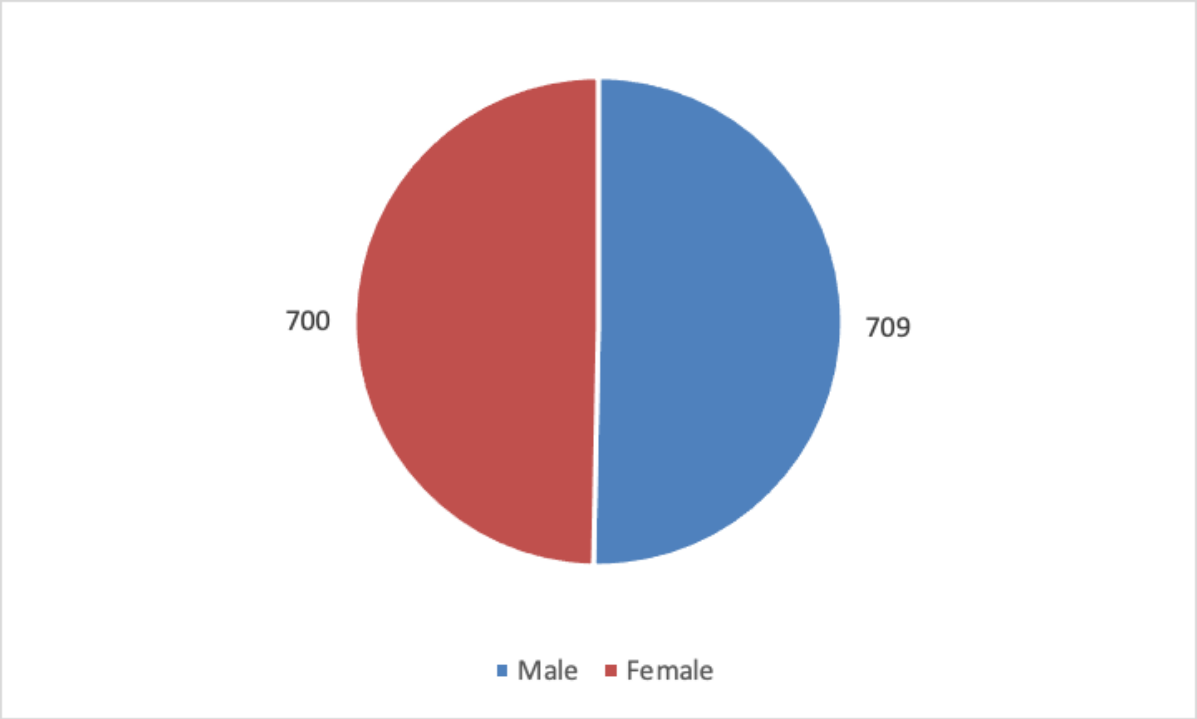

Figure 11. Gender distribution. Source: European Social Survey (2014, 2016, 2018).

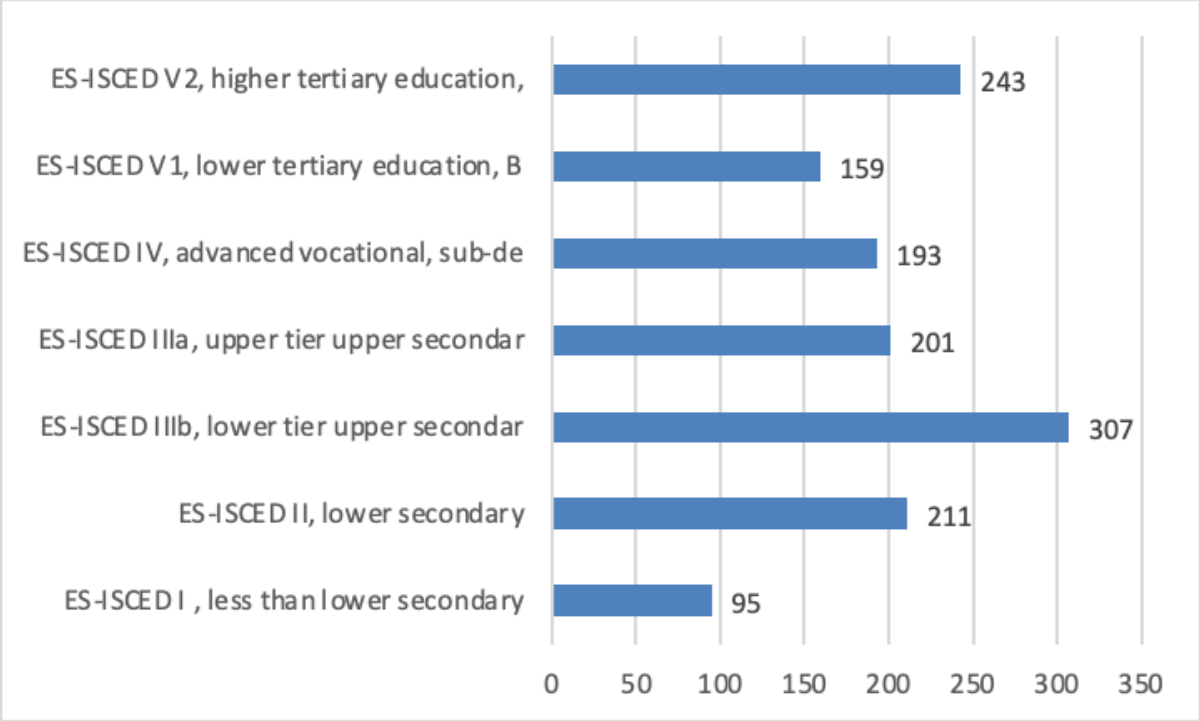

Figure 12. Distribution of the highest level of education attained. Source: European Social Survey (2014, 2016, 2018).

