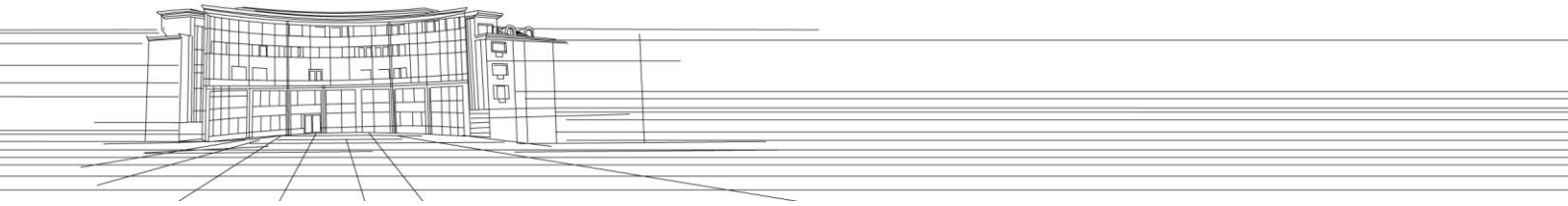

MASTER'S THESIS
INTERNATIONAL ADMINISTRATION
AND GLOBAL GOVERNANCE

The Effect of Intergenerational Social Mobility on Tolerance to Corruption

An Analysis for OECD Countries

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Abstract

This study aims to provide the answer to the question if intergenerational social mobility has an effect on tolerance to corruption. By merging together two fields of literature in social science – corruption and equality of opportunities offered in a society and performing statistical analysis this paper provides some evidences that societal mobility and tolerance to corruption are correlated.

The question of intergenerational social mobility has not been thoroughly investigated due to the limitations in the data availability. However recent studies in OECD countries allowed looking more in-depth into the phenomenon, giving an opportunity to fill in the gap in the theories. Analyzing tolerance to corruption effects of social mobility with measurement of actual social mobility was rarely employed in the quantitative analysis earlier. Using the data obtained from the World Value Review (Wave 6) for almost 22 000 individuals from the OECD countries, including their socio-demographic characteristics and perceived social mobility parameters, combined with the OECD dataset on the intergenerational educational attainment and earning elasticity, the study indicates that individual's perception of society as mobile leads to lower tolerance of corruption. This relation holds regardless the level of societal trust and general satisfaction with life. Moreover, study concludes that educational mobility may also have negative effect on tolerance to corruption.

This study contributes to the understanding why some countries succeeded in maintaining high quality of governance with low level of corruption whereas others trapped with dysfunctional political institutions.

Key words: tolerance to corruption, corruption, intergenerational social mobility, equal opportunities, inequality

Word Count: 10798

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1. Introduction

"Once social change begins, it cannot be reversed. You cannot uneducate the person who has learned to read. You cannot humiliate the person who feels pride. You cannot oppress the people who are not afraid anymore. We have seen the future, and the future is ours"
(Cezar Chavez, 1984)

The recent studies on the quality of government and the effectiveness of bureaucratic institutions proven that these are the key aspects to economic growth and social welfare. Good governance is a prerequisite for well-functioning institutions and low level of corruption. Even though the concept of quality of government is still new to the researchers, one can conclude that impartiality of institutions is a basic principle in defining the good governance. Hence equal opportunities of different groups of society can provide both social and economic progress in a country. In other words how power is exercised first of all depends on how the access to the power is provided (Rothstein & Teorell, 2008).

Moreover equality of opportunities lies at the core of democratic principles which ensures high development of state growth and reduction of corruption consequently. For example, Fischer (2009) argues that fair and impartial government decisions have direct impact on country's welfare if they are provided by strong rule of law and institutional efficiency (Fischer, 2009). At the same time, Roemer (2002) shows that equal opportunities refer often to equal set of choices offered to the individual in the society whereas the core concept of human preferences, his way of perception and resources available are ignored in the egalitarian theories. As Dworkin (1981) argued individual cannot be responsible for the resources available but rather for the set of individual preferences. In other words individuals are to be held accountable for the actions and choices society entitles him to be responsible (Dworkin 1981 as cited in Roemer, 2002). Hence, the equality of opportunities regardless individual's background should ideally provide equal access to resources and in societies. In other words, societies where these opportunities are offered can be considered as mobile. But does this necessarily provide better functioning institutions in a country?

However, inequality of income distribution and the initial welfare of an individual, often determine the avenues open for intergenerational social mobility regardless of the opportunities offered by the governmental institutions. On the other hand, persistence in occupation across generations creates certain pattern on the labor market and economic development shaping socio-economic institutions of a country in the long time perspective. Empirical testing proved that high income inequality has direct impact on low intergenerational social mobility (D'Addio, 2007).

Other scholars emphasize that intergenerational social mobility often arises from the inequality of opportunities provided to the individuals in a society when personal talent and achievements are correlated and opposed to the family background and social status obtained by an individual at birth (Corak, 2013). Moreover, raising income inequality leads to the stronger bonds with family background making it more difficult for an individual to achieve higher income and move "between classes" due to his/her personal talents (OECD 2011 cited at Corak, 2013). On the other hand, corruption is often defined as a "hierarchical phenomenon" when individuals with access to power exercise this power through obtaining personal benefits. In other words, in corrupted societies hierarchy (or social class) is a way of establishing order and structure as a coordination mechanism (Bac, 1996).

Contrary, intergenerational social mobility is a mechanism of assessing policies implemented by the country's government identifying socio-economic factors for which an individual cannot be held responsible. However the mechanism by itself cannot be used as a policy recommendation tool because social mobility only contributing to a part of inequality problem solution and therefore does not identify how intergeneration social mobility should function and how it affects quality of institutions in a country (D'Addio, 2007). On the other hand measuring intergenerational social mobility can help to identify and reduce inequalities of opportunities given to an individual at birth and with this to shape lower tolerance towards corruption and provide development of good governance as a consequence.

From the discussion above can one conclude that impartiality of government decisions and equality of opportunities engage individuals to be responsible for the social and political welfare and level of corruption in the country consequently? Put it in other way

can intergenerational social mobility/immobility affect tolerance to corruption? The social scientists discussed thoroughly the impact of economic welfare on corruption (Kaufmann 2007; Kurtz 2007; Charron & Lapuente 2010) at the same time the connection between social mobility and economic welfare of a country is relatively recent research area and it was mainly tested from economic point of view (Fischer 2009; D'Addio 2007).

From one point of view economic inequality establishes a greater degree of social inequality as different groups of society cannot benefit from the full and universal access to the country's welfare. Low-income groups tend to believe that access to the economic resources is limited and therefore "rich" groups benefit more from the access to power. Therefore, a society with a high level of economic inequality enters a circle of "causal chain" when citizens stop trusting the groups in-power, and as a consequence, the government (in-power groups) is unable to establish better social welfare programs as citizens do not entrust them with resources (Rothstein, 2011).

The causal relation between the quality of government and how corruption may prevent an economic growth and equal access to resources in a country was discussed by the Social and Economic Science Schools (Rothstein 2011; Fischer 2009; D'Addio 2007). On the contrary the impact of social mobility on the attitude to corruption, and the level of corruption a country consequently, are not in the focus of the social researchers and therefore reveal a gap of analyses on the inequality of opportunities and corruption in a society.

1.1 Research aim and question

This study aims to fulfill the research gap in quality of government field and evaluate the tolerance to corruption effect of intergenerational social mobility in a country. The paper covers different theories and approaches on equality, intergenerational social mobility and corruption in order to assess the relationship between mechanisms of social inequalities persistence over time and tolerance to bad governance. It should be noted, that measurement of social mobility lacks the common definition among the researchers, therefore this paper explores Organization for Economic Co-operation and Development (OECD) countries as a representative sample where most of the previous

studies in the field of social mobility were conducted and actual data can be obtained. Hence, the objective of this research is to identify the effect of the intergenerational social mobility in conjunction with the tolerance to corruption in the OECD countries.

Thus, this research addresses the following questions:

- Does intergenerational social mobility affect the tolerance to corruption in the OECD countries?
- What is the tolerance to corruption effects of the intergenerational social mobility in the OECD countries?

1.2 Disposition

First the existing explanation of corruption in connection with inequality issues and intergenerational social mobility are critically discussed based on the previous empirical and theoretical studies. Then, the concepts of actual and perceived intergenerational social mobility are introduced. Hence this research paper is organized as following: the existing literature on corruption, impartiality and social mobility are discussed in Section 2, Section 3 includes the description of research method and data description; followed by the empirical analysis and testing of research hypothesis in Section 4. Finally, study limitations and conclusion are presented.

2. Theoretical Framework

2.1 Quality of Government and Corruption

The concept of quality of government developed by the social scientists determines impartiality as a fundamental principle of institutional activity. The existing literature argues that impartiality provides economic development, social welfare and low corruption as a consequence. For example Rothstein and Teorell (2008) suggest that well performing countries apply and follow the principle of impartiality in the areas of public administration and public choice which in its turn provides establishment of the rule of law and government effectiveness and accountability. Therefore authors point out that good governance depends not only on the equal access to the power but on the way this power is exercised by the authorities. However input (access) and output (exercise) side of exercising political power shall be distinguished and hence equality

and impartiality are interdependent concepts. Moreover authors emphasize that democratic political regime is one of the main conditions for high quality of government although it cannot be sufficient condition all alone. Nonetheless democracy provide regulatory basis of equal access to power and establishes laws on decreasing incentive to corruption. The normative limits established by the legitimate democratic regimes enable both impartiality and equality. Thus democracy is a prerequisite for accessing power whereas exercising power is affected directly by impartiality (Rothstein & Teorell, 2008).

