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**Public Confidence in National and Supranational Institutions:  
the Impact of Materialist and Post-Materialist Values**

MA thesis

Supervisor: Piret Ehin, PhD

Tartu 2019

I have written this Master's thesis independently. All viewpoints of other authors, literary sources and data from elsewhere used for writing this paper have been referenced.

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## **Abstract**

Advanced industrialized societies are undergoing a change that alters individual values, beliefs and behavior. Building on the theories of changing values articulated by Ronald Inglehart, the thesis hypothesizes that the divide between materialist and post-materialist values has significant implications for public confidence in national and supranational institutions. The study uses data from the World Values survey to test whether and how individual materialist and post-materialist values affect confidence in the national government and the European Union. The results suggest that individuals with materialist values have more confidence in both national and supranational political institutions, while post-materialism is negatively associated with trust in the institutions. Besides, trust in the national government is positively associated with confidence in the EU and compared with individual values it has a stronger impact on public confidence in the EU.

## Introduction

Advanced industrialized societies are undergoing a change that is reflected in the transformation of the basic worldviews of individuals. System-level changes in Western countries – and more recently, in various countries around the world, such as economic development, expansion of diverse mass media and greater access to affordable secondary and higher education have been altering individual level values, beliefs, and behaviour. A prominent strand of scholarship argues that the dominant value conflict in advanced industrial societies focuses on the division between materialist and post-materialist values (Abramson and Inglehart 1986, 1992; Inglehart and Abramson 1994; Brooks and Manza, 1994:545). Value priorities that put primary emphasis on physical and economic security are acknowledged as materialist and value priorities that encompass needs such as freedom of expression, creating a less impersonal society, having more say in government, valuing ideas, self-actualization, intellectual fulfilment, and belonging are considered as post-materialist.

Two main hypotheses, known as the “scarcity” and “socialization” hypotheses, explain the link between societal types and values (Inglehart 1977, 1990, 2008; Inglehart and Welzel, 2005). The “scarcity hypothesis” holds that “one's value orientations mirror one's socioeconomic settings so that one gives the highest subjective value to the things that are in moderately short supply and the “socialization hypothesis” holds that “one's basic values reflect the conditions that prevailed during one's pre-adult years (Brooks and Manza, 1994; Inglehart, 1990a:56). Due to peace and prosperity in Western countries since the end of World War 2, post-material values have been becoming more important than the material ones, because in advanced Western societies children are born and raised in an environment where they do not have to worry about the satisfaction of basic material needs. Consequently, they start attributing more significant importance to values such as citizen input in governmental decisions, freedom of speech, personal freedom and importance, and humanism and environmental protection (Inglehart, 1977, 1990, 2008; Inglehart and Welzel, 2005).

The primary purpose of this thesis is to analyze the impact of individual materialist and post-materialist values on public confidence in political institutions, more specifically in the national government and the European Union. This research employs the concept of institutional trust that “primarily focuses on formal institutions and involves organizations, which are responsible for adopting, applying, and enforcing laws—such as parliaments, governments, and

courts” (Gyorffy, 2018: 57). Institutional trust or confidence means a belief that an institution is capable of fulfilling its public role (Ullman-Margalit 2004: 77; Rothstein, 2005; Levi et al., 2009). People comply with laws and regulations due to their value-based judgments to obey state institutions (Gibson and Caldeira, 2003). If a population does not trust the institution, they are likely to withdraw its support and reject it (Gherghina, 2017). Moreover, an erosion of confidence in major institutions will undermine their legitimacy that will become a serious threat to democracy (Newton and Norris, 2000:53; Gherghina, 2017).

Individual materialist and post-materialist values can be identified as significant factors influencing institutional trust based on the existing literature. According to the theory of intergenerational value change by Ronald Inglehart (1977), changes in individual values from materialism to post-materialism are associated with lower levels of satisfaction with their governments and cause the erosion of trust in national institutions. Inglehart and his followers (1977, 1990; Inglehart and Welzel, 2005) reckon that prevailing post-materialism might decrease citizens’ trust in national institutions, and if the governments and institutions fail to meet the expectations of post-materialists, they risk losing popular support – a development with negative consequences for those societies. Furthermore, he argues that while materialists are expected to be supportive of the established order, post-materialists reveal a more change-oriented attitude and lack of confidence in the conventional institutional arrangements (Inglehart 1977, 1990, 2008; Inglehart and Welzel 2005). Post-materialists perceive the government as an inherently dangerous, bureaucratic, hierarchical organization that threatens individual autonomy and expression (Inglehart, 1990:302).

This reasoning gives rise to the following empirically testable propositions:

**Hypothesis.1:** Post-materialism is negatively associated with trust in the national government;

**Hypothesis.2:** Materialism is positively associated with trust in the national government;

The given study develops and tests two rival explanations on public confidence in the European Union. The first proposition is derived from the literature linking post-materialist values to cosmopolitan, pro-European Union identity. Inglehart and his followers (1977, 1990; Nelsen, Guth and Fraser, 2001; Vreese and Boomgaarden, 2006; Inglehart and Welzel, 2005; Inglehart 2008) reckon that value orientations are one of the most potent predictors of supranational loyalty, and post-materialists are far likelier than materialists to have a sense of identity, which transcends



national boundaries. According to Inglehart (1977, 1990, 2008) along with changes in values and skill levels, an increase in support for supranational governance seems feasible in Europe. He thinks that compared with materialists, post-materialists are not preoccupied with sustenance and safety needs; therefore, they have enough energy left to invest in distant needs such as cosmopolitanism (Inglehart, 1977; Nelsen, Guth and Fraser, 2001; Kelemen and Vogel, 2010).

The European Union is based on the values such as respect for human dignity, freedom, democracy, equality, the rule of law and respect for human rights. These values are more prominent for post-materialists than materialists. Therefore, post-materialists with their cosmopolitan identity are expected to support the European Union more. They are markedly more likely to feel that they belong to such broader political units and will be the strongest supporters of the European Union (Inglehart, 1977; cf. Dobratz, 1993; Inglehart and Wezel, 2005; Nelsen, Guth and Fraser, 2001; Vreese and Boomgaarden, 2006).

The following hypotheses are consistent with the explanation outlined above:

**Hypothesis3a:** Post-materialism is positively associated with trust in the European Union;

**Hypothesis4a:** Materialism is negatively associated with trust in the European Union;

Academic literature also lends support and credibility to a competitive set of expectations. On the one hand, Inglehart and his supporters argue that post-materialists do not trust their national governments, but simultaneously, they have confidence in the supranational institutions such as the European Union. On the other hand, the empirical evidence (Irwin 1995; Marsh and Franklin 1996: 11; van der Eijk and Franklin 1996, 2004; Marsh 1998; Anderson, 1998; Gabel, 1998; McLaren, 2002; Franklin 2002; van der Brug and vanderEijk 2007; Hobolt, Spoon and Tilley 2009; Constantelos and Diven, 2010) shows that the confidence in the European Union is determined by trust in the national government. One of the most recent studies (Constantelos and Diven, 2010) explaining the confidence/trust in the international institutions found out that confidence in the European Union depends specifically on citizens' trust in significant social and political institutions, such as the national governments and major companies. Constantelos and Diven (2010) indicated that citizens confidence in the EU is best explained by their personal experiences with the institutions closer to home. Therefore, at least one out of these three assumptions might not be supported by the empirical evidence. In order to appraise the relationship between trust in the national government and confidence in the European Union and to test the

rival hypothesis of the hypotheses 3a and 4a, the following rival propositions are consistent with the explanation outlined above:

**Hypothesis 3b:** Post-materialism is negatively associated with trust in the European Union;

**Hypothesis 4b:** Materialism is positively associated with trust in the European Union;

**Hypothesis 5:** Trust in the national government is positively associated with trust in the European Union;

One of the shortcomings of the existing literature is that conjectures about the link between values and citizens' trust in institutions such as the national government and the European Union are rarely tested with individual-level data. Moreover, the existing empirical evidence related to the link between materialists and post-materialist value orientations and support for the European Union is still unclear. Anderson and Reichert (1996) found that both materialists and post-materialists were supportive of European integration – albeit to a different degree in different member states. In contrast, Gabel (1998) found that materialists opposed EU integration in both original and later member states, while post-materialists showed their dissatisfaction with the EU only in later member states. One of the most recent studies (Constantelos and Diven, 2010) explaining the confidence in the international institutions focuses on variables that measure the impact of economics, knowledge, identity, and trust in the national government on an individual level. These studies on public confidence in the European Union do not use EU citizens' materialist and post-materialist values in their models. In order to draw reliable conclusions, this research adds the independent variables for individual materialist and post-materialist values to the model and appraises whether individual values have any impact on confidence in the institutions such as the national government and the European Union.