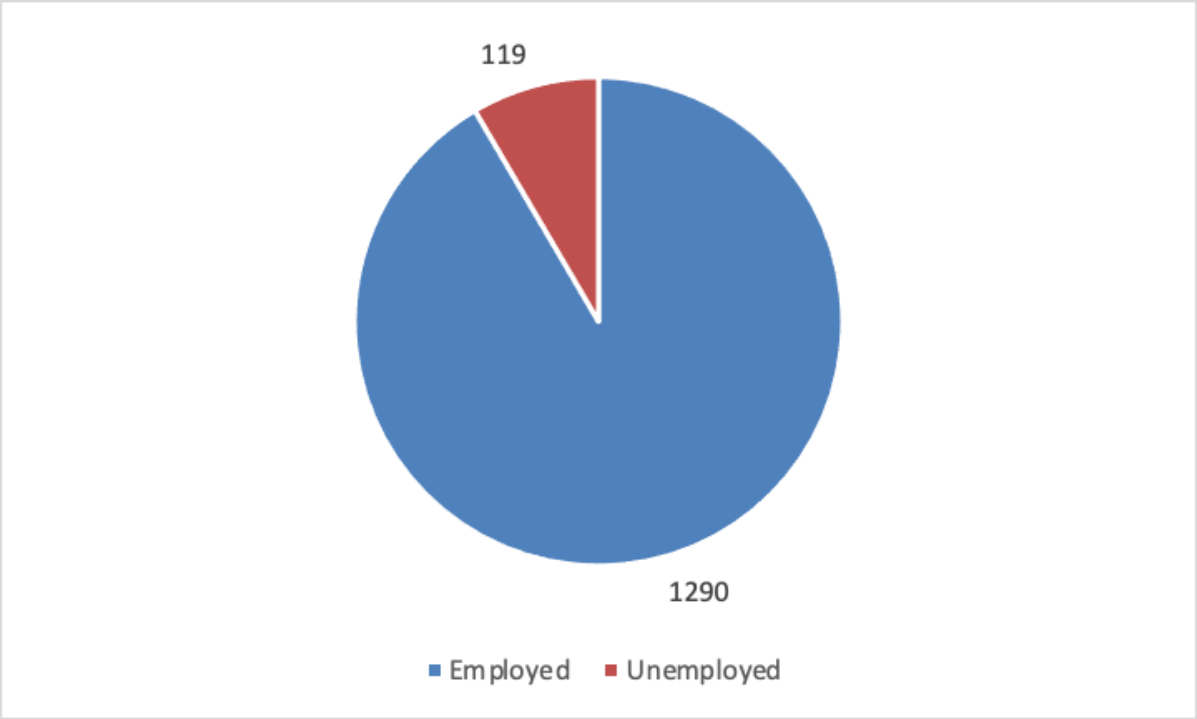

Figure 13. Distribution of employment status. Source: European Social Survey (2014, 2016, 2018).

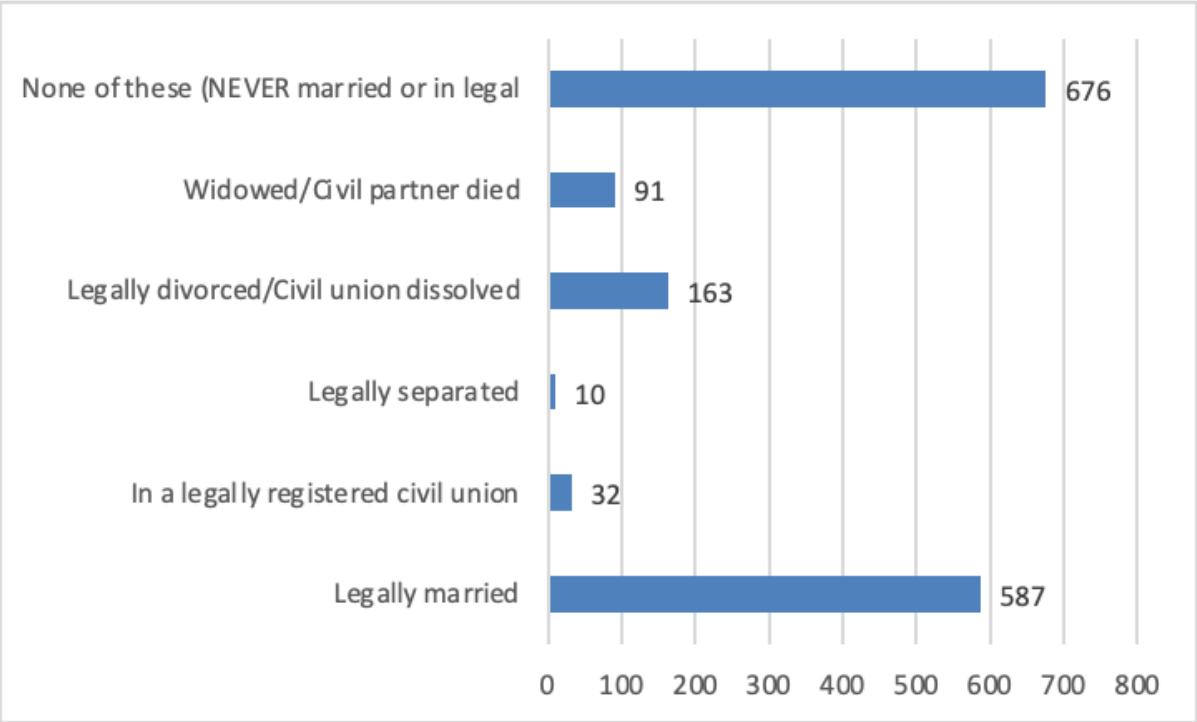

Figure 14. Distribution of legal marital status. Source: European Social Survey (2014, 2016, 2018).