Other scholars also follow the idea of importance of the institutional structure and political regime in high quality of government and decreasing corruption. For example, Olsson (1993) suggests that uncertainty implied by dictatorships often prevent state from providing good governance and economic welfare. According to him the cost of public goods in autocratic regimes devaluates with time any benefits received from them, at the same time autocrats act in their own interests aiming by limiting access to power of certain groups of society with this diminishing possibility for establishing impartial political and economic institutions. Thus the idea of impartiality together with democratic regimes discussed more thoroughly by Rothstein and Teorell (2008) secure decreasing of corruption and establishing stability in rule of law over generations instead of insuring stability for short-terms (Olsson, 1993).

However existing literature on political regimes and corruption is not fully supported by empirical findings, and therefore cannot explain the mechanisms of corruption and why some societies have higher degree of tolerance towards it. On the contrary corruption remains a threat to democratic institutions and values of equality and impartiality through decreasing social trust in political institutions. Therefore corruption is an opposite concept to impartiality and defined by Mungiu - Pippidi (2006) as “particularism” to certain individuals or groups of society contradicting with idea of equal distribution of good in a country. Hence corruption becomes more difficult to control when majority of individuals tolerate existing bad governance. In other words corrupted governments are built in highly hierarchical societies and equal treatment is guaranteed not to every individual or citizens as a whole but on the contrary - to individuals belonging to the same social group. The major solution of addressing corruption by implementing principle of impartiality does not work in these societies

and shifts to identifying corrupted privileged groups and solve this dilemma instead (Mungiu - Pippidi, 2006).

Corruption therefore depends highly on social fractionalization and hierarchies among people. Bac (1996) argues that the problem of corruption can be addressed be the mechanism of check and monitoring from individuals belonging to the different social segments (groups). In his article author takes different prospective and suggests that hierarchically structured society can benefit directly in decreasing corruption developing a system of independent control. Nonetheless, structurally independent segments are prerequisites for creating controlling system moreover the success depends highly on monitoring costs (Bac, 1996).

On the contrary some scholars suggest that high fragmentation of society and significant inequalities in economic wealth increase the level of corruption. Sanjeev (2005) argues that inequality creates social groups without access to power and therefore they have fewer instruments to participate in the system of check and monitoring of corrupted institutions. Hence inequality contributes to establishing social norms of higher degree of acceptance and tolerance towards bad governance as a logical part of economic growth. In democratic regimes this negative effect can be more severe as privileged groups which have access to power tend to generate policies protecting their interests rather than interests of majority of individuals in society. On the other hand corruption exacerbates the existing welfare gap between the different groups of society. Therefore inequalities paired with corruption decrease possibility of good governance development (Sanjeev & You, 2005).

Another widely accepted approach in addressing the relation between country's welfare and quality of government deals with the "power resource" theory. The welfare societies are seen as a byproduct of the industrial development and thus, the role of an individual is determined by his occupation or social class as a whole. As a consequence, the development of a state is therefore determined by the social class structure in a country. Moreover, distribution of resources in a country becomes predetermined by the class structure in a society. From this perspective demands of a class can further influence the political and economic structure of a state (Korpi, 2006). However Rothstein (2011) argues that class structure of a society does not necessarily reveal

increase in political corruption but on the contrary the state itself may have a leading role in mobilizing classes and providing better opportunities and more equality among different groups of a society (Rothstein, 2011).

From the discussion above one can conclude that non-corrupt states acknowledge the fact of heterogeneity in society and existence of classes with different set of opportunities. Theoretically, these issues can be addressed by impartiality and offering equal access to the opportunities. Or, on the contrary, corruption can be monitored through a clear hierarchy and a system of control at different levels of a societal structure (Bac, 1996).

The analysis of corruption often focuses on the macro level studies comparing the cross-country data. On the other hand, recent studies on corruption also try to grasp the concept of individual characteristics and their role in the tolerance to corruption in society. For example, Gatti et al. (2003) built their study of corruption based on the micro-economic determinants of a society and conclude that gender, age, employment status and income level can be determinants in attitude to corruption and as a consequence are closely associated with the tolerance to corruption in a country (Gatti et al., 2003).

To sum up, existing studies on the high quality of government and level of corruption explain the connection between good institutions and their impact on country's growth whereas the studies on the individual's impact in building better institutions are quite limited. Moreover, the theories on quality of government and corruption often omit the issue of class fragmentation in society and intergenerational social mobility. At the same time great amount of literature analyzes inequality in terms of higher degree of tolerance towards corruption. However, only indirect theoretical evidences were presented by the researchers on the effect of intergenerational social mobility on the average tolerance to corruption.

2.2 Tolerance to Corruption and Social Trust

Attitude to corruption in a society, on the other hand, reflects the social norms acceptable in a country which often can be a mirroring factor of culture and reveal the causal relation between the interpersonal trust and tolerance to nepotism, clientelism

(components of corruption). Thus, social trust is often seen as a defining factor in establishing non-material capital in a country and provides higher degree of interaction between the individuals in a society. For example Svendsen (2003) tests the value of social trust in terms of transaction costs in a society and further concludes that even economic growth of a state is strongly correlated with the level of social trust. In other words, micro-level interactions based on trust provide the base for macro-level growth through the societal structure and collective contribution to social capital as a consequence (Svedsen and Svedsen, 2003).

Similarly, Rothstein (2011) argues that social trust as a major way of interaction among the individuals establishes an "informal institution" or a form of mutually beneficial cooperation for all level of actors. But on the other hand, in the corrupted societies elite groups, or those who are close to the resource distribution, may benefit the most in this situation when corruption is perceived in terms of other people's beliefs (Rothstein, 2011). This leads to the assumption that corruption can be overcome if the strong informal institutions like social trust can be established as a form of checks and controls.

On the other hand, Widmalm (2008) tests if corruption can become a trap to a society, i.e. once institutions in a country are classified as corrupted it implies lower moral norms and standards to the whole society and the system of checks and controls does not function. In other words, corruption and social norms become a vicious circle, when corruption is seen as an acceptable norm. However, author concludes that corruption by itself does not correlate with individual's attitude towards corrupted practices like accepting bribes among the officials (Widmaml, 2008). This indicates that cultural acceptance of corruption and tolerance to the corrupted institutions does not necessarily reveals direct positive correlation between two variables, but at the same time may have impact in individual understanding and acceptance of societal norms.

2.3 Social Mobility

Existing literature addresses the problem of social mobility mostly from economic point of view measuring inequality of opportunities and its effect on the economic growth and welfare development. For example Fischer (2009) develops studies to discuss the relationship between the intergeneration social mobility and subjective well-being

measured by earning differences of parent and child pair. However author identifies that actual and perceived intergenerational social mobility may have different effect on income inequalities, economic development, and individual satisfaction with socio-economic wellbeing (Fischer, 2009).

It is important to distinguish here between two major types of intergenerational social mobility – actual and perceived defined by the scientists. D'Addio (2009) identifies that actual social mobility is measured in terms of intergenerational earnings gap and therefore varies highly among households' income. At the same time actual social mobility depends often on the income and education inequalities (D'Addio, 2009). On the other hand perceived social mobility is more complex concept and deals with individual perception of equal opportunities for education and possibility to escape poverty offered by society in this country. Therefore perceived social mobility is seen as a moderate tool of lowering subjective wellbeing and providing higher tolerance towards inequalities in society contrary to the actual social mobility. However Fischer identifies that inequalities are easier tolerated in intergenerational immobile societies (Fischer, 2009).

Low social mobility has direct impact on inefficient economic development of a state diminishing satisfaction in political institutions. Even though economic theories suggests that inequalities in society provide higher incentive to move from one social class to another and with this effect economic growth, Breen (1997) argues that individual abilities do not often meet the actual social position and creates higher degree of social dissatisfaction. Therefore in his study author provides statistical proves that social mobility and economic growth do not have linearly positive relation but on the contrary increasing welfare gap in society generates lower productivity, decreasing trust and satisfaction in government institutions. This economic gap and prospect of higher social mobility may be an ineffective socio-economic policy for improving social and economic performance of a state (Breen, 1997).

Nonetheless, social mobility is not only a mechanism of overcoming economic inequalities but on the other hand might be used as a tool of justifying and maintaining bad institutions. For example, Mungiu-Pippidi (2006) argues that government promises of high social mobility can be used as a mechanism of control in authoritarian and

corrupted regimes. These open channels of migrating from a lower social group to the privileged one enables individuals to use these upward mobility channels which are often easy and fast way to succeed contrary to the idea of changing the whole system and establishing functioning institutions. Therefore corrupted regimes prefer to engage individuals from lower social groups into their "game" with this insuring higher tolerance towards corruption and support to the existing system as a whole (Mungiu-Pippidi, 2006).

Social mobility and questions of inequality are especially observable in the competitive market economies. Similar to the analysis performed by Mungiu-Pippidi, Kolankiewicz (1996) also addresses the issue of the equal access and control over power and distribution of income. However author suggests in his article that existing social mobility in corrupted countries is provided by market forces and mechanisms generating communication and interdependence of social groups within one country. At the same time well-functioning economy is forced to provide equal opportunities due to the higher demand for educated and experienced labor establishing with this social networking and connections with governmental institutions (Kolankiewicz, 1996).

However, intergenerational social mobility can also be seen as a by-pass of economic and social policies implemented in a country. In other words, if social mobility is treated as a combined measurement of two components – educational attainments of child/parent pair and wage mobility through generations, then education often shows direct impact on wage persistence. At the same time policies implemented in a state (resource access and distribution) are positively correlated with the wage mobility (Causa et al., 2009).

Nonetheless low social mobility and inequality is not only used as a tool of maintaining corrupted institutions out of fear of being overthrown in authoritarian regimes but it also creates certain social norms and beliefs tolerating bad governance. Sanjeev (2005) suggests that easier acceptance of corrupted institutions can be explained both by economic and normative mechanisms when in a long period of time corruption becomes a social norm accepted by the individuals in society. However contrary to Mungiu-Pippidi theory, author believes that individuals with higher income have better opportunities to enter government institutions and therefore being engaged in

corruption whereas people excluded from access to political institutions are also limited in their rights to monitor and control bad governance increasing with this intergenerational social immobility. Therefore the impact of low social mobility and inequality on corruption is not just direct but also reverse because in a long run corrupted institutions and bad governance promotes higher immobility and wealfare gap (Sanjeev & You, 2005).