This study adds new evidence to the comparative scholarship on trust in the national government and the European Union by scrutinizing the impact of individual materialist and post-materialist values on confidence in the national government and the European Union in nine EU countries. The analysis is conducted at an individual level through binomial logistic regression based on the data of the World Values Survey collected in 2010-2014. The main empirical question addressed in this research is whether and how individual materialist and post-materialist values impact public trust in institutions such as the national government and the EU.

The remainder of the thesis proceeds as follows. The first chapter reviews the concept and theory of materialist and post-materialist values introduced by Ronald Inglehart and emphasizes their link to trust in the national government and confidence in the European Union. The first subchapter thoroughly discusses the notion of materialist and post-materialist values. This is followed by an appraisal of the connection between materialist and post-materialist values and trust in the institutions, more specifically, in the national government and in the European Union in second and third subchapters, respectively. The fourth subchapter focuses on expectations regarding the linkage between trust in the national government and confidence in the European Union. The second chapter covers the methodology, research methods, and measurement used in this research. It presents the data and introduces the variables used in the empirical analysis and their operationalization. The third chapter presents and interprets the empirical results of the two regression models, while discussion and conclusions discusses the research findings and confers potential avenues for further research.

## **1. Intergenerational Value Change and Confidence in Political Institutions**

Advanced industrialized societies are undergoing a change that is reflected in the transformation of basic worldviews of their publics. Time series data demonstrates (Inglehart and Welzel, 2005) that in advanced industrial societies, changes occur in multiple directions – in sex roles, morals, values, in the ecology, the economy and politics. The system-level changes in Western countries such as economic development, expansion of diverse mass media and greater access to affordable secondary and higher education have been altering individual level values, beliefs and behavior (Abramson and Inglehart 1986, 1992; Inglehart and Abramson 1994; Brooks and Manza, 1994:545). A prominent strand of scholarship argues that the dominant value conflict in advanced industrial societies focuses on a clash between materialist and post-materialist value orientations.

This chapter reviews the concept of materialist and post-materialist values introduced by Ronald Inglehart and examines their link to trust in the national government and confidence in the European Union. The first subchapter explains the concept of materialist and post-materialist values and their relevance. This is followed by the appraisal of the connection between materialist and post-materialist values and trust in the national government. The third subchapter focuses on expectations regarding the linkage between trust in the national government and confidence in the European Union, and the last subchapter examines the relationship between confidence in the EU and materialist and post-materialist values.

### **1.1 Materialist vs. Post-Materialist Values**

Since World War II, many political changes in the advanced industrial societies can be traced to a shift in the values of the Western publics from an overwhelming prominence of physical security and material well-being toward a greater focus on the quality of life (Brooks and Manza, 1994). Among the fundamental changes are the apparent decline of political conflict based around traditional left-right and social class divisions, the rise of new social movements and green political parties, an increasing emphasis on individual autonomy and "lifestyle" issues, and the increasing vulnerability of bureaucratic welfare states (Inglehart, 1977; Inglehart 1990a).

Value priorities that put a significant emphasis on physical and economic security are acknowledged as materialist and value priorities that encompass needs such as freedom of expression, creating a less impersonal society, having more say in government, valuing ideas, self-

actualization, intellectual fulfillment, and belonging are considered as post-materialist. Materialism refers to a value-system that prioritizes the fulfillment of material needs such as sustenance and security. People with these value priorities are expected to value economic growth above environmental protection and give higher priority to safety and order above civil liberties. In contrast, post-material needs are related to self-esteem, self-actualization, belonging, aesthetic and intellectual satisfaction and values attached to them are self-expression, autonomy, freedom of speech, gender equality, and environmentalism (Inglehart, 1977; Gabel, 1998; Inglehart and Wezel, 2005).

Two conditions have the most significant impact on the value shift in Europe: value change from materialism to post-materialism is emerging in European societies due to prolonged security and economic prosperity in Europe. On the one hand, the absence of total war, the simple fact that no Western European nation has been invaded since 1945 and, on the other hand, the unprecedented prosperity experienced by Western nations during the decades following World War II may have extremely significant consequences for intergenerational value change (Inglehart, 1977; Gabel, 1998; Inglehart and Wezel, 2005;). Due to peace and prosperity in Western countries, post-material values are becoming more important than the material ones, because in advanced European societies children are born and raised in an environment where they do not have to worry about the satisfaction of basic material needs. Consequently, they start giving prominent importance to values such as citizen input in governmental decisions, freedom of speech, personal freedom and importance, humanism and environmental protection (Inglehart, 1977; Inglehart and Wezel, 2005).

Inglehart (1977) offers two hypotheses to explain the link between societal types and values. A "scarcity hypothesis" holds that "one's value priorities echo one's socioeconomic situation; therefore, one gives utmost subjective value to those things that are in shortage and a "socialization hypothesis" holds that one's basic values mirror the conditions that prevailed during one's formation years (Brooks and Manza, 1994; Inglehart, 1990a:56).

According to the scarcity hypothesis, the economic history of advanced industrial societies has significant implications for value change from materialism to post-materialism. "European societies are striking exceptions to the general historical pattern: most of their population does not live under conditions of hunger, poverty and economic insecurity. This has led to a gradual shift in which needs for belonging, esteem, and intellectual and aesthetic satisfaction have become more

prominent" (Inglehart and Welzel, 2005). Since World War II, Europeans' economic and safety needs are relatively well satisfied. Since World War II, for decades Europeans live in an economically secure environment where their physical safety is well protected. These are the significant factors affecting value priority changes in European societies. As there is the presence of prolonged peace and prosperity in Europe, more and more people give priority to the values that are related to self-esteem and self-actualization rather than economic and physical security (1977; Inglehart and Welzel, 2005 ).

According to the "scarcity hypothesis," people generally attribute major importance to post-materialist values when their materialist needs are already satisfied. Post-materialistic needs become salient only after the material and belonging needs are satisfied. Karl Marx and Friedrich Engels argued that "life involves, before anything else, eating and drinking, a habitation and clothing. The first historical act is to satisfy these needs [But] as soon as a need is satisfied, new needs are made" (Inglehart, 1977: 64). Taking into consideration the Maslovian need hierarchy (see *Figure 1*), higher level needs emerge only after the previous levels' needs are satisfied. "The basic needs could be viewed as points along a continuum which runs from "concern with one's self" to "concern with the environment" (and self to it)" (Inglehart, 1977: 57).

People, who give the most exceptional value to the economic and safety needs are materialists, and those who prioritize the higher-level desires over the economic and safety needs of Maslovian Pyramid are called post-materialists. To put it another way, when a person's primary concern is how to ensure or guarantee his or her economic and physical safety, they will not have enough energy to think of the more distant desires. Needs related to economic and physical safety are basics for everybody. However, when an individual gives the most significant value to these needs, it means that they are not still yet fully satisfied and thus remain in short supply. Assuming that post-materialists' economic and safety needs are already satisfied, they do not consider these

needs as in shortage; however, things related to self-esteem and self-actualization are in high demand for them (Inglehart, 1977; Inglehart and Welzel, 2005).

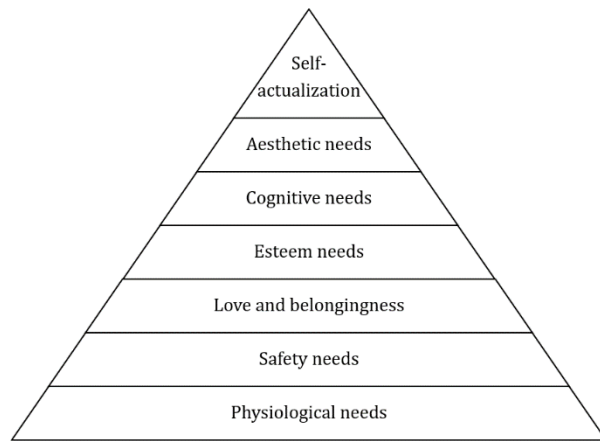


Figure1. Maslow's hierarchy of needs

Source: (Personal collection).