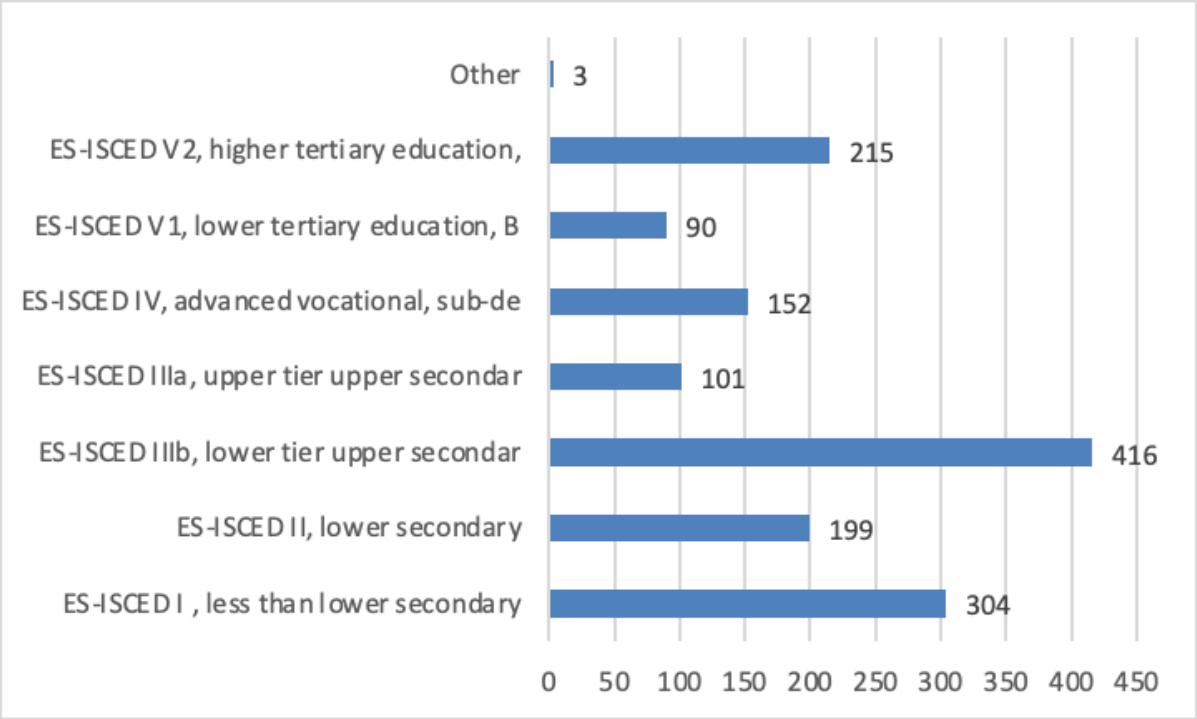

Figure 15. Distribution of father's highest level of education attained. Source: European Social Survey (2014, 2016, 2018).

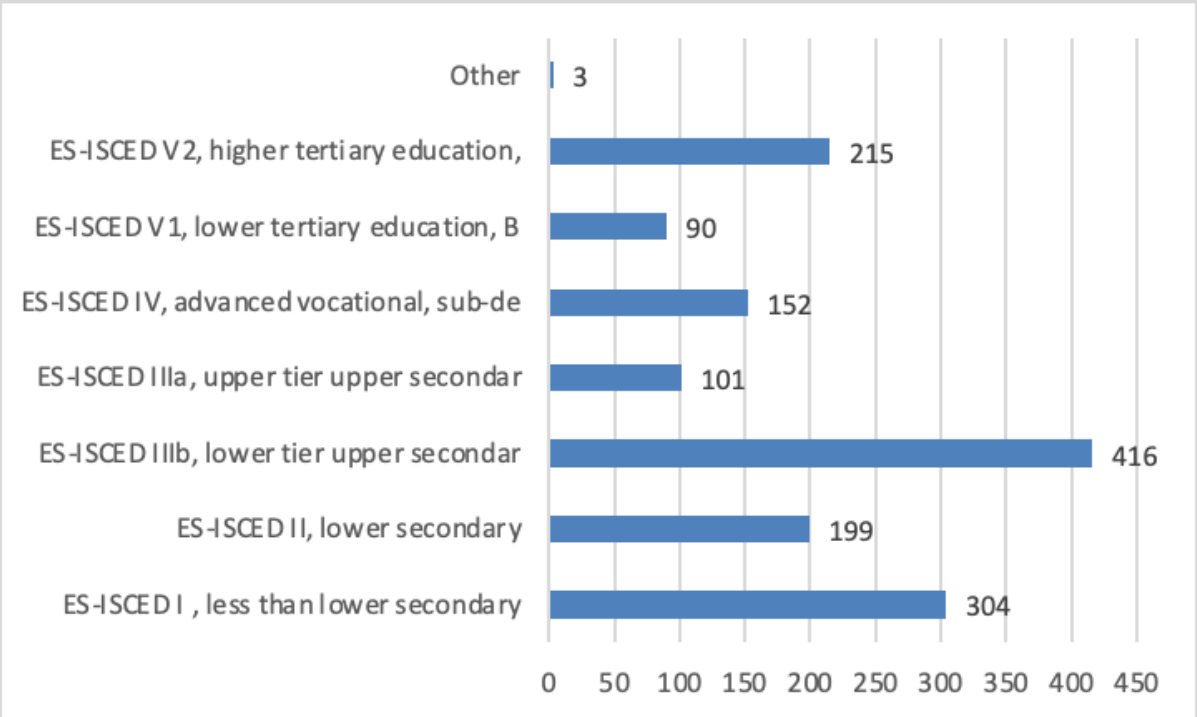

Figure 16. Distribution of mother's highest level of education attained. Source: European Social Survey (2014, 2016, 2018).

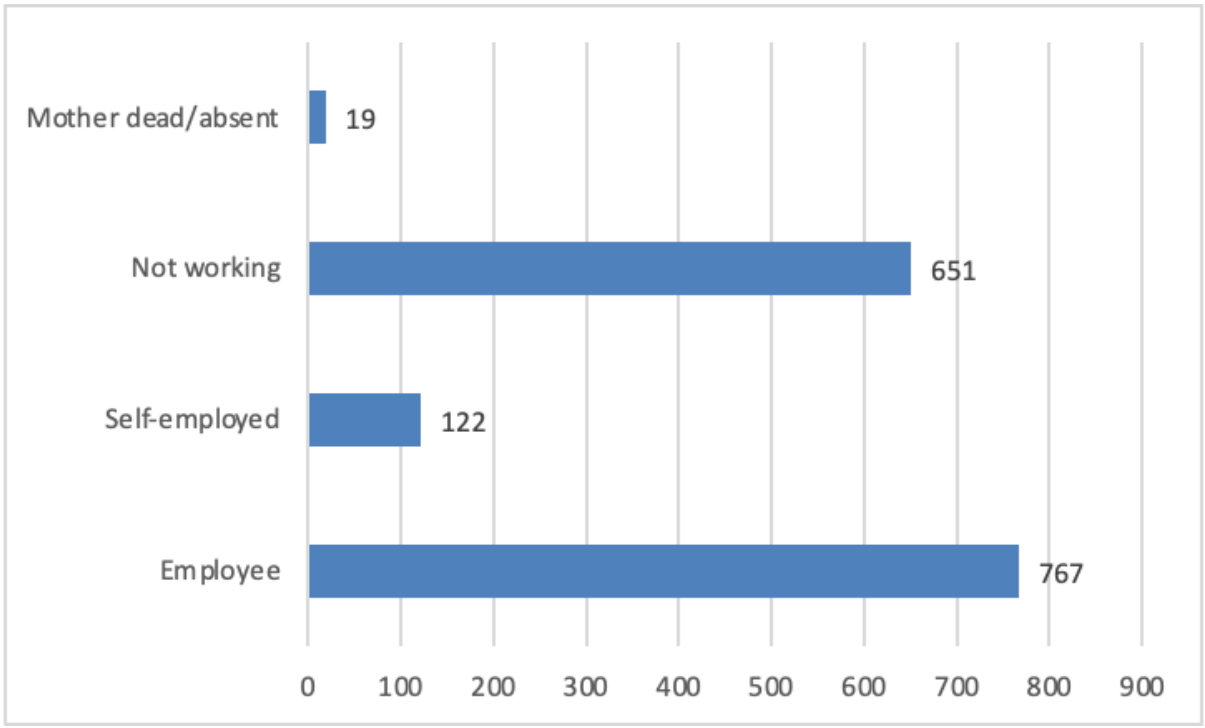

Figure 17. Distribution of mother's employment status when respondent aged 14. Source: European Social Survey (2014, 2016, 2018).