At this point it is interesting to refer to the egalitarian theory where the basic and one of the major principles of equal opportunities emphasizes not only the equality of set of choices made by individual but what is more important - equality of responsibilities that shall be considered by individuals in society. Roemer (2002) discusses that responsibilities taken by individual for the choices he made can ensure more equal treatment both on economic and social level. Nonetheless this aspect is often left ignored by the economists arguing for utilitarian redistribution of income which in its turn involve less effective socio-economic policies developed by dysfunctional institutions. At the same time changes in policies have direct impact on decreasing or increasing welfare gap and social mobility opportunities (Roemer, 2002). Therefore individual taking responsibility for his actions is held accountable for institutional choices he makes and quality of government consequently.

On the other hand being accountable for the set of choices cannot create or increase the trust of an individual in governmental institutions especially if they are proved to be dysfunctional and highly corrupted. Morris and Klesner (2010) suggest that trust is a major and most effective mechanism to involve society in eliminating corruption. Therefore one can conclude that perceived corruption in a country depends first of all on normative believes in institutions of the social groups excluded from access to power. Similar to Sajeev & You (2005) arguments, this study shows that corruption creates reverse causal effect generating mistrust among poor groups of society and increasing with this heterogeneity within the society. However being a part of corrupted group neither provides trust in governmental organizations nor helps to get rid of corruption (Morris & Klesner, 2010). Hence, from the egalitarian prospective, individual decreases the level of personal responsibility in fight against corruption.

2.3.1 Social Mobility and Institutions

From the discussion above, it can be argued that social mobility can be used as a mechanism of improving economic efficiency and developing good governance. However the concepts of social mobility, impartiality and good governance are closely interrelated and can compound each other (Pearce, 2011). Hence, the combination may lead to the negative effect as well and corrupted institutions creating lower trust in governance and growing economic gap promote among individuals incentive to have access to the power rather than changing the system as a whole which increases tolerance towards corruption. Therefore the relation between intergenerational social mobility and tolerance to corruption shall be assessed more thoroughly as one of the direct way of ensuring better governance, promoting equal opportunities and impartiality.

2.3 Research Hypotheses

This research aims to test whether tolerance to corruption is correlated with the intergenerational social mobility based on the data available for the OECD countries. For this purpose ordinary least squares (OLS) regression analysis is performed. Estimators identified in the regression analysis help to explain the effects of independent variable (social mobility) on dependent variable (tolerance to corruption) and answer the question if there is a causal relation between the level of social mobility in a country and attitude (tolerance) to corruption in a society.

In order address the research questions the following hypotheses were drawn:

> *Hypothesis 1: Intergenerational social mobility is negatively correlated with the tolerance towards corruption in a country.*
>
> *Hypothesis 2: Intergenerational social mobility and higher life satisfaction have negative effect on the tolerance to corruption.*

Based on the existing studies in the field of quality of government, tolerance to corruption and intergenerational social mobility it can be suggested that other societal and individual factors, like socio-demographic characteristics, social trust and life satisfaction, must be taken into consideration when testing the relation between two

variables. Moreover, existing studies on the intergenerational social mobility distinguish between the perceived and actual social mobility. This assumption is taken into consideration when testing the relationship between intergenerational social mobility and tolerance to corruption. Therefore, this research includes data both on the micro (individual) and macro (country) level.

> *Hypothesis 3: Intergenerational social mobility and higher societal welfare are negatively correlated with the tolerance to corruption.*

These aspects are taken later into consideration in model specification (See Section 3.2) and defined in more details in data description section (See Section 3.1).

3. Data and Methodology

In order to answer the research question quantitative method analysis is applied as a preferable when working with and analyzing numerical data (Saunders *et al.*, 2009). The quantitative research method allows collecting data both on micro (individual) and macro (country) levels and explaining the causal relationship between two variables. By running regression with numerical observations, the theories presented above and relationship between two variables outlined in the literature review part of this research are tested (Field, 2013). Moreover, the cross-sectional design of study allows identifying the differences between the groups included in the study and therefore to establish patterns in data analysis, drawing a conclusion as a result (Vaus, 2010). As previous studies lay the ground for testing the correlation between the tolerance to corruption and intergenerational social mobility, it is required to specify the definitions of variables included in this study and give explanation how they were converted into meaningful data. In this research data on social mobility and tolerance to corruption are used as explanatory and response variables respectively.

3.1 Data Description

3.1.1 Dependent Variable - Tolerance to Corruption

The concept of corruption itself is arguable and not easy to measure due to the limited access to the reliable data. Therefore measuring of corruption represents often a complex set of policies and criteria combined in an average score which are highly

questionable by a number of scholars. For example, Keller and Sik (2009) argue that measurement of corruption use unreliable data and this limit analysis to very narrow version of corruption (Keller & Sik, 2009). Moreover, Morris (2010) believes that the actual experience of corruption by civil groups is much lower than the perception of corruption and trust in political and bureaucratic institutions. On the contrary lack of trust prevent society from taking steps towards fighting corruption and increases tolerance towards the existing low quality of institutions at some extent (Morris & Klesner, 2010). At the same time Ko et al. (2012) argue that corruption index is not defined only by country's laws but rather depends on people's attitude and expectations of how bureaucratic institution should function (Ko et at., 2012). Thus, in corrupted societies more resources are spent by the officials for the personal use which creates decrease in confidence in governmental institutions among the population. Moreover, the belief that institutions and government are corrupted is seen as the main barrier in creating equal opportunities to succeed through life regardless the family background. In other words if corruption is seen as the best and fastest way to higher achievements in life it may create the perception that joining the group close to the resources distribution is the only option (Rothstein, 2011).

Due to the arguments presented above the concept of corruption is limited in this research by the public tolerance towards corruption. Keller and Sik (2009) distinguish active and passive tolerance towards corruption where passive corruption is defined as individual's attitude towards officials accepting bribes whereas active corruption measured as officials asking for bribe. In order to measure the active corruption Keller and Sik (2009) recommend to use European Value Survey measuring if it is acceptable for officials to ask for favor or bribe (Keller & Sik, 2009). However, as this research aims to identify the correlation between the public tolerance to corruption and social mobility, the definition is limited to the passive corruption. Therefore the measure of tolerance to *passive corruption* is based on the responses received from the citizens in the World Value Survey, Wave 6 (2010-2014):

V202: *Please tell me for each of the following actions whether you think it can always be justified (10), never be justified (1), or something in between, using this card: Someone accepting a bribe in the course of their duties*

3.1.2 Independent Variables

3.1.2.1Perceived Social Mobility

As this paper aims to evaluate the effect of intergenerational social mobility on the tolerance to corruption in OECD countries it is important to specify the definition of social mobility per se. For this purpose the recent OECD publications on intergenerational social mobility (Alesina, 2004; Fischer, 2009; Causa & Johansson, 2010) were exploited and the definition was adapted. Social mobility is used in this study as an explanatory variable of tolerance towards corruption. However social mobility is difficult to measure due to the limitation in available information over time and across generations. Therefore the definition of the concept is adapted from the research implemented in OECD countries and was defined as "life experiences of individuals differ from those of their parents". In countries offering equal opportunities parent's background cannot have direct significant impact on their children performance.

Perceived social mobility can be measured by standard questionnaire containing questions about equal possibility perceptions in education and escape from poverty. For example Alesina, Glaeser and Sacerdote (cited at Fischer, 2009) used this type of analysis to measure perceived social mobility in the US and European countries. The data obtained contained information of people's believe to escape poverty throughout their life time, equal access to education and laziness as an actual cause of low income.

The perceived social mobility is measured based on the World Values Survey (WVS, Wave 6, 2010-2014) and includes the following factors -confidence in the education system (universities) –

V 119: *I am going to name a number of organizations. For each one, could you tell me how much confidence you have in them: is it a great deal of confidence (1), quite a lot of confidence (2), not very much confidence (3) or none at all (4)?*

Another variable that captures the level of the perceived social mobility is a belief that better life can be achieved through a personal effort (not luck).

Now I'd like you to tell me your views on various issues. How would you place your views on this scale? 1 means you agree completely with the statement on the left; 10 means you agree completely with the statement on the right; and if your views fall somewhere in between, you can choose any number in between.

V96: *Incomes should be made more equal VS We need larger income differences as incentives for individual effort*

V100: *In the long run, hard work usually brings a better life VS Hard work doesn't generallybring success—it's more a matterof luck and connections.*

3.1.2.2 Actual Social Mobility

In countries offering equal opportunities parent's background cannot have direct significant impact on their children performance. However intergenerational mobility can be measured numerically by comparing the difference between parent's and child's income in a long run, i.e. intergenerational earnings elasticity (Becker and Tomes (1979) cited at D'Addio, 2007). This helps to assess the impact of parent's income on future child's economic performance and consequently the actual degree of generational income mobility in a country (D'Addio, 2007).

On the other hand perceived intergenerational social mobility is different from the actual social mobility measured by improvement income and social statuses differ from their parents. (Fischer, 2009).

However intergeneration earning elasticity is an average index and cannot measure the degree of variations in income mobility ranges and its categories. Moreover intergeneration earning elasticity measures father-son rather than total family income ignoring earning from mother's side. Nevertheless the changes in today's world and high involvement of women in labor market may have statistically significant impact on the social mobility findings (D'Addio, 2007). However, other scholars argue that in empirical testing father's educational background has higher effect on son/daughter outcomes both in education attainment and future earnings (Nguyen and Getinet, 2003 cited at Causa, 2009). D'Addio also points out that intergeneration earning elasticity methods requires precise definition of sample and time period used as differences in

statistical methods may lead to different results and conclusions within the same country (D'Addio, 2007).