Countries that are safe and prosperous are expected to have a greater share of post-materialists among their populations because people's basic economic and safety needs were already satisfied. In contrast, people who grew up in an environment where instability was rampant and their physical and economic security were threatened, are expected to be materialists due to the intensified longing for peace and prosperity. The wealthier countries (Inglehart, 1977; Inglehart and Welzel, 2005) have relatively high proportions of post-materialists. Research by Inglehart (1977) and Inglehart and Welzel (2005) revealed that the two nations ranking highest in per capita ranked second and third highest in their proportion of post-materialists to materialists. The country that had the highest proportion of post-materialists did not have the biggest GDP per capita; notwithstanding, it was among the wealthier countries, and had been relatively well-off for a long time - a fact that should be important given the interval between economic change and value change. The two poorest nations ranked relatively low (Inglehart, 1977, Inglehart and Welzel, 2005).

The technological advancement of a given nation is another prominent factor that affects people's value priorities. Technology creates a post-materialist society due to its ability to foster unprecedented productivity. Technological advancement requires fewer people to be involved in the production process, and workers from industrial employment can move to the so-called knowledge industry. People working in the knowledge industry are oriented toward scientific and professional goals while people in industrial sector put greater emphasis on economic growth and

profits (Craig and Bell, 1974; Inglehart, 1977). “Experience in the industrial sector leads one to emphasize efficient production and the effort to maximize one's share of the economic pie, while the service occupations are more likely to orient one toward innovation. Furthermore, people employed in the service sector tend to become professionalized: they become more concerned with the values and goals of a profession as a whole than with the viability of one specific business enterprise” (Inglehart, 1977:65). Consequently, in technologically advanced societies more people are employed in the knowledge sector and have strong post-material needs that relate to self-esteem and self-actualization, while workers of an industrial sector are more likely to prioritize profit and thus, remain materialists (Inglehart, 1977).

There is no one-to-one connection between socioeconomic development and the prevalence of post-materialist values, for these values reflect one is a subjective sense of security, not one's actual economic level per se. Thus, the scarcity hypothesis must be interpreted along with the socialization hypothesis. Moreover, one's subjective sense of security not only reflects one's security but is affected by the overall sense of security that exists in one's social context. “While wealthy individuals and nationalities tend to feel more secure than poor ones, these feelings are also influenced by the cultural environment and social welfare institutions in which one is brought up” (Inglehart and Welzel, 2005).

The socialization hypothesis maintains that “one's basic values reflect the conditions that prevailed during one's pre-adult years” (Inglehart, 1990a:56). The *Theory of Intergenerational Value Change* by Ronald Inglehart (1977) argues that the citizens' values and political attitudes are impacted by the socio-economic environment of their formative years. Once the values are formed at the pre-adult period of an individual, major changes in them are not expected. When certain values, behavior or character are formed in childhood and youth, people tend to maintain these values, behavior or character throughout their adult life. Of course, some changes in basic values occur during adult life; however, the probability of such change diminishes substantially after one reaches adulthood (Inglehart, 1977; 1990a; Inglehart and Welzel, 2005). Those who were economically protected during their formative years are likelier to have post-materialist value priorities. The living conditions shape and instill particular values and attitudes that are persistent over a person's lifetime. The economic well-being affects the individual value orientations mostly due to its ability to satisfy the basic need for economic security. The middle-class respondents are the most post-materialist, working-class respondents less so and respondents from farm families



least so (Inglehart, 1977). When an individual is raised in an environment of material insecurity, (s)he will be more likely to embrace materialist values such as building a stable economy, fighting rising prices, maintaining order in the nation and fighting against crime throughout the life cycle. However, when individuals grow up in an environment of material security, (s), he will be more likely to place greater emphasis on “post-material” values such as having more say in government, freedom of speech, creating a less impersonal society and valuing ideas (Inglehart 1977, 1990a).

As younger people in Europe are raised in more economically and technologically advanced societies, without worrying much about economic hardships and wars, they tend to be more post-materialist than the older ones. While peace and prosperity are present in Europe since the World War II, the younger generations feel safer and economically better secured than their parents or grandparents because the memory of insecure Europe for them exists only in history books. The younger generations in “European Union countries have never experienced an invasion of their homeland by hostile forces. For them, the war has been something that only happens in other countries”( Inglehart, 1977). Moreover, the data analysis revealed that there is a significant positive correlation between youth with higher education and post materialism value orientations (Inglehart, 1977, 1990a, Inglehart and Welzel, 2005).

The post-materialist type is generally much more common among university-educated people than the others. This might be the only sector of society where the post-materialists are in the majority. Education refers to the cognitive development and is an indicator of integration into a specific communications network. Universities engage students in political matters; the academic environment makes people more liberal, less dogmatic, more open and less authoritarian. The association between education and value type is evident because it reflects. First, general cognitive development - the more educated have developed skills they would not otherwise possess. Second, the free communications patterns - the more educated people communicate with different people and are exposed to a variety of messages from those encountered by less educated and third, the explicit indoctrination - it is considered that post-materialist values are deliberately instilled in schools and universities. Among the university-educated respondents, post-materialists are close to being in the majority.

Moreover, better-educated people are generally better informed, too. Both people with higher education and higher information level tend to be post-materialist.

Furthermore, higher education level is positively correlated with higher information level; notwithstanding, education level affects value orientation more than the information level. Inglehart (1977) found out that more educated people who had a *low* information level were significantly more post-materialist than the better informed but less educated group of people. However, although post-materialists may be predominant in one of the major social institutions - the universities, the progression of value change is not limited to schools. It pervades Western society (Inglehart, 1977).

The evidence makes it clear that the intergenerational value differences found in industrial societies do not reflect life-cycle effects. The birth cohorts did not become more materialistic as they aged. Inglehart and Welzel (2005) showed that the younger birth cohorts who placed more emphasis on post-materialist values than older cohorts did, did not move away from post-materialist values toward materialist values as they age from 1980 to 2000. Within this period, younger birth cohorts were emphasizing on post-material values than older ones. Moreover, although each of the birth cohorts aged by twenty years from 1980 through 2000 (Inglehart and Welzel, 2005:105), none of them placed less emphasis on post-materialism in 1999–2001 than they did in 1981 – as would have been the case if these age differences mirrored life-cycle effects. Quite the contrary, Inglehart and Welzel (2005) found that “all birth cohorts came to place somewhat more emphasis on post-material values as time went by. This was particularly true of the younger cohorts, who showed a substantial shift toward post-material values from 1980 to 2000; the older cohorts remained relatively stable, but none of them shifted toward material values” (Inglehart and Welzel, 2005: 106; Inglehart, 2008).

Although post-materialist values might be slightly altered by the period effects due to their linkage with economic security, in the long run, the values of any given birth cohort are remarkably stable (Inglehart, 1977; Inglehart and Welzel, 2005). The period effects alter the number of materialists and post-materialists in a given society. “Prolonged periods of high prosperity encourage the spread of post-materialist values, and enduring economic decline would have the opposite effect. Unfortunate developments, such as relatively high unemployment, the collapse of stock markets and welfare state retrenchment, would increase economic insecurity; if this went far enough, it could undermine the prevailing sense that survival can be taken for granted and, in the long run, bring a resurgence of materialist values” (Inglehart and Welzel, 2005). For example, high inflation rates make people feel economically insecure. High levels of inflation affects the post-

materialists' proportions. However, these period effects are temporary; they are vanished when economic situations return to normal (Inglehart and Welzel, 2005).

To sum up, according to Inglehart and his followers in advanced Western societies the prolonged peace and prosperity fosters the process of intergenerational value shift from materialism to post-materialism. Post-materialists focus more on individual autonomy who seek more participation in political processes and are less supportive of welfare states. Additionally, although period effects sometimes alter post-materialist values, the intergenerational value differences do not reflect life-cycle effects and remain outstandingly stable (Inglehart, 1977, 1990a; Abramson and Inglehart 1986, 1992; Inglehart and Abramson 1994; Brooks and Manza, 1994; Inglehart and Welzel, 2005).

## **1.2 Connection between Values and Trust in the National Government**

Changes in individual values from materialism to post-materialism are associated with lower levels of satisfaction with their governments and cause the erosion of trust in national institutions. This research employs the concept of institutional trust that “primarily focuses on formal institutions and involves organizations, which are responsible for adopting, applying, and enforcing laws—such as parliaments, governments, and courts” (Gyorffy, 2018: 57). While discussing institutional trust, an often used term is confidence, which means a belief that an institution is capable of fulfilling its public role (Ullman-Margalit 2004: 77; Rothstein, 2005; Levi et al., 2009; Gherghina, 2017). According to the theory of Intergenerational Value Change by Ronald Inglehart (1977, 1990), national political systems in advanced industrial democracies generally satisfy the traditional demands relatively well, while the governments seem to be reluctant or unable to satisfy other types of needs that are emerging and are vital among certain segments of the population. Along with value change, the perceptions of the mass publics of the adequacy of institutional arrangements and "their rules of the game" also change. The institutions and the governments themselves might face a crisis of legitimacy. The value shift from materialism to post-materialism, changes in political skills and the emergence of the more critical public will result in a descending trend in support for national institutions (Inglehart, 1977, 1990).