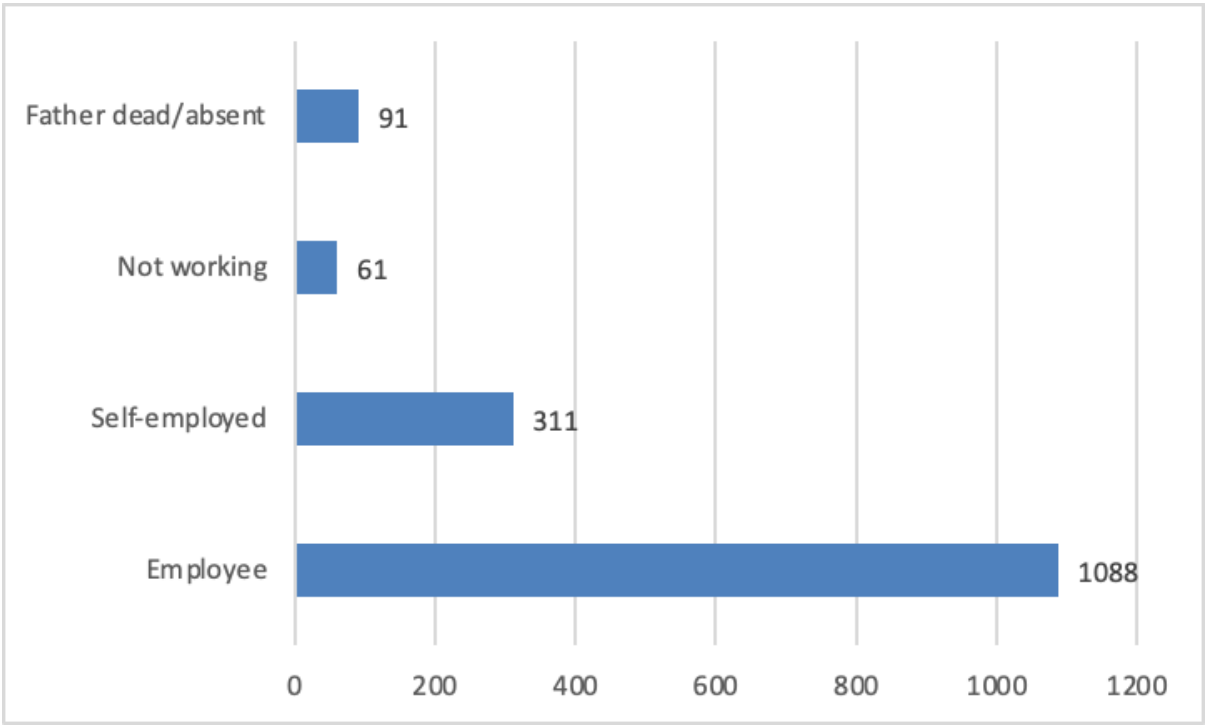

Figure 18. Distribution of father's employment status when respondent aged 14. Source: European Social Survey (2014, 2016, 2018).

Father Sample

Country of origin	No. of respondents in sample	CPI Average	Social trust (mean)
Afghanistan	1	14	1
Albania	1	29	7
Angola	1	20	7
Argentina	1	31	6
Austria	1	78	6
Australia	1	86	9
Bosnia and Herzegovina	1	34	4
Bangladesh	1	20	8
Belgium	1	69	7
Bulgaria	1	38	5
Brazil	1	38	5
Belarus	1	31	5
Belize	1	36	5
Canada	1	87	5
Democratic Republic of Congo	1	20	7
Central African Republic	1	22	10
Republic of Congo	1	22	7
Switzerland	1	88	9
Ivory Coast	1	24	4
Chile	1	71	0
Cameroon	1	22	5
China	1	34	7
Colombia	1	34	5
Cuba	1	42	3
Cape Verde	1	54	6
Cyprus	1	61	4
Czech Republic	1	46	0
Germany	1	79	7
Denmark	1	95	5
Dominican Republic	2	30	3.11
Algeria	2	31	5.09
Estonia	2	62	5.00
Egypt	2	32	4.50
Spain	2	63	5.17
Ethiopia	2	28	5.28
Finland	2	94	2.48
France	2	69	6.94
United Kingdom	2	82	6.00

Country of origin	No. of respondents in sample	CPI Average	Social trust (mean)
Ghana	2	38	6.00
Guinea	2	21	4.95
Equatorial Guinea	3	19	6.47
Greece	3	43	5.69
Guinea-Bissau	3	21	4.86
Honduras	3	25	7.04
Croatia	3	39	5.84
Haiti	3	18	6.51
Hungary	3	50	4.61
Indonesia	3	24	5.83
Ireland	3	76	5.22
Israel	3	66	2.95
India	3	31	5.74
Iraq	3	18	8.00
Iran	3	26	6.85
Iceland	4	89	5.51
Italy	4	45	6.05
Jamaica	4	36	2.43
Jordan	4	48	4.39
Japan	4	71	7.16
Kenya	4	22	5.74
South Korea	4	48	6.59
Kuwait	4	45	7.03
Sri Lanka	4	34	5.15
Lithuania	4	48	3.88
Luxembourg	4	85	3.39
Latvia	5	42	3.94
Libya	5	23	3.31
Morocco	6	36	6.88
Moldova	6	29	5.82
Madagascar	7	29	6.32
Macedonia	7	35	2.80
Mali	8	30	5.85
Mexico	8	34	6.93
Mozambique	8	28	7.10
Namibia	8	48	5.18
Nigeria	9	19	4.63
Nicaragua	9	27	5.54
Netherlands	9	88	3.69
Norway	9	87	5.32