Due to the fact that actual social mobility is difficult to define and measure in a single number (Hopkins, 2008; Bjørnskov et al., 2013) in broad terms scholars (Fischer, 2009; Bjørnskov et al., 2013; D'Addio, 2007) use two major factors to measure the actual intergenerational mobility including intergenerational education attainment and earnings (wage) elasticity. As this study focuses on OECD countries, the explanation of the actual social mobility and data were obtained from the definition at work used by the OECD Economic Department.

The first category grasps the concept of educational attainment in farter/son pair, i.e. dependence of child's educational achievements on parent's educational background. For this purpose PISA student performance in mathematics performance data was obtained (OECD, 2014; OECD, 2007, OECD, 2004) based both on the maternal and paternal-education dependence, where higher values indicate higher intergenerational social mobility whereas lower values indicating educational immobility (Fischer, 2009).

Another factor impacting actual intergenerational social mobility in the OECD countries is earnings elasticity and persistence (Bjørnskov et al., 2013; Hopkins, 2008; Fischer, 2009, Causa, 2009). It should be noted however, that the data for parents life earnings is the data that is difficult to obtain and often measured in an estimation model (Causa, 2009; D'Addio, 2007; Corak, 2006).Therefore, macro-level data was collected from the recent Fischer's (2009) research on social mobility in the OECD countries, where 0 indicates complete generation mobility and 1 – complete immobility (Fischer, 2009).

3.1.3 Control Variables

3.1.3.1 Social Trust

The development of the model analyzing the tolerance to corruption effects of the intergenerational social mobility includes also other potential factors that may have influence in the regression. In this connection the question of general trust in the society may denote the tolerance both to active and passive corruption. In other words societies with higher trust in institutions and government are generally "happier" and more willing to accept the existing state of corruption in a country. Moreover Rothstein

(2011) argues that societies with higher level of trust are built on the idea of "social solidarity" and belief that each member of a society have equal share of responsibilities. On the other hand social trust does not only related to the tolerance to corruption but also seen as a way of building equal opportunities. In theory high level of economic inequality built upon the increasing earnings gap prevent societies from creating welfare programs which may lead to the equal access to education, economic and social status regardless the parents' background. Groups with higher privileges have easier access to the resources whereas others are left out from the social insurance programs and distribution of the national welfare (Rothstein, 2011).

Moreover, Fischer (2009) argues that social trust may contribute to the higher intergenerational social mobility in a country. Social trust creates positive environment for sharing the resources providing economic freedom, which in its turn, triggers higher social mobility and protects individuals from being trapped by the family background (Fischer, 2009).

Therefore social trust is included in the analysis as a control variable. The measurement is based on the World Value Survey, Wave 6 (2010-2014) question:

V24: *Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?*

1 Most people can be trusted. 2 Need to be very careful.

3.1.3.2 General Satisfaction with Life

On the other hand, the attitude towards the level of corruption in a country may be also correlated with the general satisfaction with life. In other words different people have different objectives in life regardless the objective opportunities offered by the social system in a country (Bjørnskov et al., 2013). As it was established earlier in the literature review part of this paper, equality of opportunities by itself is a major determinant of fairness and access to the social welfare in a country. Rothstein (2011) argues that sense of equality of opportunities is directly related to declining segregation among the different classes of society and therefore generates higher degree of trust both within the society and towards the institutions (Rothstein, 2011).

As this study aims to explore the effect of social mobility both perceived and actual on the tolerance to corruption, the subjective characteristics of individuals and sense of equality of opportunities in a society are accounted and grasped through the concept of general satisfaction with life. Micro level data for the OECD countries was extracted from the World Value Review, Wave 6 (2010-2014):

V23: *All things considered, how satisfied are you with your life as a whole these days? Using this card on which 1 means you are "completely dissatisfied" and 10 means you are "completely satisfied" where would you put your satisfaction with your life as a whole?*

3.1.3.3 Net National Income

All things considered economic welfare of a country also plays an important role in the individual wellbeing as it has direct impact on educational attainment, earnings level, and tolerance to corruption in a society. In other words National wealth is often associated with the better and more equal access to education and the quality of government institutions (Fischer, 2009). On the other hand most of the OECD countries share similar political and economic structure which in theory should lead to the equality of opportunities and similar level of social insurance for the population in the countries. However the difference of the wellbeing and increasing gap within the society prompt that economic structure is not defining factor in the establishing of good institutions (Rothstein, 2011).

Based on this divergent explanation of the role of economic welfare in a country, the Net National Income per capita is included in the regression analysis as a control variable.

3.1.3.4 Other Control Variables

The demographics of individuals included in the analysis may also affect the tolerance to corruption. For example a number of studies on the intergenerational social mobility and welfare showed that gender, age, educational background and social class (subjective) of the individuals involved in the analysis identify stronger correlation between the variables (Fischer, 2009; Bjørnskov et al., 2013). It is therefore may be suggested that individual's background has an effect on social mobility and correlated with the tolerance to corruption in a country. The data on population demographics included in the World Value Survey and corresponds with the individuals' responses.

Table 1: Measuring Social Mobility and Tolerance to Corruption

Variable Name	Definition
Tolerance to Corruption	
Passive Corruption	Public attitude towards officials accepting of bribes 1- can never be justifies 10 – can be justified
Perceived Social Mobility	
Confidence in Education	Individual's confidence in universities, where 0 indicates no confidence, 1 –complete confidence.
Household income depends on individual's effort	Dummy variable, where 0 indicates that income does not depend on individual efforts and 1 – individual effort
Hard work brings success	Dummy variable where 0 – success depends on luck and connections, and 1 – hard work brings success
Actual Social Mobility	
Intergenerational Income Elasticity	Dependence of one's own life-time income to parental income, based on a father-son comparison
Mobility in educational attainment	A measure of dependency of student's educational attainment of her parents' education - PISA test Score
Social Trust	
Trust in the society	Dummy variable, 1 – most people can be trusted, 0 – need be careful
Satisfaction with life	
Overall satisfaction with life	Ordinal categorical variable 1 – completely satisfied, 0 –completely dissatisfied
Net National Income	
Net National Income per capita	Approximates the level of disposable income in the population

The data obtained from the World Value Survey Wave 6 (2010-2014) is then sub sampled for 34 OECD countries (See Appendix 1 "The List of OECD countries") with

information for 22 709 individuals from 15 OECD countries. For the country-level analysis individual responses from the WVS are aggregated to the macro-level and combined with the information on actual intergenerational social mobility, including intergenerational income elasticity and mobility in educational attainment, obtained from the OECD database (OECD, 2007; OECD, 2014) and Fischer (2009).

3.2 Model Specification

In order to address the research question if the tolerance to corruption is correlated with the intergenerational social mobility the quantitative analysis of the data available for the OECD countries was applied. The quantitative analysis is performed with IBM SPSS Statistics software. The correlation between two variables is tested with the ordinary least squares (OLS) regression which generally has the following model:

$$y_i = \beta_0 + \beta_1 X_i + \varepsilon_i$$

Where Y_i is a dependent variable (predicted outcome) and X_i is an independent variable and parameter β_1 quantify the relationship between two parameters with an error term ε_i and common intercept coefficient β_0 (Field, 2013).

The analysis includes both the effects of the perceived and actual social mobility; in addition control variables like socio-demographic characteristics, social trust, satisfaction with life and net national income per capita are included in the research in order to test alternative impacts on the tolerance to corruption.

First micro level analysis is applied in order to identify the correlation between the perceived social mobility and tolerance to passive corruption on the individual level:

Model 1: $\textit{Tolerance of passive corruption}_i = \beta_0 + \beta_1 \textit{Perceived Social Mobility} + \varepsilon_i$

The model is further developed by adding control variables, including demographics of the population, advanced by adding social trust and general life satisfaction in the regression analysis.

Model 2-5: $\textit{Tolerance of passive corruption}_i = \beta_0 + \beta_1 \textit{Perceived Social Mobility} + \beta_2 \textit{Population Demographics} + \varepsilon_i$

Model 6: $Tolerance\ of\ passive\ corruption_i = \beta_0 + \beta_1 Perceived\ Social\ Mobility + \beta_2 Population\ Demographics + \beta_3 Social\ Trust + \varepsilon_i$

Model 7: $Tolerance\ of\ passive\ corruption_i = \beta_0 + \beta_1 Perceived\ Social\ Mobility + \beta_2 Population\ Demographics + \beta_3 Social\ Trust + \beta_4 Life\ Satisfaction + \varepsilon_i$

In further development of the study, actual social mobility is introduced to the regression with statistical analysis on the macro (country) level:

Model 8: $Tolerance\ of\ corruption_i = \beta_0 + \beta_1 Actual\ Social\ Mobility + \varepsilon_i$

Model 9: $Tolerance\ of\ corruption_i = \beta_0 + \beta_1 Perceived\ Social\ Mobility + \beta_2 Actual\ Social\ Mobility + \varepsilon_i$

Finally, the macro-level analysis is implemented including control variable economic welfare of a country (Net National Income):

Model 10: $Tolerance\ of\ corruption_i = \beta_0 + \beta_1 Perceived\ Social\ Mobility + \beta_2 Actual\ Social\ Mobility + \beta_3 Net\ National\ Income + \varepsilon_i$

4. Empirical Analysis

4.1 Individual-level Analysis

First the individual level analysis is performed in order to determine the correlation between the perceived intergenerational social mobility and tolerance to corruption in the OECD countries. The subsample for OECD countries is extracted from the World Value Survey, Wave 6 (2010-2014). Table 2 below presents the descriptive statistics for the tolerance to corruption (dependent variable), factors measuring perceived social mobility (independent variables), demographics (gender, age, educational background, and social class (subjective)), social trust and satisfaction with life (control variables) after recoding taking into account missing values. The data was also rescaled to 0-1 parameter in order to facilitate comparison of variables effect on the tolerance to corruption.