While materialists are expected to be supportive of the established order, post-materialists reveal a more change-oriented attitude and lack of confidence in the conventional institutional arrangements (Dalton and Russell, 1977; Inglehart, 1977, 1990; Dalton, Russell, Scott and Beck, 1984; Dalton, Russell and Kuechler, 1990; Dalton, 2013). Post-materialists are less satisfied with

the existing political settings and compared with materialists they support more radical political changes. Despite having its origins in material conditions, the political dissatisfaction in industrial societies is more probable among affluent post-materialists than materialists. Prolonged prosperity fosters the emergence of the public that gives lower priority to economic well-being and security and value aesthetic and humanistic goals; more specifically, to the segments of a society that have never experienced economic deprivation, the economic gains do not seem the most prominent. The majority of governmental institutions are operating on a material base. Therefore, they are losing post-materialists' confidence towards them when the demands of newly articulated groups of post-materialists are not satisfied within the existing structures, their support for governmental institutions decreases. While in the past the central test to lead a society was the degree to which they satisfied citizens' economic and security needs, it is changed now. In order to establish legitimacy among the public, corresponding to the economic and security needs of citizens is no longer sufficient. In order to gain people's confidence, governments have to do their best to address the needs of both, materialists and post-materialists. Western governments need to solve economic problems in order to gain materialists' trust; however, prosperity has its consequences. Affluence evokes new sets of demands that are not easy to be satisfied by the existing structures (Inglehart, 1977:71; Dalton and Russell, 1977; Dalton, Russell and Kuechler, 1990; Dalton, 2013).

The change in values reduces the legitimacy of hierarchical authority that causes the erosion of confidence in institutions. This political expression of changes in values will be transparent by a shift from so-called "elite-directed" to "elite-challenging" activities (Dalton and Russell, 1977; Inglehart, 1977, 1990). The "elite-directed" political participation means mobilizing the masses through established organizations such as political parties, religious institutions and so on. The "elite-challenging" approach gives the public increasingly higher chances of involvement in the decision-making process (Inglehart, 1977:4; Dalton and Russell, 1977; Dalton, Russell and Kuechler, 1990).

Post-materialists who prioritize civil liberties more than their physical and economic security are frustrated by the state authority. Due to the occurrence of a value shift, these societies are moving towards individual autonomy rather than central authority. They put greater emphasis on belonging, self-expression and the quality of life. Therefore, while the previous generations might be more willing to make trade-offs that sacrificed individual autonomy at the expense of physical and economic well-being, the increasing number of people in Western industrial societies

take this sense of security for granted. They prioritize the self-expression values both at work and in their political lives and thus, strive for more participatory roles in politics. This reinforces their resistance to the state authority (Inglehart, 1990:11). They put a significant emphasis on individual creativity and initiative; thus, they are willing to have a say in governmental decisions. Hence, they lack confidence in state authority and governmental institutions due to growing skepticism about the state control and increasing concern for individual autonomy. Post materialists view governmental bureaucracy as dehumanizing and opt for moving the decision-making power to those directly affected by the decisions (Inglehart, 1990:8).

In industrial societies, the welfare state reached to a point at which the benefits gained from it do not outweigh its costs anymore. The primary concern and purpose of states for ages were to maintain order and defend their people from poverty and physical harm against outsiders. Such concerns are no longer prominently significant for post-materialists, and they weigh less among their priorities. Inglehart and his supporters (Dalton and Russell, 1977; Inglehart, 1977, 1990; Dalton, Russell, Scott and Beck, 1984; Dalton, Russell, and Kuechler, 1990) argue that the welfare state reached its principal goal of alleviating poverty and sense of insecurity among the citizens. Moreover, it paved the way for the emergence of new types of needs to be central. The masses do not starve even at times of the most severe economic downturn. Therefore, at some point, the welfare state started reaching its limits, due to the massive taxation, the public feels the burden (Inglehart, 1990:10).

Post-materialists perceive the government as an inherently dangerous, bureaucratic, hierarchical organization that threatens individual autonomy and expression (Inglehart, 1990:302). In this respect, they face a dilemma. On the one hand, post-materialists strive for change in society and on the other hand, they do not have confidence in the state institutions that are the instruments for bringing the change. Post-materialists relate the state to a potential instrument of oppression and exploitation. Even though they seek for equality, they reject the state to bring it about. The solution to this dilemma might lie in decentralizing the state. Post-materialists require more from their states rather than mere satisfaction of sustenance and safety needs, and hence, they are relatively open to a supra-national orientation (Inglehart, 1990:304; Nelsen, Guth and Fraser, 2001; Kelemen and Vogel, 2010).

Based on the discussion above, this thesis posits the following hypotheses:

**Hypothesis.1:** *Post-materialism is negatively associated with trust in the national government;*

**Hypothesis.2:** *Materialism is positively associated with trust in the national government;*

### 1.3 Connection between Values and Confidence in the EU

The concept of institutional trust applies to the European Union due to its responsibility for adopting, applying and enforcing laws on the European level. The European Commission plans, prepares and proposes new European legislation due to its "right of initiative." The EU laws secure the interests of the Union and its citizens and variety of stakeholders who may be affected such as citizens, public authorities, civil society or businesses can have their say in the process. The EU uses several legislative procedures to adopt laws. The procedure followed for a legislative proposal is determined by the type and subject of the proposal. The majority of EU laws are jointly adopted by the EU Parliament and Council, while in specific cases a single EU institution can adopt alone. The national parliaments of EU countries are consulted on all Commission proposals, and any changes or amendments to the EU treaties necessitate the approval of every EU state. Regarding apply the EU laws, it is worth noting that when regulations and decisions take effect, they become automatically binding throughout the EU on that date. Directives have to be incorporated into national law by the EU member states. Furthermore, the Commission monitors whether EU laws are applied correctly and timely and takes action if not (European Commission, 2018). Therefore, public confidence in the European Union refers to the public judgment of how the organization is capable of fulfilling its public role. It also highlights a belief in the integrity of decision-makers and their commitment to the public good (Gyorffy, 2018; Rosanvallon, 2008: 3–4).

The existing empirical evidence related to the link between materialists and post-materialist value orientations and the support for the European Union is still unclear. Anderson and Reichert (1996) found out that both, materialists and post-materialists were supportive of the European Integration but differently in different member states. "While there is a positive relationship between post-materialist values and EU support in 1982, 1986, and 1990 among the citizens of the older member states, there is significantly more support of EU among the materialists in the new member states in all three years" (Anderson and Reichert, 1996:244). In contrast, Gabel (1998) found out that materialists from 1978 to 1992 were opposing the EU integration in both original and later member states, while post-materialists showed their dissatisfaction with the EU only in later member states.

Post-materialists are more likely than materialists to have an identity that exceeds national boundaries. Inglehart and his followers (Nelsen, Guth and Fraser, 2001; Vreese and Boomgaarden,

2006) believe that value shift towards post-materialism in Europe will enhance people's support for European integration due to post-materialists' broader sense of cosmopolitanism. Compared with materialists' post-materialists are less parochial and more cosmopolitan (Inglehart 1977, 1990a). This is particularly important for European politics where this trend should increase the support for supranational governance. Although this process is complicated, along with the changes in values and skill levels, increase in support for supranational governance is probable (Inglehart, 1977; Nelsen, Guth and Fraser, 2001; Kelemen and Vogel, 2010).

Value orientations are one of the most potent predictors of supranational loyalty. Inglehart (1977) and his supporters (Nelsen, Guth and Fraser, 2001; Vreese and Boomgaarden, 2006) reckon that if the process of value change continues the supporters of the supranational European institutions will increase over time. Post-materialists feel more related to the related European institutions and are supportive towards them. The more educated, the wealthier, the younger are relatively supportive of having supra-national loyalties. Compared with materialists, post-materialists are not preoccupied with the sustenance and safety needs; therefore, they have enough energy left to invest in distant needs such as cosmopolitanism. It is worth noting that post-materialists emphasize greater on both their ethnic group belonging and supporting for European integration. Additionally, post-materialists' cosmopolitanism is highlighted by their high attachment to "Europe" or "the World", while materialists remain parochial and only a small fraction of them sees himself or herself as part of any supra-national units (Inglehart, 1977:334; Nelsen, Guth and Fraser, 2001; Vreese and Boomgaarden, 2006).