Country of origin	No. of respondents in sample	CPI Average	Social trust (mean)
New Zealand	10	94	6.33
Peru	10	38	5.97
Philippines	11	28	5.17
Pakistan	14	24	6.94
Poland	14	47	5.78
Palestine	14	27	4.84
Portugal	14	63	4.57
Romania	15	34	5.10
Serbia	16	36	4.50
Russia	16	25	4.29
Rwanda	18	39	4.68
Sweden	20	92	5.30
Singapore	23	91	6.84
Slovenia	23	61	4.48
Slovakia	26	42	5.22
Senegal	27	33	5.64
Somalia	30	11	4.38
Suriname	31	35	4.71
Sao Tome and Principe	32	34	5.33
Syria	33	26	5.25
Togo	36	26	6.39
East Timor	37	26	5.78
Tunisia	38	46	5.45
Turkey	45	39	5.15
Trinidad and Tobago	45	39	4.99
Tanzania	51	27	4.54
Ukraine	54	24	5.80
Uganda	55	25	4.48
United States of America	56	75	5.01
Uruguay	58	61	4.81
Venezuela	71	23	4.64
Vietnam	94	27	4.66
South Africa	171	48	5.74
Zimbabwe	179	26	4.72

Table 18. Descriptive statistics for country of origin. Source: Transparency International (1995-2014), European Social Survey (2014, 2016, 2018).

Country of residence	No. of respondents in sample	Age (mean)
Austria	155	50
Belgium	175	42
Switzerland	160	39
Germany	290	45
Denmark	54	36
Spain	46	36
Finland	41	46
France	231	44
United Kingdom	113	44
Iceland	28	40
Italy	19	37
Netherlands	126	41
Norway	64	38
Portugal	54	31
Sweden	69	41

Table 19. Descriptive statistics for country of residence. Source: European Social Survey (2014, 2016, 2018).

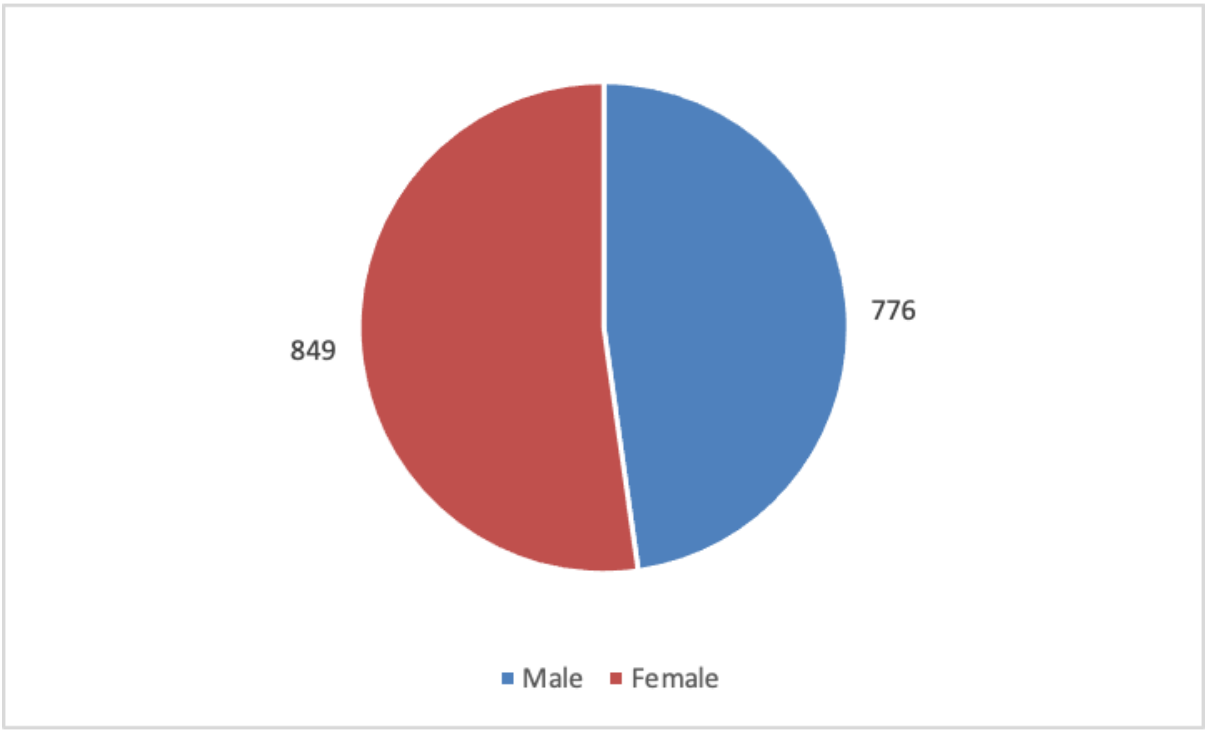

Figure 19. Gender distribution. Source: European Social Survey (2014, 2016, 2018).