Table 2: Descriptive Statistics of the variables

Variable	**N**	**Min**	**Max**	**Mean**	**Std. Deviation**
Passive Tolerance to Corruption	22267	1	10	1.57	1.447
Control Variables					
Life Satisfaction	22516	0	1	0.72	0.195
Social Trust	22145	0	1	0.36	0.481
Gender	22700	0	1	0.47	0.499
Age	22686	17	99	47.43	17.545
Social Class	21897	0	1	0.62	0.178
Education	22121	0	3	2.14	0.720
Perceived Social Mobility					
Confidence in Universities	21077	0	1	0.75	0.433
Income Equality	22033	0	1	0.41	0.491
Hardworking brings success	22047	0	1	0.70	0.460

Taking into consideration the missing values, total number of valid individuals participated in the survey is 18 872. The analyzed sample is well balanced in gender (10754 females (47,4%) and 11946 males (52,6%) from the OECD countries participated in the survey) and age (ranging from 17 to 99 years old with the mean value 47.43). The biggest share of the interview people has obtained secondary

education - 48.7%, 31.7% have university degree, primary education was achieved by 15.8% and only 1.2% have no formal education. Most of the individuals participated in the survey attribute themselves to the middle class (with upper middle class share 23.0% and lower middle class share 39.0%), working class was indicated by 26.3%, whereas upper and lower class 1.1% and 6.1% respectively (See Appendix 2).

Figure 1 (below) was constructed based on the individual responses on tolerance to corruption obtained from the World Value Survey, Wave 6 (2010-2014). Generally in the sub-sample of 15 OECD countries the tolerance to corruption is quite low (below 2.5) with highest index in Mexico (2.2) followed by Sweden (1.8) whereas Japan and Turkey have the lowest tolerance to passive corruption (1.3 and 1.2 respectively).

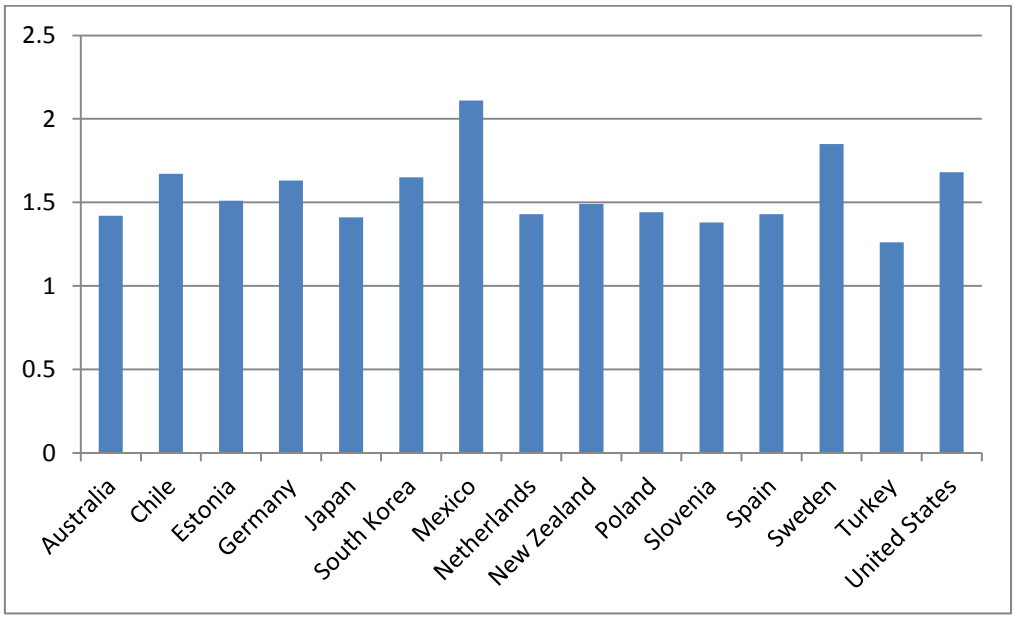

Figure 1: Tolerance to Passive Corruption: Analysis for OECD countries. Data: World Value Survey, Wave 6 (2010-2014)

As tolerance to passive corruption does not follow normal distribution, the value is further transformed to logarithmic function in order to hold the first OLS regression assumption of data normal distribution (See Appendix 3) (Field, 2013).

Furthermore, when working with the pooled data it is important to address the problem of clustering, i.e. specific countries factors (GDP, size of the population and etc.) that may have effect on the individual's responses and correlation coefficients consequently.

Therefore, dummy variables for 15 countries were included in the regression (See full regression estimates in Appendix 4).

Table 3: Multiple regression (OLS) estimates of the effect of Social Mobility on Tolerance to Corruption

DV: Tolerance to Corruption (1-10)	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Confidence in Education (0-1)	-0,063***	-0.063***	-0.060***	-0.054***	-0.052***	-0.050***	-0.047***
	(0.010)	(0.010)	(0.009)	(0.010)	(0.010)	(0.010)	(0.010)
Household income depends on individual's effort (0-1)	0.028***	0.026**	0.021**	0.026**	0.025**	0.025**	0.030***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Hard work brings success (0-1)	-0.053***	-0.053***	-0.052***	-0.050***	-0.047***	-0.047***	-0.041***
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Gender (0-1)		0.066***	0.066***	0.068***	0.067***	0.067***	0.064***
		(0.008)	(0.007)	(0.008)	(0.008)	(0.008)	(0.008)
Age (17-99)			-0.441***	-0.475***	-0.480***	-0.485***	-0.493***
			(0.022)	(0.023)	(0.023)	(0.024)	(0.024)
Level of education obtained (0-3)				-0.040***	-0.041***	-0.041***	-0.041***
				(0.006)	(0.006)	(0.006)	(0.006)
Social Class (Subjective) (0-1)					0.005	-0.001	-0.039
					(0.024)	(0.024)	(0.024)
Social Trust (0-1)						-0.017**	-0.009
						(0.009)	(0.009)
Satisfaction with life (0-1)							-0.189***
							(0.022)
Constant	0.342***	0.312***	1.044**	1.196***	1.198***	1.212***	1.379***
	(0.016)	(0.016)	(0.040)	(0.047)	(0.052)	(0.053)	(0.056)
R^2	0.026	0.030	0.049	0.051	0.050	0.051	0.055
N	20261	20255	20248	19757	19279	18938	18872

*p<.05 ** p<.01 ***p<.001.Standard errors within parentheses. Data: World Value Survey, Wave 6 (2010-2014)

The regression analysis starts with measuring correlation between the perceived intergenerational social mobility (when all three components are included in the regression) and tolerance to passive corruption. The results indicate that all three components (confidence in education, believe that household income depends on individual's effort and hard work can bring success) are statistically significant in the analysis. The distinctive factor is the sign of the coefficients included in the regression which helps us to predict the correlation between the perceived social mobility and tolerance to corruption. Specifically, higher confidence in education is negatively correlated with the tolerance to corruption, i.e. 1 unit change in the confidence in education leads to decrease in tolerance to corruption by 0.063. Similar impact has the question about the effect of hard work or luck in individual's success. In other words, if an individual believes that hard work brings success, his/her tolerance to corruption decreases by 0.053. On the contrary, the question of income inequality and the role of officials in decreasing inequality gap have positive correlation with the tolerance to corruption. This indicates that individuals who rely more on individual efforts in decreasing income gap tend to tolerate corruption more, comparing to those who think that household income should be equal. However, the R square of the model is quite low (0.026) and therefore the model is further improved by introducing the control variables.

Further models (Model 2-5) take into consideration the demographics of the population participated in the survey which helps to indicate if gender, age, education and social class (subjective) have any effect on tolerance to corruption in a society. The characteristics of population demographics are tested separately, and R square indicates that the inclusion of all factors in the regression (Model 5) gives the best fit (R square equals 0.050). The regression indicates that subjective perception of the social class does not correlate with the tolerance to corruption as its coefficient (0.005) is not significant in the regression. However, factors of the perceived social mobility (confidence in education, believe that household's income depends on individual's effort and hard work brings success) remain significant with coefficients -0.052, 0.025 and -0.047 respectively. Moreover, other demographic factors, including gender, age, and level of education obtained also show significance in the regression model. Looking at the coefficients of the control variables it can be concluded, that obtaining higher level

of education leads to the decrease in tolerance to corruption by 0.041 points. Similarly, with aging individuals tend to tolerate corruption among the officials less by 0.480 points. The coefficient of the gender is more difficult to perceive, as dummy variable (0-male, 1-female) was adapted in the regression. However, from the regression results, it can be concluded that women have lower tolerance to corruption comparing to men (β coefficient 0.067).

The next step is to test whether perceived social mobility (including socio-demographics characteristics) and social trust are correlated with the tolerance to corruption in the society. The model shows a better fit as R square increases to 0.051. The factors of the perceived social mobility still show strong correlation with the tolerance to corruption. Moreover, the socio-demographic characteristics also have strong correlation with the dependent variable (gender 0.067; Age -0.485; level of education obtained -0.041). However, subjective perception of the social class does not affect the tolerance to corruption as its coefficient (0.001) is insignificant in the model. Social trust, included as a control variable in the regression,shows significance with $p<0.01$with negative correlation to tolerance to corruption, i.e. with increase of 1 in social trust the tolerance to corruption is decreased by -0.017.

Finally, the model includes general satisfaction with life as a control variable. In this case the model shows the best fit of the data and the theoretical assumptions with R square 0.055. The model indicates the negative significant correlation between the life satisfaction and tolerance to corruption showing with the change in life satisfaction by 1 the tolerance to corruption decreases by 0.189 points. As for the main independent variables measuring the perceived intergenerational social mobility, the confidence in education is negatively correlated with the tolerance to corruption (coefficient -0.047), which means that higher confidence in education leads to the decrease in tolerance of corruption. Similarly, if an individual believe that hard work brings success in life, his/her tolerance to corruption decreases by 0.030 points. On the other hand, if an individual thinks that income equality can be achieved by personal efforts, it increases tolerance to corruption by 0.041. Socio-demographic characteristics of an individual hold significant coefficients for gender, age and highest level of education obtained (0.064, -0.493 and -0.041 respectively). However, subjective measure of social class and general trust in the society are not significant in the model.