The European Union represents a vehicle for social, political, and economic reform toward a less nationalistic, more egalitarian society; thus, it should be more attractive to post-materialists than materialists. Materialists prioritize economic security and physical safety over the civil liberties, while post-materialists consider freedom of speech and giving say in governmental decisions as the most prominent values. Consequently, the EU's public role for materialists might be related to fostering their economic security and stability, while post materialists expect the promotion of civil liberties as the primary goal for the EU (Gabel, 1998:336, Inglehart, Rabier, and Reif, 1991:152). Article 2 of the Treaty on European Union says that: *"The Union is founded on the values of respect for human dignity, freedom, democracy, equality, the rule of law and respect for human rights, including the rights of persons belonging to minorities. These values are common to the Member States in a society in which pluralism, non-discrimination, tolerance,*

*justice, solidarity, and equality between women and men prevail."* (TEU, C326-17). The European Union is based on the values those are more prominent for post-materialists than materialists. Thus, they are expected to be more confident in the institution that stands for their values. As it was discussed above, Inglehart (1977) and his followers (Inglehart and Wezel, 2005; Nelsen, Guth and Fraser, 2001; Vreese and Boomgaarden, 2006) reckon that due to their parochialism and conservativeness, materialists are less likely to show support towards the supranational organization. In contrast, post-materialists with their cosmopolitan identity are expected to support European Union more, moreover, they are expected to feel much belonging to such bigger political institution and will be the strongest supporters of the European Union (Inglehart, 1977; Inglehart and Rabier, 1978; Dobratz, 1993; Inglehart and Wezel, 2005; Nelsen, Guth and Fraser, 2001; Vreese and Boomgaarden, 2006).

Compared to materialists, post-materialists are expected to benefit more from the European Union; thus, they might have more confidence in the European Union. Post-materialists have higher levels of political awareness and skills than materialists do and thus, they have better chances to identify themselves with a supra-national political institution such as the European Union. According to the Theory of Intergenerational Value Change (Inglehart, 1977, 1990) materialists tend to be less educated, poorly informed individuals with low incomes. Consequently, they might have insufficient knowledge of the European Union and be unable to seize the educational and professional opportunities offered by the European Union. Gabel (1998) employs a practical egocentric approach to claim that low-income groups who perceive the EU as a threat to their jobs and social welfare are most likely to oppose it. Within the EU, it appears that countries which are benefitting from the EU the most are more supportive towards the EU than those who are less likely to get benefits (Diven and Constantelos, 2010).

Post-materialists as educated, skilled and higher income people have better chances to seize opportunities deriving from the European Union and thus, are expected to have more confidence in the EU. Compared with uneducated people with lower income, the educated skilled and higher income people are better able to seize educational and economic opportunities deriving from the EU (Gabel, 1998); therefore, their evaluation of how the EU is capable of fulfilling its public role is expected to be more positive, and they are more likely to support the institution. McLaren (2006) claims that while only 48 % of manual workers agreed with the idea that EU membership was a positive development for their country, 70% of professionals and executives say the same. In



addition, McLaren (2006) argues that those who are more neutral than negative about the EU are potential losers from the EU (Diven and Constantelos, 2010). In order to judge the purpose of the European Union, realize its principal duties and assess its capacity of handling its public role, the higher education and information levels are needed. Educated people, generally, have better access to information, they are expected to know more about the purpose and work of the European Union and their judgment of EU's performance concerning meeting its core responsibilities might be more accurate. It is worth noting that incomplete information about a complex and moderately distant international institution can weaken support. Various scholars have emphasized the connection between imperfect information and skepticism. Popkin and Dimmock (2002) have considered this as “low information rationality” (Diven and Constantelos, 2010). Post-materialists are expected to be better informed about the European institutions that are remote and have an indirect relationship with the citizens. Additionally, familiarity with the European supra-national institutions makes them less threatening to them (Inglehart, 1977; cf. Dobratz, 1993; Inglehart and Wezel, 2005; Nelsen, Guth and Fraser, 2001; Vreese and Boomgaarden, 2006).

Based on the discussion above, this thesis posits the following hypotheses:

**Hypothesis 3a:** *Post-materialism is positively associated with trust in the European Union;*

**Hypothesis 4a:** *Materialism is negatively associated with trust in the European Union;*

However, the literature also lends support and credibility to a competitive set of expectations. The primary question might arise regarding materialists and post-materialists' confidence in the EU when it comes to their confidence in the national governments. Inglehart (Inglehart 1990a, pp. 9-11) reckons that the crisis of welfare states and citizens' growing lack of confidence in their national governments reflect post-materialist sentiments (Brooks and Manza, 1994:545). Kritzinger (2003) argues that due to lack of specific information on the EU and more direct relationship between the nation-state and its citizens, the public evaluation of the EU depends on the general performance of the nation-state. Thus, on the one hand, according to the theory of Intergenerational Value Change (1977, 1990), post-materialists are characterized as people whose trust is eroded in their national governments and on the other hand, if trust in the government is positively correlated with the confidence in the European Union, post-materialists are expected to be less confident about the EU. One of the most recent studies (Constantelos and Diven, 2010) explaining the confidence/trust in the international institutions found out that confidence in the European Union depends specifically on citizens' trust in significant social and

political institutions, such as the national governments and major companies. Constantelos and Diven (2010) indicated that citizens confidence in the EU is best explained by their personal experiences with the institutions closer to home. The other empirical evidence (Irwin 1995; Marsh and Franklin 1996: 11; van der Eijk and Franklin 1996, 2004; Marsh 1998; Anderson, 1998; Gabel, 1998; McLaren, 2002; Franklin 2002; van der Brug and vanderEijk 2007; Hobolt, Spoon and Tilley 2009) shows that trust in the national government determines the confidence in the European Union and if materialists maintain trust in their national governments (Inglehart 1977, 1990; Inglehart and Welzel, 2005) they are expected to be confident about the EU.

Based on the discussion above, this thesis posits the following rival hypotheses:

**Hypothesis 3b:** *Post-materialism is negatively associated with trust in the European Union;*

**Hypothesis 4b:** *Materialism is positively associated with trust in the European Union;*

## **1.4 Connection between Trust in the National Government and Confidence in the EU**

There is a fundamental disagreement between scholars who claim that confidence reflects utilitarian attitudes towards the benefits of membership and is a logical outgrowth of political experiences (Constantelos and Diven, 2010) and, and those who posit that trust is more deep-seated in personality and political socialization. There are two competed schools on this matter: the “attitude” school and the “second-order election” school. According to the “attitude” school, people make decisions in favor of or against the EU based on their values and preferences (Siune, Svensson and Tonsgaard 1992, 1994a, 1994b; Siune and Svensson 1993; Svensson 1994, 2002; Aardal et al. 1998; Uslander, 2002). The scholars of this school suggest that individual values and attitudes towards the European Union determine the citizens' voting behavior in the EU related referendums (Hobolt, 2009). The "second-order election" school claims that citizens' attitudes towards the EU are determined by the degree of support to their national governments (Franklin, Marsh and McLaren 1994; Franklin, Marsh and Wlezien 1994; Franklin, van der Eijk and Marsh 1995; Anderson, 1998; Gabel, 1998; McLaren, 2002; Franklin 2002).

Citizens' trust in the EU, their satisfaction or dissatisfaction with the institution is determined by the satisfaction with the performance of the national government and confidence in it. Citizen's attitudes towards the European Union are impacted by the level of confidence in their national governments. The scholars of this school reckon that European matters are generally

regarded as less important compared to the national issues; thus, people are against the European Union if they are dissatisfied with the performance of their governments. This is transparent in the context of EU related referendums where people might vote against further EU integration in order to punish their governments (Hobolt, 2009). The "second order" model claims that individual attitudes and values play a limited role in determining people's stands on the issues related to the European Union. Hobolt (2009) states that the various studies have shown that individual attitudes towards the European Integration do not play the prominent role in determining people's support towards the EU in the EU related elections and referendums. Instead, public attitudes towards the European Union are shaped by the degree of citizens' confidence in their national governments (Hobolt, 2009). The citizen's perception of the EU and their confidence in it is mostly impacted by domestic considerations and 'national political cues' (Irwin 1995; Marsh and Franklin 1996: 11; van der Eijk and Franklin 1996, 2004; Marsh 1998; Anderson, 1998; Gabel, 1998; McLaren, 2002; Franklin 2002; van der Brug and vanderEijk 2007; Hobolt, Spoon and Tilley 2009).