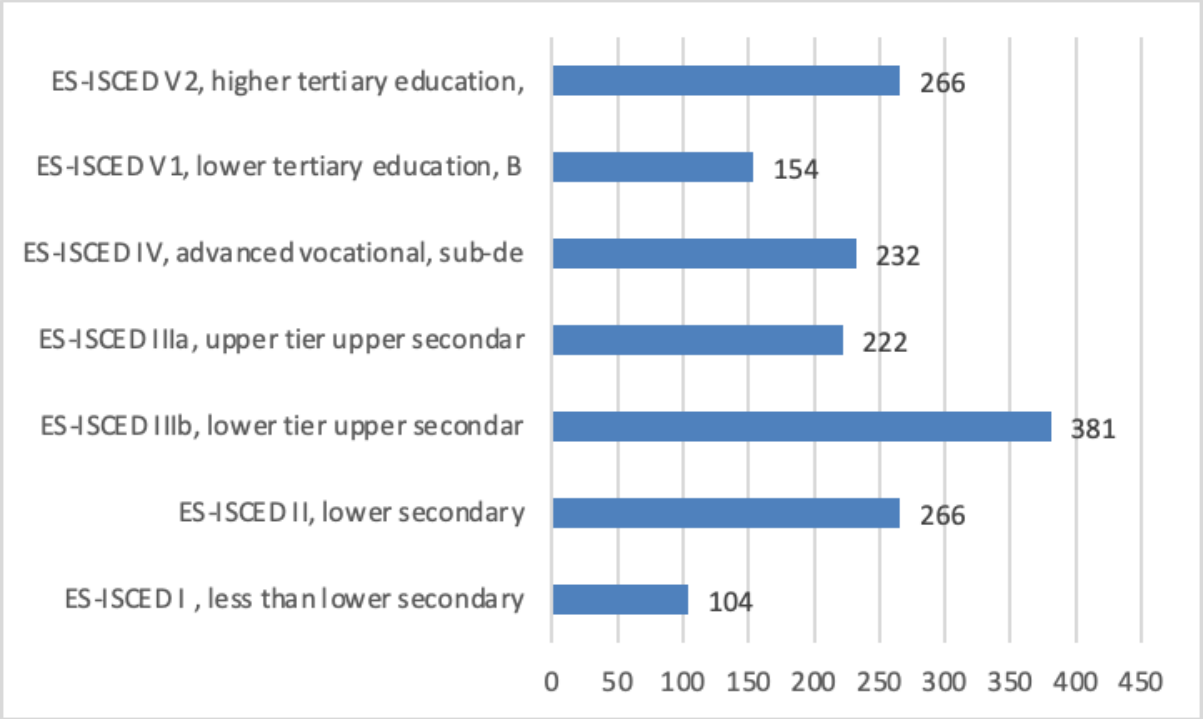

Figure 20. Distribution of highest level of education attained, ES-ISCED. Source: European Social Survey (2014, 2016, 2018).

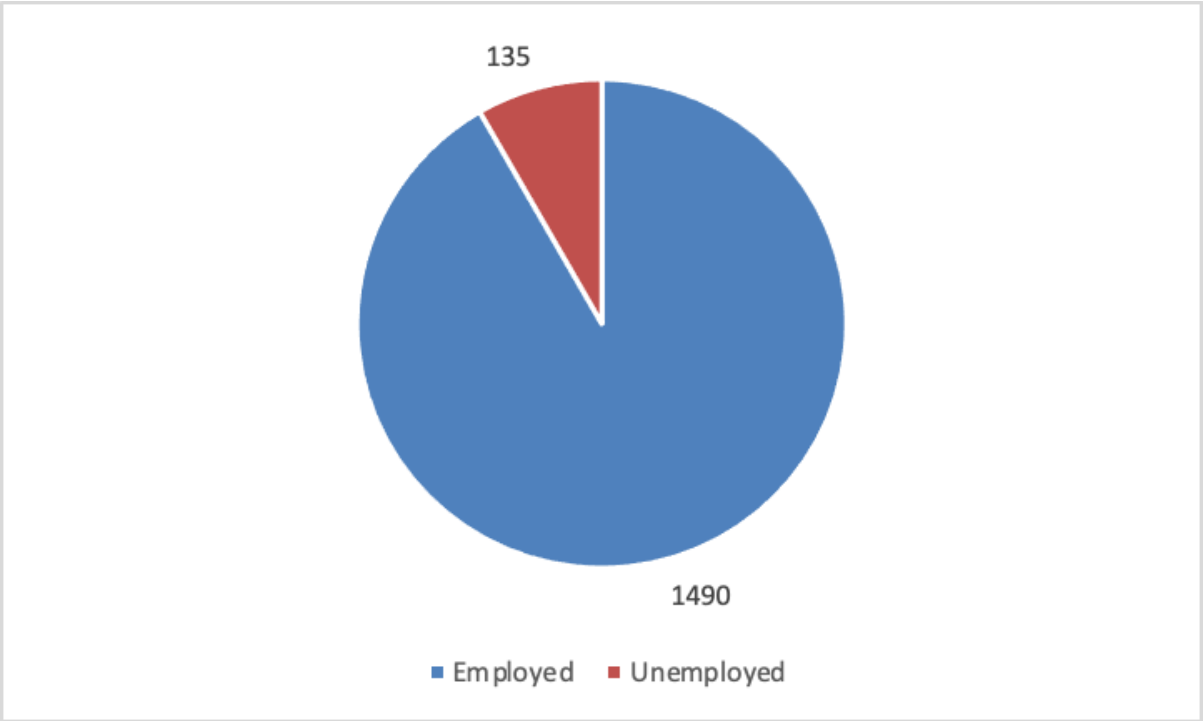

Figure 21. Distribution of employment status. Source: European Social Survey (2014, 2016, 2018).

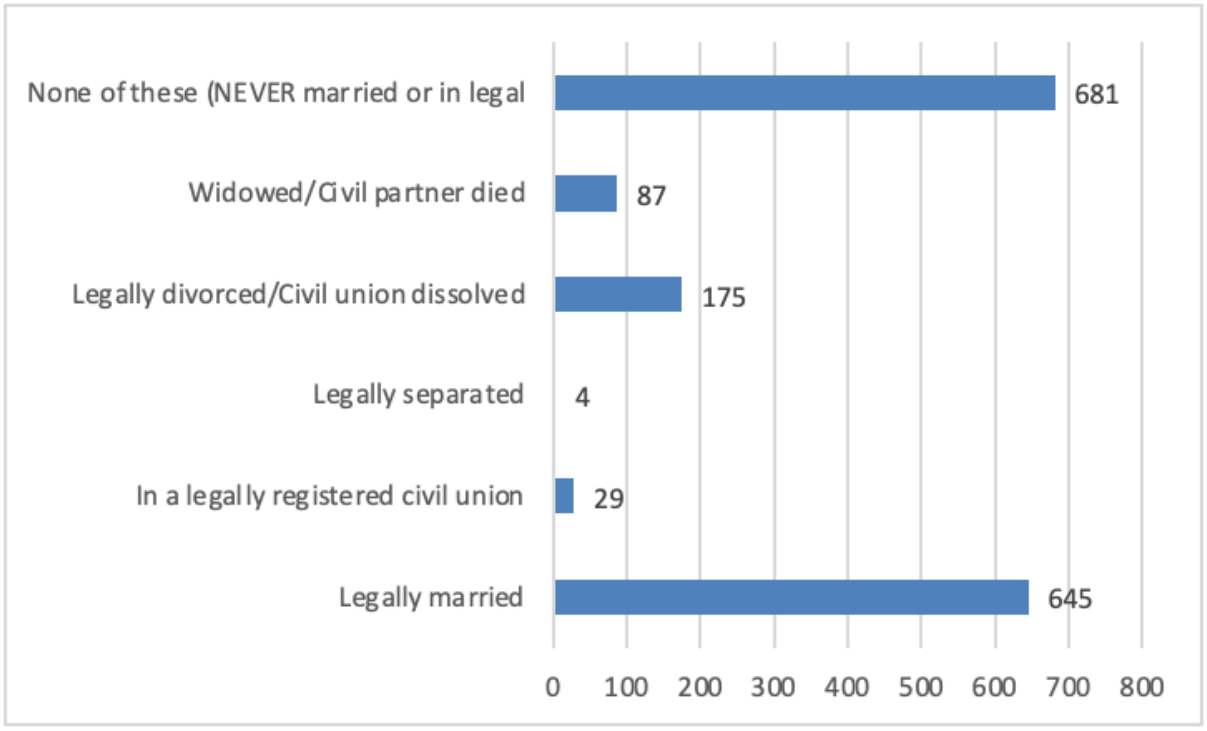

Figure 22. Distribution of legal marital status. Source: European Social Survey (2014, 2016, 2018).