4.2 Country-level Analysis

For the country analysis, the data obtained from the World Value Survey, Wave 6 (2010-2014) on the individual level is aggregated to the macro-level with the subsample for OECD countries. WVS (2010-2014) contains data for 15 OECD countries. Further data available on actual social mobility characteristics in OECD countries (educational social mobility and intergenerational earnings elasticity) is combined in one dataset. However, due to the scarcity of the data for the actual social mobility, the subsample decreases to 12 countries for the mobility in educational attainment and only five countries if intergenerational earnings elasticity is included (See Appendix 5). It is difficult to draw statistically significant conclusion based on this small sample; therefore, measure of the intergenerational social mobility was dropped from the analysis. However, the results of intergenerational educational attainment can still help to see some general trends.

Table 4: Multiple regression (OLS) estimates of the effect of Actual and perceived Social Mobility on Tolerance to Corruption

DV: Tolerance to Corruption (1-10)	**Model 8**	**Model 9**	**Model 10**
Intergenerational Educational Attainment	-0.005**	-0.005*	-0.005*
	(0.001)	(0.002)	(0.002)
Confidence in Education (0-1)		-0.087	-0.081
		(0.284)	(0.294)
Household income depends on individual's effort (0-1)		0.084	0.074
		(0.171)	(0.178)
Hard work brings success (0-1)		-0.099	-0.075
		(0.264)	(0.275)
NNI per capita			-0.074
			(0.101)
Constant	0.391***	0.511	0.817
	(0.038)	(0.409)	(0.595)
R^2	0.629	0.669	0.696
N	13	13	13

*p<.05 ** p<.01 ***p<.001.Standard errors within parentheses. Data: World Value Survey Wave 6 (2010-2014); OECD, Society at Glance, (2004-2009)

First model, testing the correlation between the actual social mobility measure in terms of the intergenerational educational attainment and tolerance to corruption shows

negative correlation with coefficient -0.005. In other words, lower social mobility leads to higher tolerance of corruption.

Model 9 includes the characteristics of actual and perceived social mobility. The fit of the data is better with R square 0.669. However, with the inclusion of perceived social mobility, the intergenerational educational attainment become less significant (significant when $p<0.05$) whereas factors of the perceived social mobility (confidence in education, importance of individual's efforts in household income and hard work) become insignificant in the model.

Finally, Net National Income per capita (Log NNI) is included in the analysis. The model shows, that only intergenerational social mobility has significant correlation with tolerance to corruption whereas (-0.005), factors of the perceived social mobility and NNI does not have significant effect on the tolerance to corruption in a society.

It still should be noted, that the obtained results cannot be considered as a conclusive due to the scarcity of the data available both for the measurement of Perceived Social Mobility (World Value Survey, Wave 6 2010-2014) and actual social mobility (OECD, Society at Glance 2007) in the OECD countries.

4.3 Discussion of the Results

The regression analysis of the factors of perceived social mobility and tolerance to corruption performed on the individual level for OECD countries indicates that two indicators are correlated. Specifically, it can be concluded that both higher confidence in education and believe that success depends on a personal effort but not luck leads to lower tolerance to corruption in a society, whereas belief that income should be made more equal (regardless the personal efforts) is positively correlated with the low tolerance to corruption.

For further analysis socio-demographic characteristics of the individuals participated in the survey were included in the analysis as control variables.In this case the coefficients of perceived social mobility of all three factors (confidence in education, household's income depends on individual's effort, and hard work brings success) decreased (-0.063 vs -0.052; 0.028 vs 0.025; -0.053 vs -0.047 respectively) which indicates that correlation

between the perceived social mobility and tolerance to corruption is also driven by the personal socio-demographic characteristics, including gender, age, level of education obtained and subjective attribution to a social class (Model 5). However, social status (subjective) does not have significant correlation with tolerance to corruption. On the other hand, model indicates that women are generally less tolerant to corruption; moreover, older people are less tolerant to corruption than younger people; similar effect has education, i.e. people with higher level of education are less tolerant to corruption. Similar effect was indicated by Fischer (2009) that perceived social mobility at an individual level analysis is captured by the socio-demographic characteristics or personal history per se.

Introducing social trust to the regression does not change the coefficients of other variables significantly (see Model 4), however indicates the importance of the control variable in the analysis. In other words, if an individual generally trust people it increases his/her tolerance to corruption by 0.017 points.

Nonetheless, including general satisfaction with life shows the best fit of the model with r square 0.056 and, interestingly enough, this eliminates the significance of social trust in the regression. Moreover, the coefficients of confidence of education and belief that hard work brings success in life are decreased to -0.047 and -0.041 respectively, whereas the question of income difference used as an incentive for individual effort becomes stronger 0.030 indicating that individual's satisfaction with life is one of the most significant factors in addressing the question of the perceived social mobility and tolerance to corruption. In other words, as it was previously argued in theory, the belief of equality of opportunities offered in a society decreases class segregation and therefore leads to higher trust to institutions and lower tolerance to corruption as a result.

However, perceived social mobility does not always reflect the actual intergenerational social mobility in a country as it is rather a measurement of beliefs and perceptions rather than an indication of social and economic opportunities offered in a society. This phenomenon may be related to the misconception and individual understanding of a social mobility, a bright confidence in future life development whereas in reality, actual mobility may not be that optimistic (Fischer, 2009). It is therefore the further analysis

exploiting the characteristics of actual social mobility (intergenerational educational attainments and earning elasticity) was conducted on a macro level.

Macro-level analysis (Models 8-10) includes the characteristics of actual social mobility (intergenerational education attainment) in the analysis eliminates the significant effect of the perceived social mobility, indicating that in a countries with equal opportunities in education offered to the students regardless their parents' background show lower tolerance to corruption. Introduction of the Net National Income per capita as a control variable in macro-level analysis does not change the correlation coefficient of the intergenerational educational attainment (-0.005) however it becomes significant only with $p<0.05$. NNI per capita itself is not statistically significant in the regression, i.e. does not have strong effect on tolerance to corruption under this model. Nevertheless the number of observations (13 OECD countries) included in the analysis is too small to draw any final statistical conclusion from the suggested models.

4.4 Limitations

It is important to point out limitations of this paper that may have effect the results of the study. This study aimed to investigate the correlation between intergenerational social mobility and tolerance to corruption. As previously discussed in the paper, the existing literature differentiates between the perceived and actual intergenerational social mobility. Throughout the process of collecting data for this research a number of obstacles occurred which limited significantly the scope of the study. Specifically, the data on the actual social mobility in the OECD countries is quite limited and was collected from different sources (Fischer, 2009; D'Addio, 2007; Bjørnskov, 2013).It is important to note that organized and comprehensive on the intergenerational social mobility is available only for the OECD countries. The aspect of scarcity of the data was pointed out in the results discussion (See Section 4.3) and it was emphasized that no final conclusion can be drawn for the macro-level analysis exploiting the available data on the actual social mobility. Further research would benefit from a larger sample of countries included in the study and will allow to perform a stronger analysis of the correlation.

Another limitation in methodology of this research is use of cross-section data which does not allow seeing the variations in correlation over time, for example comparing to the panel data (Vaus, 2010). On the other hand, intergenerational social mobility involves the comparison of at least two generations in a family (farther/son pair). However there is no data available in order to trace the effect of parental views and believes in perceived social mobility and tolerance to corruption on their children. Future research may benefit from applying case study analysis or multi-level regression analysis when working on the aspect of social mobility and tolerance to corruption.

5. Conclusion

This study was developed in order to identify the role of the intergenerational social mobility in tolerance to corruption with the focus on OECD countries. Intergenerational social mobility was previously thoroughly researched in connection with the country's economic welfare whereas the connection with tolerance to corruption is inconclusive in the social field studies. On the other hand, the discussion of corruption in the context of quality of government often refers to the impartiality of institutions and equality of opportunities offered to an individual in a country as a prerequisite to development. Therefore this researched aimed to bridge two fields of discussion and sought to answer the following questions:

- Does intergenerational social mobility affect the tolerance to corruption in the OECD countries?
- What is the tolerance to corruption effects of the intergenerational social mobility in the OECD countries?

Throughout the study two measurement of intergenerational social mobility accepted by the scholars were defined – perceived and actual social mobility. Perceived social mobility captures the confidence in education and belief that poverty can be escaped by individual's efforts, whereas actual social mobility is a measurement of improvement in educational attainment and earning elasticity with regard to parents' achievements. Hence this study adapted both definitions and merged together data sources available on perceived social mobility (World Values Survey) and actual social mobility (OECD, Society at Glance), introducing other control variables, like socio-demographic

characteristics, general satisfaction with life, trust in society, and economic factors (NNI per capita).

The main empirical findings were summarized in the results discussion (See Section 4.3) and indicated that intergenerational social mobility has negative effect on the tolerance to corruption in OECD countries. In other words if an individual perceive the society he/she living in as a mobile, he/she tend to tolerate corruption on a lesser degree. The results of the study hold significant when controlling for socio-demographic factors, social trust and general satisfaction with life. Moreover, as this study exploited pooled data from 15 OECD countries, the analysis also included statistical control for avoiding clustering of the results.

The results obtained on micro (individual) level analysis support the theoretical assumption that more mobile societies tend to tolerate corruption on a much lesser degree comparing to the immobile societies. Macro-level analysis also support this assumption, however, as the phenomenon of the actual social mobility is quite difficult to capture due to the scarcity of the data available, it is cannot be treated as a conclusive statement.

This study offered initial steps in analyzing the theoretical assumption that tolerance to corruption may be correlated with how mobile a society is. It connected two broad social fields of researches – corruption (as a part of quality of government) and social mobility which is exploited more often in the studies of economic growth and welfare.