The evidence shows that the confidence in the European Union is positively correlated with the confidence in the national government. People's judgment of the EU is based on the presence of the positive impact that the EU had on their country. If the national government performs poorly, citizens' subjective evaluation of the EU might be negative too because EU's inability to make any difference. One current perspective on public confidence towards the European Union is that confidence and criticism in and of the organization is primarily a reflection of the trust in the national government (Anderson 1998). This effect is especially appraised in the context of referenda in the early 1990s when the results reflected government support (Franklin, Marsh and McLaren 1994). van Eijk and Franklin (1996) and Hobolt (2009) argue that European elections are fought not on a European level, but national issues. Due to shortage of knowledge and information on the EU, and more direct connection between the nation-state and the public, Kritzinger (2003) argues that the public judgement of the EU heavily depends on the general performance of a given nation-state.

Taking into consideration that the principal rationale for European integration was economic, it is not surprising that the perception of this benefit is an integral part of public support. The EU citizens' support towards the EU to some degree is based on citizens of the EU states scaling the potential benefits against the costs of being part of the EU. Public confidence in the EU is determined through the cost-benefit analysis of being part of the EU. Carry, and Tilley (2009)

highlighted that those wealthy Western societies that are attractive for immigrants, might show less trust in the EU than poorer Eastern member states of the EU. Garry and Tilley (2009) demonstrated that economic factors prevailing in a given nation state determine the public opinion of the EU. Specifically, they (Garry and Tilley, 2009) concluded that living in an EU country that receives a significant share of support from the EU acts as a "buffer" that diminishes the negative effect of nationalism on Euroscepticism. Similarly, citizens living in a country that is attractive to immigrants due to their country's economic advancement have more skeptical attitudes towards the EU. Thus, criticism and confidence in the EU is a reflection of domestic political issues. The nation-state is used as a proxy for attitudes about the EU (Irwin 1995; Marsh and Franklin 1996: 11; van der Eijk and Franklin 1996, 2004; Marsh 1998; Anderson, 1998; Gabel, 1998; McLaren, 2002; Franklin 2002; van der Brug and vanderEijk 2007; Hobolt, Spoon and Tilley 2009). Although the analysis is not conducted on a country level and the thesis does not aim at appraising public confidence in the EU in particular countries for later comparisons, the study wants to scrutinize whether and how trust in the government on an individual level impacts public confidence in the EU.

Based on the discussion above, this thesis posits the following hypotheses:

**Hypothesis 5:** *Trust in the national government is positively associated with trust in the European Union.*

## **2. Methodology, Research Methods, and Measurement**

### **2.1 Data and Sample**

The research aims to appraise the relationship between materialist and post-materialist values, trust in the national government and confidence in the European Union. To that end, the World Values Survey (WVS) is the most applicable data source. The WVS describes itself as “the world’s most comprehensive investigation of political and socio-cultural change.” (Constantelos and Diven, 2010) It is a leading dataset containing measurements of EU citizens' materialist and post-materialist values and is commonly used to analyze public attitudes towards the European Union. It is worth noting that the WVS was built on the European Values Survey that was initially modeled on the Eurobarometer (series of public opinion surveys carried out regularly addressing a wide variety of issues relating to the European Union throughout its member states (Norris 2009)). While the World Values Survey (WVS) might not provide the profundity or specificity of the Eurobarometer on EU issues, it is the most valuable source as it asks a broader set of questions about core values of citizens; moreover, the latest data from Eurobarometer on materialist and post-materialist values was collected in 2010 (73.1 Eurobarometer). The priority was given to the most recent sixth wave (2010-2014) of World Values Survey that includes numerous questions that allow testing the hypotheses of a given thesis.

In this research, the analysis is conducted at an individual level for a total number of 12 414 cases in nine European Union countries. The sixth wave of the WVS was carried out in 57 countries between 2010 and 2014. The data were publicly released in 2016. Nine EU member states participated in the survey: Romania, Cyprus, Estonia, Germany, Poland, Netherlands, Slovenia, Spain, and Sweden. There is a geographical balance between Western and Central and Eastern Europe (4 and 5 cases respectively) and countries of various sizes are included (Spain at one extreme and Cyprus at the other). It is worth noting that the study results can be generalized about nine EU member states due to the representative sampling in respective countries. However, taking into considerations the limitations of the dataset (the presence of only nine EU member states), it would hardly be reliable to generalize from these observations about the European Union as a whole.

The thesis findings rely on the data analysis collected through the public opinion survey that has several limitations. For instance, while researching mass attitudes, people find it difficult to reveal how they feel and might give partial and random responses. A series of in-depth

interviews would give a more accurate statement of one's opinions, but the cost of depth interviews makes it easier for researchers to employ survey interviews and rely on these results. Besides, in survey research, the cutting points might not be identical in different languages when comparing the results of two or more countries. For example, it should not be assumed that confidence for Estonians means the same as confidence for Germans. Different people might not understand concepts similarly; however, within given samples comparisons are quite accurate. This thesis does not compare the results from various countries to each other; it tests whether a phenomenon occurs within a particular sample. Thus, this particular limitation does not affect the findings of this study (Bryman, 2008; Brians, Willnat, Manheim and Rich, 2011).

Although the public opinion survey is not the best tool to analyze public attitudes and values, it has one crucial advantage. It enables researchers to obtain a larger number of cases in comparison with in-depth and focuses group interviews. A large N is essential to make valid, reliable and generalizable results. The large N also enables scholars to scrutinize phenomena in cross-national perspective. Although the considerable amount of fluctuation characterizes the public survey at the personal level, the overall distribution of cases is quite reliable. It is worth noting that if survey research is skillfully used, it can be one of the most general tools available in social science (Brians, Willnat, Manheim and Rich, 2011).

## **2.2 Variable Operationalization**

This analysis will use logistic regression analysis to examine the impact of several factors such as gender, age, education, income levels and trust in the national government that are already discussed in the literature on confidence in the European Union, as well as others such as materialist and post-materialist values that have not previously been examined thoroughly. Trust in the national government and confidence in the EU are primary dependent variables of this study; however, one of the models uses trust in the national government as an independent variable in order to scrutinize its impact on confidence in the EU. The independent variables are grouped into three categories that for the sake of simplicity are called demographics (gender, age, education, income level), values (materialist and post-materialist), and trust (confidence in the national government). According to the hypothesis based on Inglehart and his supporters (Inglehart, 1977; cf. Dobratz, 1993; Inglehart and Wezel, 2005; Nelsen, Guth and Fraser, 2001; Vreese and Boomgaarden, 2006) post-materialism is negatively associated with confidence in the national government and it is positively correlated with trust in the European Union. However, significant

number of scholars (Irwin 1995; van der Eijk and Franklin 1996, 2004; Marsh 1998; Anderson, 1998; Gabel, 1998; McLaren, 2002; Franklin 2002; van der Brug and vanderEijk 2007; Hobolt, Spoon and Tilley 2009) claim that confidence in the national government is positively associated with trust in the European Union making materialists more confident in the EU.

The purpose of the research is to analyze whether the material and post-material values have an impact on trust in institutions, more specifically on confidence in the national government and the European Union; additionally, the thesis aims at appraising the relationship between trust in national government and confidence in the European Union. The research wants to appraise whether individual materialist and post-materialist values and trust in the national government have an impact on public confidence in the European Union. To that end, two separate models will be run for empirical analysis. The first model will examine the relationship between materialist and post-materialist values as independent variables along with demographic control variables and trust in the national government as the dependent variable. The second model will comprise of all independent (values and trust in the national government) and control (demographics) variables in order to analyze their impact on confidence in the European Union (the dependent variable).

### **2.2.1 Dependent Variables**

The dependent variables, trust in the national government and confidence in the European Union, were ordinal variables which were recoded into dichotomous variables (complete descriptions of the WVS questions and the coding of dichotomous variables are provided in Appendix 1). The academic literature related to the public confidence in national and supranational institutions uses the similar measures of public confidence, especially when analyzing survey data. Therefore, the face validity applies to the dependent variables of this thesis. It is worth noting that along with confidence/trust in the EU, scholars sometimes use support for the EU integration. However, the World Values survey (6th wave) did not ask a question about support for the EU integration.