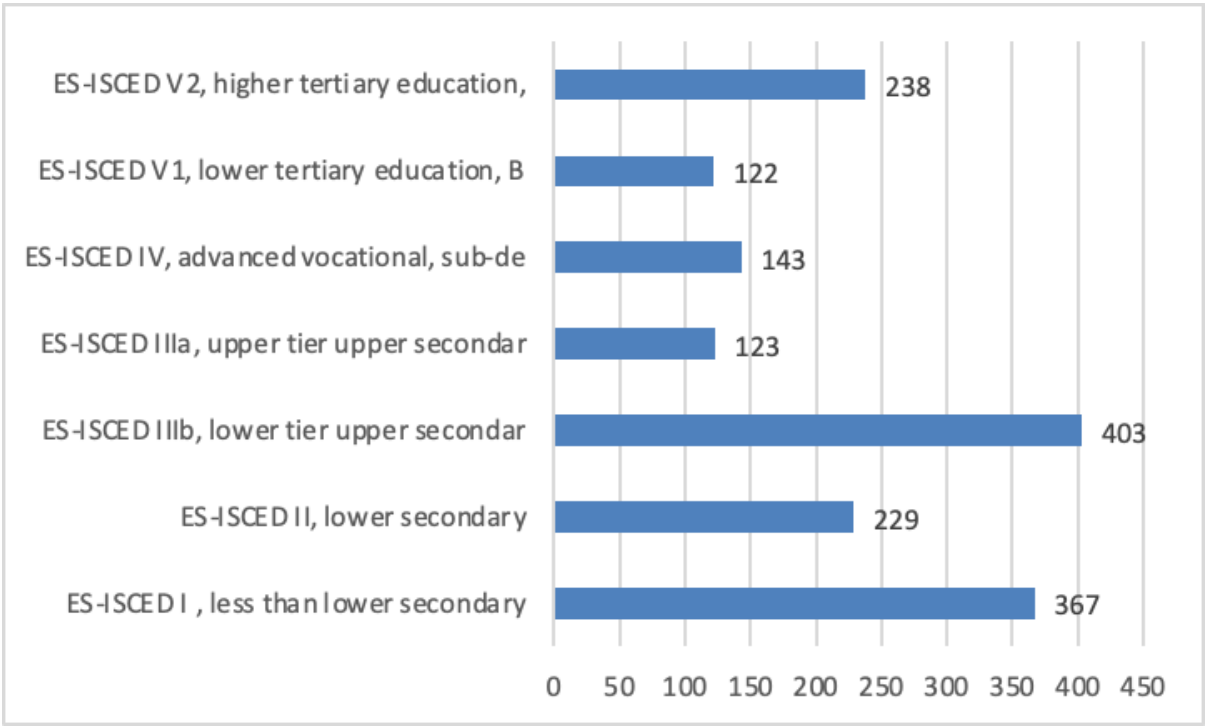

Figure 23. Distribution of father's highest level of education attained, ES - ISCED. Source: European Social Survey (2014, 2016, 2018).

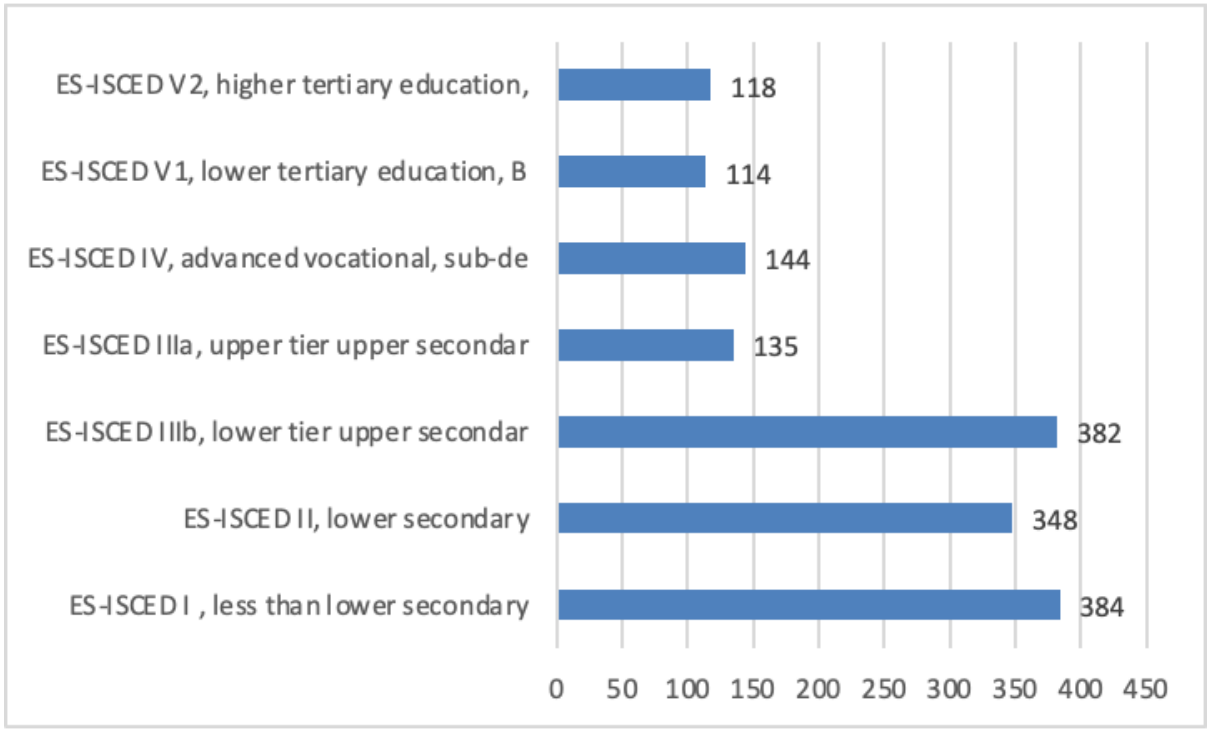

Figure 24. Distribution of mother's highest level of education attained, ES - ISCED. Source: European Social Survey (2014, 2016, 2018).