On the other hand, answers to the research question allow assessing socio-economic factors that have direct impact on tolerance to corruption in a society and therefore can further help in drawing policy recommendations of controlling corruption in a country. The analysis also helps to evaluate more thoroughly these concepts in connection with the characteristics of society in the modern world including benefits on the individual level. Moreover this research contributes to the understanding why some countries succeeded in maintaining high quality of governance with low level of corruption whereas others trapped with dysfunctional political institutions.

As it was argued earlier in this research, corruption is a “hierarchical phenomenon” and in immobile societies it is a direct way of establishing order and structure as a

coordination mechanism. Hence, higher social class fractionalization in a country diminishes the system of controls in a society and risk to increase of corruption in the long term.

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Appendices

1. List of OECD countries

No	Country	Date	Country Code in WVS
1	Australia	7 June 1971	36
2	Austria	29 September 1961	40
3	Belgium	13 September 1961	56
4	Canada	10 April 1961	124
5	Chile	7 May 2010	152
6	Czech Republic	21 December 1995	203
7	Denmark	30 May 1961	208
8	Estonia	9 December 2010	233
9	Finland	28 January 1969	246
10	France	7 August 1961	250
11	Germany	27 September 1961	276
12	Greece	27 September 1961	300
13	Hungary	7 May 1996	348
14	Iceland	5 June 1961	352
15	Ireland	17 August 1961	372
16	Israel	7 September 2010	376
17	Italy	29 March 1962	380
18	Japan	28 April 1964	392
19	Korea	12 December 1996	410
20	Luxemburg	7 December 1961	442
21	Mexico	18 May 1994	484
22	Netherlands	13 November 1961	528
23	New Zealand	29 may 1973	554
24	Norway	4 July 1961	578
25	Poland	22 November 1996	616
26	Portugal	4 August 1961	620
27	Slovak Republic	14 December 2000	703
28	Slovenia	21 July 2010	705
29	Spain	3 August 1961	724
30	Sweden	28 September 1961	752
31	Switzerland	28 September 1961	756
32	Turkey	2 August 1961	792
33	United Kingdom	2 May 1961	826
34	United States	12 April 1961	840

2. **Descriptive Statistics of individuals included in the survey**

Variable	N	Min	Max	Mean	Std. Deviation
Passive Tolerance to Corruption	22267	1	10	1.57	1.447
Control Variables					
Life Satisfaction	22516	0	1	0.72	0.195
Social Trust	22145	0	1	0.36	0.481
Gender	22700	0	1	0.47	0.499
Age	22686	17	99	47.43	17.545
Social Class	21897	0	1	0.62	0.178
Education	22121	0	3	2.14	0.720
Perceived Social Mobility					
Confidence in Universities	21077	0	1	0.75	0.433
Income Equality	22033	0	1	0.41	0.491
Hardworking brings success	22047	0	1	0.70	0.460

Frequency Tables

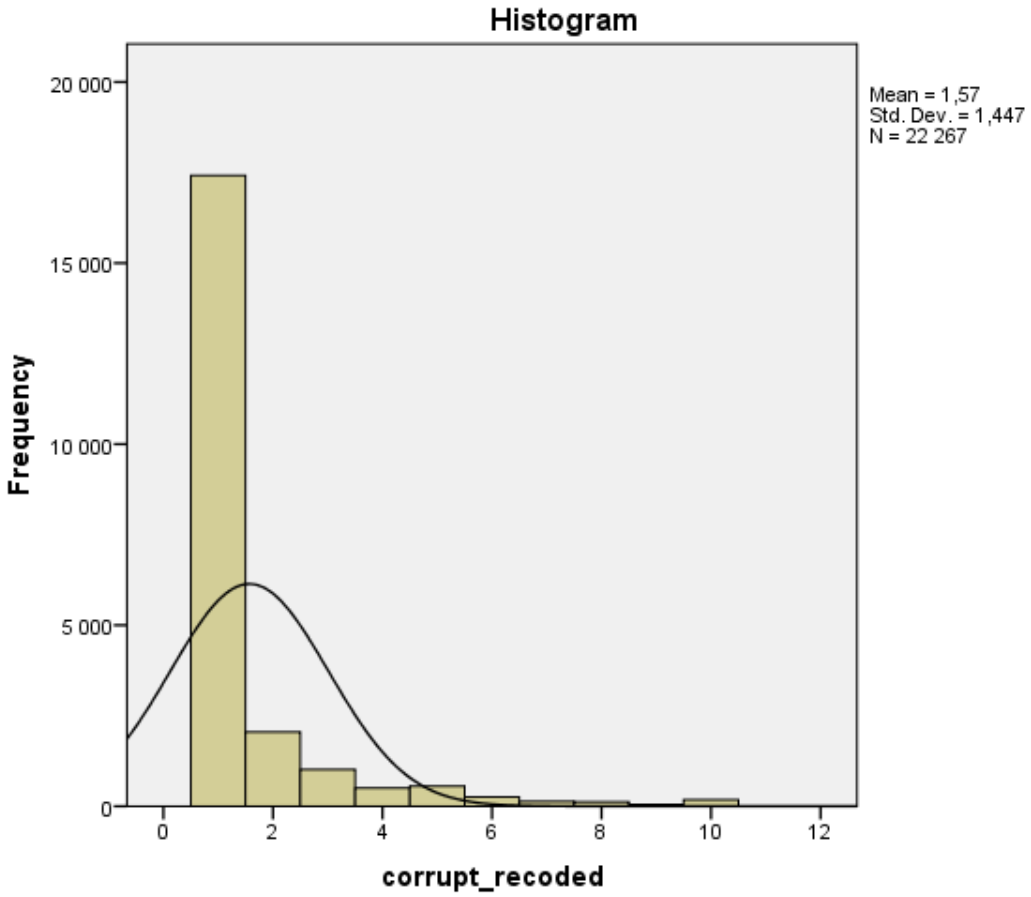
Gender	Frequency	Percent	Valid Percent
0	11946	52.6	52.6
1	10754	47.4	47.4
Total	22700	100.0	100.0
Missing System	9	0	
TOTAL	22709	100.0	

Highest Level of Education Obtained	Frequency	Percent	Valid Percent
0	275	1.2	1.2
1	3589	15.8	16.2
2	11068	48.7	50.0
3	7189	31.7	32.5
Total	22121	97.4	100.0
Missing System	588	2.6	
TOTAL	22709	100.0	

Social Class (Subjective)	Frequency	Percent	Valid Percent
Upper Class	251	1.1	1.1
Upper Middle Class	5219	23.0	23.8
Lower Middle Class	9064	39.9	41.4
Working Class	5968	26.3	27.3

Lower Class	1395	6.1	6.4
Total	21897	96.4	100.0
Missing System	812	3.6	
TOTAL	22709	100.0	

3. Tolerance to passive corruption: Histogram



4. Multiple regression (OLS) estimates of the effect of Social Mobility on Tolerance to Corruption with Countries Dummies

DV: Tolerance to Corruption (1-10)	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Confidence in Education (0-1)	-0,063*** (0.010)	-0.063*** (0.010)	-0.060*** (0.009)	-0.054*** (0.010)	-0.052*** (0.010)	-0.050*** (0.010)	-0.047*** (0.010)
Household income depends on individual's effort (0-1)	0.028*** (0.008)	0.026** (0.008)	0.021** (0.008)	0.026** (0.008)	0.025** (0.008)	0.025** (0.008)	0.030*** (0.008)
Hard work brings success (0-1)	-0.053*** (0.009)	-0.053*** (0.009)	-0.052*** (0.009)	-0.050*** (0.009)	-0.047*** (0.009)	-0.047*** (0.009)	-0.041*** (0.009)
Australia	-0.071*** (0.018)	-0.068*** (0.018)	-0.050* (0.018)	-0.052* (0.018)	-0.051* (0.018)	-0.052* (0.020)	-0.052* (0.020)
Chile	0.038* (0.022)	0.037* (0.022)	0.014 (0.022)	0.014 (0.022)	0.014 (0.022)	0.008 (0.022)	-0.007 (0.022)
Estonia	-0.006 (0.019)	-0.005 (0.019)	-0.013 (0.019)	-0.016 (0.019)	-0.015 (0.019)	-0.025 (0.019)	-0.023 (0.019)
Germany	0.042* (0.017)	0.041* (0.017)	0.039 (0.017)	0.038 (0.017)	0.038 (0.017)	0.008 (0.018)	0.006 (0.018)
Japan	-0.064*** (0.017)	-0.067*** (0.017)	-0.064*** (0.017)	-0.062*** (0.017)	-0.063*** (0.017)	-0.077*** (0.018)	-0.074*** (0.018)
South Korea	0.025 (0.019)	0.025 (0.019)	0.025 (0.019)	0.003 (0.019)	0.001 (0.019)	-0.004 (0.019)	-0.001 (0.019)
Mexico	0.136*** (0.017)	0.135*** (0.017)	0.083*** (0.017)	0.079*** (0.017)	0.079*** (0.017)	0.046* (0.017)	0.047* (0.018)
Netherlands	-0.069*** (0.018)	-0.069*** (0.018)	-0.050* (0.018)	-0.050* (0.018)	-0.050* (0.018)	-0.062*** (0.018)	-0.059** (0.018)
New Zealand	-0.035	-0.030	-0.024	-0.023	-0.023	-0.024	-0.008