Trust in the national government and confidence in the European Union were measured in the survey on a four-point scale. EU citizens were asked how much confidence they had in their national government and in the European Union, a great deal of confidence, quite a lot of confidence, not very much confidence or none at all. To reaggregate them, each was recorded dichotomously to have value 0 for no confidence, no support, or negative assessment and 1 for confidence, support, or positive evaluation (see Appendix 1). “don’t knows” in all cases were

coded as “missing.” (See Appendix 1). Listwise deletion of missing values was used, yielding a sample of 12 085 (trust in the national government) and 11 707 (confidence in the European Union) observations.

“The English version of the WVS uses the word *confidence* rather than *trust*. The existence of robust literature on the multiple meanings of trust would argue for a careful analysis of the different conceptualizations of these terms, as would Crepaz’s (2008) recent work, which distinguishes the concepts when applying them to international institutions. This concern is hindered, however, by the observation that identical terms are used for *confidence* and *trust* in the German (*vertrauen*), French (*confiance*), Italian, Spanish, Dutch and variety of other versions of the WVS” (Constantelos and Diven, 2010: 5). Therefore, in this research, these concepts are treated synonymously.

In all countries, which were included in the analysis 36% (4300) of respondents have trust in the national government, and 64% (7785) of them do not have trust in it while 43% (5061) of respondents have confidence in the European Union and 57% (6646) do not have trust in the institution.

### 2.2.2 Independent Variables

The independent variables are grouped into three categories including values (materialist and post-materialist), trust (confidence in the national government) and demographics (gender, age, education, and income level).

To test the materialist and post-materialist hypothesis, the materialist 4-items and 12-items indexes were used. These indexes were created and applied by Ronald Inglehart in 1973 and 1983 respectively; since then the measurements have been employed in a variety of studies concerning citizens’ material and post-material values. In order to create the so-called *four-item index*, representative national samples of the population over seventeen years of age in nine European Union states were asked to choose two the most desirable options among “maintaining order in the nation”, “giving the people more say in important political decisions”, “fighting rising prices” and “protecting freedom of speech”. Two choices were given; thus, a respondent was able to choose any of six possible pairs. Choice of the first of these four items (“order”) emphasizes physical safety; selection of the third item (“prices”) prioritizes economic stability. It is probable that citizens who select one of these items might be likely to select the other item, too: physical and economic insecurity tend to go together. For example, if a country is invaded or the nation has



insecurities regarding national security, there is likely to be both economic dislocation and fear of losing a life. Economic decline is often associated with the domestic disorder. Materialist set of value priorities emphasize economic stability and order. By contrast, selection of the items such as political participation and free speech puts the emphasis on two post-materialist values that generally are paired together. From the choices made among these four items, the respondents were classified into six value priority types, ranging from a pure materialist type (0) to a pure post-materialist type (1), with four mixed categories (2) in between (Inglehart, 1977). In this research, the materialist type was coded as 1, rest of the value types were coded as 0. To capture post-materialists the post-materialist type was coded as 1, rest of them were coded as 0 (see Appendix 1). Listwise deletion of missing values was used, yielding a sample of 11 995 observations. In all countries, which were included in the analysis 26% (3068) of respondents have materialist values (4-item index), 14% (1626) have post-materialist values (4-item index), and 60% (7301) hold mixed values (4-item index).

In order to reduce the amount of error in measurement that is always a significant problem in survey research, along with four-item index Inglehart (1977) created *the materialist and post-materialist values' 12-item index* (Inglehart, 1977:39). This thesis uses the materialist and post-materialist values' 12-items index in its regression analysis models. When replying to public survey questions, a considerable number of respondents provide fractional answers. Thus, it is problematic to distinguish between those whose responses reflect a genuine attitude and those whose answers are basically pointless. Nonetheless, a big number of related questions might provide a set of reliable responses that possibly mirror an actual underlying preference. Since 1973, along with the four items from the original value priorities index, eight additional goals were also supplemented to the previous four-item materialist and post-materialist index. Among them, six items were intended to emphasize the physiological or materialist needs. "Rising prices", "Economic growth" and "Stable economy" being aimed at the sustenance and economic needs; and "maintain order," "fight crime" and "strong defense forces" being aimed at the safety needs. The remaining six items were designed to tap various post-materialist needs. "More say on the job", "less impersonal society," "more say in government" refer to needs of belonging and "protect free speech," "more beautiful cities" and "ideas count" emphasize expressive and intellectual needs. The latter needs are viewed as potentially universal: every human being has a need for esteem, an aesthetic satisfaction and an inherent intellectual interest; he or she will act on these

needs unless conditions force one to suppress them. The emphasis on the six post-materialist items will generate one cluster, with the materialist items in another separate category. The relative rankings for twelve crucial goals will be obtained by these types of questions. The introductory sentences are putting the questions in a distant time frame, and far-reaching societal goals are dealt with the choices rather than the instantaneous desires of the respondent. The long-term concerns rather than respondents' immediate needs are being tapped through these questions on values. To permit the full coverage of the Maslow's need hierarchy, the twelve options themselves were created. The respondents were categorized into six value priority types, ranging from a pure materialist type (0) to a pure post-materialist type (5), with four mixed categories (1,2,3,4) in between. The first three value priority types (0,1,2) including pure materialists (0) were coded as 0, the remaining categories (3,4,5) with pure post-materialists (5) were coded as -1 (see *appendix 1*). Listwise deletion of missing values was used, yielding a sample of 11 707 observations. In all countries, which were included in the analysis 56% (6587) of respondents have materialist values (12-item index) while 44% (5120) of them hold post-materialist values (12-item index).

*Trust in the national government* is an ordinal variable and was measured on a four-point scale. EU citizens were asked how much confidence they had in their national government, a great deal of confidence, quite a lot of confidence, not very much confidence or none at all. To reaggregate them, I recoded each dichotomously to have value 0 for no confidence, no support, or negative assessment and 1 for confidence, support, or positive evaluation (see Appendix 1). "Don't know" in all cases were coded as "missing." (See Appendix 1). Listwise deletion of missing values was used, yielding a sample of 12085 observations. In all countries, which were included in the analysis 36% (4300) of respondents have confidence in the national government, and 64% (7785) of them do not have trust in it.

*Age in years* is a continuous variable (See *appendix 1*). The listwise deletion of missing values was used, yielding a sample of 12 410 observations. In all countries, which were included in the analysis the youngest respondent was 17 years old (3 respondents) and the oldest one was 99 years old (1 respondent). The average age of the respondent is 49. In addition to that, the different dummy variables were created in order to assess the impact of different age cohorts concerning their confidence in the European Union (See *appendix 1*).

*Sex* was identified through "respondent's gender by observation," the male was coded as 1 and female was coded as 0. Listwise deletion of missing values was used, yielding a sample of

12411 observations. Overall, in all countries, which were analyzed 54% (6680) of respondents were female and 46% (5731) were male.

*Education* is an ordinal variable and was measured on a nine-point scale. EU citizens were asked what was the highest educational level they had attained among no formal education, incomplete primary school, complete primary school, incomplete technical or vocational school, complete technical or vocational school, incomplete secondary university-preparatory type of school, complete secondary university-preparatory type of school, some university-level education, without degree and university - level education, with degree. To emphasize on "higher education," I re-coded this variable dichotomously to have value 1 for university-level education, with a degree and 0 for all other options, excluding "don't knows" that were coded as "missing." I coded "low education" dichotomously too and reaggregate no formal education, incomplete primary school, complete primary school, incomplete technical or vocational school, complete technical or vocational school by assigning a value of 1 and 0 for all other options, excluding "don't knows" that were coded as "missing" (see *Appendix I*). List wise deletion of missing values was used, yielding a sample of 12 328 observations. In all countries, which were included in the analysis 19% (2284) of respondents have university-level education with diploma and 35% (4303) have lower level education (no formal education, incomplete primary school, complete primary school, incomplete technical or vocational school, incomplete secondary university-preparatory type of school, complete technical or vocational school). People with secondary education (46%) constitute the reference category.