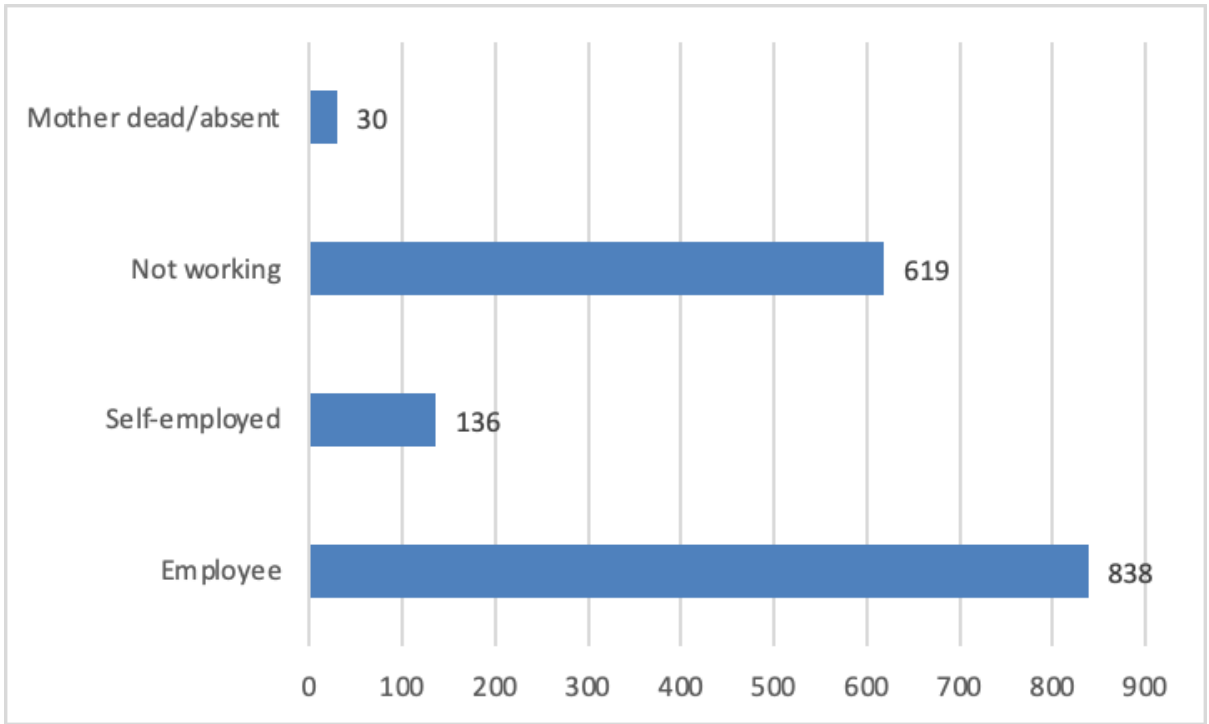

Figure 25. Distribution of mother's employment status when respondent aged 14. Source: European Social Survey (2014, 2016, 2018).

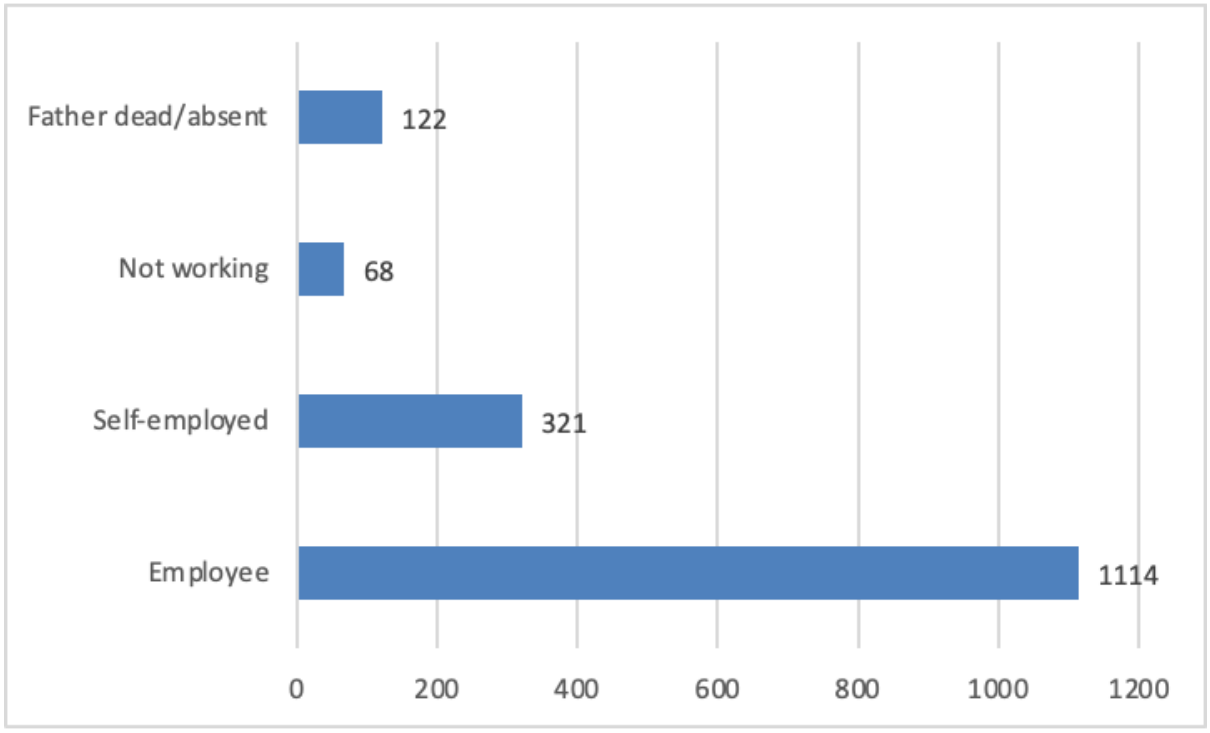

Figure 26. Distribution of father's employment status when respondent aged 14. Source: European Social Survey (2014, 2016, 2018).