	(0.024)	(0.024)	(0.023)	(0.023)	(0.023)	(0.024)	(0.025)
Poland	-0.070** (0.023)	-0.069** (0.023)	-0.079*** (0.022)	-0.081*** (0.022)	-0.081*** (0.022)	-0.102*** (0.023)	-0.095*** (0.023)
Slovenia	-0.083*** (0.021)	-0.080*** (0.021)	-0.086*** (0.021)	-0.086*** (0.021)	-0.086*** (0.021)	-0.101*** (0.021)	-0.098*** (0.022)
Spain	-0.058** (0.020)	-0.058* (0.020)	-0.072*** (0.020)	-0.074*** (0.020)	-0.073*** (0.020)	-0.111*** (0.021)	-0.109*** (0.021)
Sweden	0.123*** (0.020)	0.124*** (0.20)	0.118*** (0.020)	0.111*** (0.020)	0.113*** (0.020)	0.103*** (0.020)	0.102*** (0.020)
Turkey	-0.148*** (0.018)	-0.149*** (0.018)	-0.197*** (0.018)	-0.197*** (0.018)	-0.198*** (0.018)	-0.234*** (0.019)	-0.234*** (0.019)
Gender (0-1)		0.066*** (0.008)	0.066*** (0.007)	0.068*** (0.008)	0.067*** (0.008)	0.067*** (0.008)	0.064*** (0.008)
Age (17-99)			-0.441*** (0.022)	-0.475*** (0.023)	-0.480*** (0.023)	-0.485*** (0.024)	-0.493*** (0.024)
Level of education obtained (0-3)				-0.040*** (0.006)	-0.041*** (0.006)	-0.041*** (0.006)	-0.041*** (0.006)
Social Class (Subjective) (0-1)					0.005 (0.024)	-0.001 (0.024)	-0.039 (0.024)
Social Trust (0-1)						-0.017** (0.009)	-0.009 (0.009)
Satisfaction with life (0-1)							-0.189*** (0.022)
Constant	0.342*** (0.016)	0.312*** (0.016)	1.044** (0.040)	1.196*** (0.047)	1.198*** (0.052)	1.212*** (0.053)	1.379*** (0.056)
R^2	0.026	0.030	0.049	0.051	0.050	0.051	0.055
N	20261	20255	20248	19757	19279	18938	18872

*p<.05 ** p<.01 ***p<.001.Standard errors within parentheses. Data: World Value Survey, Wave 6 (2010-2014)

5. Aggregated data: Perceived and Actual Social Mobility in OECD countries

Country Name	Country Code	Log_corruption	Confidence in education	Income	Luck	Educational Attainment	Earning Elasticity	NNI	Log_NNI
Australia	36	0,19	0,82	0,38	0,8	35,44	0,16	27458	4,44
Chile	152	0,32	0,62	0,21	0,66				
Estonia	233	0,25	0,92	0,2	0,58				
Germany	276	0,3	0,86	0,21	0,65	29,72	0,32	26213	4,42
Japan	392	0,19	0,66	0,42	0,67	33,87		24607	4,39
South Korea	410	0,31	0,67	0,68	0,68	30,77		18385	4,26
Mexico	484	0,4	0,75	0,47	0,8	11,07		9911	4
Netherlands	528	0,2	0,78	0,55	0,64	28,56		29781	4,47
New Zealand	554	0,23	0,81	0,45	0,81	32,25		19677	4,29
Poland	616	0,2	0,76	0,63	0,5	55,1		11373	4,06
Slovenia	705	0,18	0,63	0,16	0,69				
Spain	724	0,21	0,77	0,44	0,72	27,14	0,32	22724	4,36
Sweden	752	0,37	0,88	0,41	0,76	2,48	0,27	28693	4,46
Turkey	792	0,13	0,69	0,37	0,66	50,23		9678	3,99
United States	840	0,28	0,64	0,51	0,78	34,53	0,47	36662	4,56

Data: World Value Survey, Wave 6 (2010-2014) (aggregated), OECD Society at Glance (aggregated)

6. Students Performance in Mathematics (PISA 2003 Score) in Connection with Highest Level of Education Obtained by Fathers

Country	Fathers with completed primary or lower secondary education				Fathers with completed upper secondary education				Fathers with completed tertiary education			
	Percentage of students	S.E.	Performance		Percentage of students	S.E.	Performance		Percentage of students	S.E.	Performance	
			Mathematics scale				Mathematics scale				Mathematics scale	
			Mean score	S.E.			Mean score	S.E.			Mean score	S.E.
OECD Countries												
Australia	23,8	(0,6)	505	(3,3)	34,4	(0,5)	516	(2,1)	41,8	(0,8)	551	(2,8)
Austria	10,9	(0,7)	471	(5,9)	50,8	(1,1)	511	(3,9)	38,3	(1,0)	517	(3,9)
Belgium	14,9	(0,5)	502	(4,4)	38,7	(0,8)	536	(2,5)	46,4	(0,9)	565	(2,9)
Canada	11,9	(0,4)	511	(2,7)	39,1	(0,6)	529	(1,7)	49,0	(0,8)	552	(2,2)
Czech Republic	3,3	(0,3)	465	(11,5)	76,5	(0,8)	513	(3,0)	20,2	(0,8)	575	(4,8)
Denmark	18,6	(1,0)	486	(4,1)	43,2	(0,9)	508	(2,9)	38,2	(1,2)	549	(3,5)
Finland	21,9	(0,6)	525	(3,0)	27,1	(0,7)	538	(2,8)	51,0	(0,9)	560	(2,2)
France	28,8	(1,0)	489	(4,6)	40,5	(1,1)	520	(2,5)	30,7	(1,2)	539	(3,7)
Germany	19,2	(0,9)	454	(5,4)	44,5	(0,9)	520	(3,8)	36,3	(0,9)	549	(3,8)
Greece	32,8	(1,5)	419	(3,8)	34,4	(0,9)	450	(3,7)	32,9	(1,6)	466	(5,8)
Hungary	9,2	(0,6)	425	(6,5)	67,8	(1,0)	482	(2,8)	23,0	(1,0)	546	(4,8)
Iceland	20,1	(0,6)	497	(3,8)	50,3	(1,0)	514	(2,3)	29,6	(0,9)	534	(2,9)
Ireland	31,4	(0,9)	482	(3,2)	40,4	(0,9)	507	(2,8)	28,3	(1,1)	531	(3,8)
Italy	40,9	(0,9)	442	(3,6)	33,6	(0,6)	485	(3,4)	25,5	(0,8)	482	(3,8)
Japan	16,4	(0,9)	492	(7,0)	37,3	(0,9)	524	(4,4)	46,3	(1,0)	558	(4,8)
Korea	23,6	(0,8)	506	(4,0)	40,7	(1,1)	541	(3,1)	35,7	(1,3)	572	(5,6)

Luxembourg	21,3	(0,7)	461	(3,6)	35,0	(0,8)	499	(3,0)	43,6	(0,8)	523	(2,2)
Mexico	61,7	(1,7)	366	(3,2)	12,5	(0,6)	426	(4,8)	25,8	(1,3)	415	(5,3)
Netherlands	24,4	(1,1)	524	(5,0)	35,7	(1,2)	541	(3,3)	40,0	(1,1)	570	(3,5)
New Zealand	18,1	(0,7)	495	(4,0)	52,5	(0,9)	529	(2,5)	29,4	(0,8)	562	(3,7)
Norway	9,5	(0,6)	473	(5,3)	41,7	(1,1)	490	(2,8)	48,8	(1,2)	513	(3,1)
Poland	8,5	(0,5)	454	(6,7)	76,9	(0,8)	485	(2,4)	14,5	(0,7)	540	(4,1)
Portugal	62,9	(1,3)	456	(3,1)	17,0	(0,8)	498	(3,5)	20,2	(1,0)	486	(6,6)
Slovak Republic	5,1	(0,7)	426	(12,3)	74,4	(1,0)	490	(3,1)	20,5	(1,0)	553	(4,1)
Spain	43,3	(1,5)	469	(2,9)	26,4	(0,8)	488	(3,0)	30,3	(1,4)	516	(3,0)
Sweden	23,9	(0,8)	491	(3,4)	30,8	(0,9)	520	(3,3)	45,3	(1,1)	522	(3,4)
Switzerland	29,5	(1,0)	491	(3,6)	32,4	(0,8)	542	(2,9)	38,0	(1,0)	551	(4,7)
Turkey	58,8	(2,1)	395	(4,2)	22,7	(1,0)	444	(6,9)	18,5	(1,6)	494	(15,2)
United States	11,2	(0,7)	439	(4,7)	52,0	(1,1)	479	(2,7)	36,8	(1,1)	513	(3,7)
OECD Total	***24,3***	***(0,4)***	***439***	***(1,6)***	***42,0***	***(0,4)***	***497***	***(1,1)***	***33,7***	***(0,3)***	***526***	***(1,3)***
OECD Average	***24,4***	***(0,2)***	***460***	***(1,1)***	***42,0***	***(0,2)***	***505***	***(0,6)***	***33,6***	***(0,2)***	***534***	***(0,8)***

Data: OECD (2004). Learning for Tomorrow's World: First Results from PISA 2003

7. Students with Tertiary Education by Parents' Educational Attainment (2012)

Country	Parents with tertiary education %	Parents with educational attainment below upper secondary education %	Parents with upper secondary or post-secondary non-tertiary education as highest level of attainment %
Japan	76,42	1,87	21,70
Canada	73,14	3,07	23,79
Norway	72,59	6,07	21,33
Sweden	68,22	5,59	26,20
Estonia	66,94	1,68	31,38
Germany	65,42	2,22	32,36
Denmark	63,23	6,90	29,87
Netherlands	61,21	13,30	25,50
Australia	59,18	16,33	24,49
United States	57,98	8,15	33,87
Finland	55,81	5,01	39,18
United Kingdom	55,23	3,50	41,27
Austria	54,52	2,70	42,78
Ireland	51,06	15,79	33,15
France	49,72	9,61	40,67
South Korea	46,73	10,15	43,12
Poland	39,17	1,38	59,45
Slovak Republic	38,83	1,97	59,20
Czech Republic	37,77		62,13
Spain	37,08	33,26	29,66
Italy	27,75	24,46	47,78

Data: OECD (2014). Education at Glance 2014: OECD Indicators