*"Satisfaction with the financial situation of household"* and *"scale of income"* are ordinal variables and were measured on "Sten scores." EU citizens were asked how satisfied they were with the financial situation of their households and to identify their households' income levels (see *Appendix I*). It is worth noting that "Sten scores" divide a scale into ten units and in principle, it is an ordinal scale because the response categories have a rank order. However, it has become a common practice to assume that "Sten" is an interval scale. If a researcher treats it as an ordinal scale, due to the absence of mean, parametric tests cannot be performed. Thus, equal distance is assumed between "Sten" categories (Cohen, Manion and Morrison, 2002). Therefore, in this study, *"Satisfaction with the financial situation of household"* and *"scale of income"* are treated as scale variables. Listwise deletion of missing values was used that yielding a sample of the 12331 observations in case of *"satisfaction with the financial situation of the household."* In all

countries, which were included in the analysis the mean of the variable was 6 (1 meant completely dissatisfied and 10 - completely satisfied). In the case of "scale of income" without missing values, the sample was 11 720 observations, and the mean was 5 (1 meant the lowest step and 10 –the highest step).

## 2.3 Binomial Logistic Regression Model

The relationship between the independent variables (materialist and post-materialist values, trust in the national government, demographics) and a dependent variable (confidence in the European Union) is assessed through binomial logistic regression. The binomial logistic regression is part of a larger statistical group of tests known as Generalized Linear Models (GzLM). These tests are an addition of linear models (e.g., multiple regression) to include dependent variables that are measured on dichotomous or ordinal measurement scales rather than continuous scale (Leard Statistics, 2015; Hosmer, Lemeshow and Sturdivant, 2013; Tabachnick and Fidell, 2014). “Like multiple regression, binomial logistic regression allows a relationship to be modeled between multiple independent variables and a single dependent variable where the independent variables are being used to predict the dependent variable” (Leard Statistics, 2015). However, when the dependent variable is dichotomous, the binomial logistic regression is used. “Besides, a transformation is applied so that instead of predicting the category of the binomial logistic regression directly, the logit of the dependent variable is predicted instead”. For example, if we consider four independent variables to be "X1" through "X4" and the dependent variable to be "Y," a binomial logistic regression models this:

“Logit(Y) =  $\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$ .

Where:

- 1)  $\beta_0$  is the intercept (also known as the constant);
- 2)  $\beta_1$  is the slope parameter (also known as the slope coefficient) for  $X_1$ , and so forth;
- 3)  $\varepsilon$  represents the errors.

This represents the population model, but it can be estimated as follows:

$$\text{Logit}(Y) = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + e$$

In the formula above:

- 1)  $b_0$  is the sample intercept (aka constant) and estimates  $\beta_0$ ;
- 2)  $b_1$  is the sample slope parameter for  $X_1$  and estimates  $\beta_1$ , and so forth;
- 3)  $e$  represents the sample errors/residuals and estimates  $\varepsilon$ .

A *logit* is the natural log of the odds of an event occurring. It has little direct meaning. However, by applying an anti-log, it can have a much more interpretative meaning” (Leard Statistics, 2015).

For a binomial regression at least two variables should be present – one dependent variable and one independent variable. In binomial logistic regression, the independent variables should be either “scale” variables or “nominal” variables. If any of the independent variables were measured on an ordinal scale, it is needed to decide whether to enter these as continuous or nominal variables. They cannot be entered in regression analysis as ordinal variables. In this research, the majority of relevant variables were measured on an ordinal scale; however, they were re-coded as dichotomous variables (see *Appendix I*). Variables such as "scale of income," "age" and "satisfaction with the financial situation of your household" were entered as "scale" variables in the analysis.

A vital part of the process of analyzing data through the binomial logistic regression contains checking the data to make sure it can be analyzed using this test (Leard Statistics, 2015). Binomial logistic regression has seven assumptions that need to be considered. The assumptions of a binomial logistic regression will allow providing information on the accuracy of the predictions; testing how well the regression model fits the data; determining the variation in the dependent variable explained by the independent variables and testing hypotheses on the regression equation.

These are five significant assumptions of the binomial logistic regression: first, the dependent variable should be dichotomous. Second, there should be at least one or more independent variables, which can be either continuous variables or nominal variables. “Third, there should be the independence of observations, and the categories of the dichotomous dependent variable and all nominal independent variables should be mutually exclusive and exhaustive and fourth, there should be minimum of 15 cases per independent variable” (although some recommend 50 cases per independent variable) (Leard Statistics, 2015).

“A binomial logistic regression must meet other three assumptions that relate to how the data fits the binomial logistic regression model in order to provide a valid result. First, there should be a linear relationship between the continuous independent variables and the logit transformation of the dependent variable. Second, there should be no multicollinearity, and third, there should be no significant outliers, leverage or influential points” (Leard Statistics, 2015; Hosmer, Lemeshow and Sturdivant, 2013; Tabachnick and Fidell, 2014).

The assumption of linearity necessitates that the linear relationship between the scale independent variables, "satisfaction with the financial situation of household," "scale of income" and "age" and the logit transformation on the dependent variable, "having confidence in the EU." The linearity of the continuous variables concerning the logit of the dependent variable was assessed via the Box-Tidwell (1962) procedure (a detailed account of the Box-Tidwell (1962) procedure that was used to test the assumption of linearity is available in *Appendix 2*). A Bonferroni correction was applied using all terms in the model resulting in statistical significance being accepted when  $p < 0.0042$  (Tabachnick and Fidell, 2014). Based on this assessment, the continuous independent variables – "*satisfaction with the financial situation of household*" and "*scale of incomes*" were found to be linearly related to the logit of the dependent variable; However, the continuous independent variable – "age" was not linearly related to the logit of the dependent variable. In order to observe the impact of age on the dependent variable, first, the continuous variable of age was split into ordinal categories (age groups) and then two dichotomous variables of "young people (17-24)" and "old people (55+)" were created (see *appendix 1*).

Multicollinearity occurs when two or more independent variables are highly correlated with each other. This makes it difficult to recognize the variance explained in the dependent variable is contributed by which independent variable. Multicollinearity can be detected through an inspection of correlation coefficients and tolerance/VIF values, which give information whether the data meets or violates this assumption. In this study, none of the independent variables were highly correlated with each other; thus, multicollinearity did not occur.

Finally, there should be no high leverage points, highly influential points or significant outliers. When performing a binomial logistic regression analysis, outliers, leverage and influential points are used to represent observations in the data that are unusual. These distinguishing classifications of unusual points reproduce the various influence they might have on the regression equation. However, all these points can have a negative effect on the regression line that predicts the value of the dependent variable based on the independent variables (further information about testing for outliers using case diagnostics is available in *Appendix 3*). In this research no outliers, leverage and influential points were present; thus, the statistics did not show the casewise diagnostic table (Leard Statistics, 2015; Hosmer, Lemeshow and Sturdivant, 2013; Tabachnick and Fidell, 2014).

### 3. Results of Binomial Logistic Regression Analysis

The empirical analysis consists of two models. The first model will examine the relationship between materialist and post-materialist values and trust in the national government. It will include the socio-demographic (control) variables. The second model will appraise the impact of individual materialist and post-materialist values, trust in the national government and socio-demographic control variables on confidence in the European Union.

#### 3.1 Model I – The Impact of Materialist and Post-materialist Values on Trust in the National Government

The first model of a binomial logistic regression was performed to ascertain the effects of “gender (male)”, “young people”, “old people”, “higher education”, “low education”, “post-materialist values”, “scale of income (V239)” and “satisfaction with the household income” on the likelihood that participants have confidence in the government. The logistic regression model was statistically significant ( $\chi^2(8) = 399.468$ ,  $p < .0005$ ; Hosmer and Lemeshow test ( $p < .161$ ). The Nagelkerke  $R^2$  was 0.049 and with the independent variables the model correctly classified 64.7% of cases (compared with 63.7% without any independent variables). Out of eight predictor variables, only two were not statistically significant: low education ( $p=0.672$ ) and “gender (Male)” ( $p=0.155$ ) (as shown in *Table 1*).

*Table 1.* Logistic regression results: effects of values and socio-demographic variables on confidence in the national government

	B	Wald	Sig.	Exp(B)	95% C.I. for EXP(B)	
					Lower	Upper
Gender (male)	-.058	2.024	.155	.944	.871	1.022
Post-materialists (12item)	-.102	6.143	.013	.903	.832	.979
Low education	-.020	.180	.672	.980	.892	1.076
Higher education	.331	36.571	.000	1.393	1.251	1.550
Older people (55+)	.342	59.571	.000	1.408	1.291	1.536
Young people (17-24)	.256	14.283	.000	1.292	1.131	1.475
Scale of income	.076	38.415	.000	1.079	1.053	1.105
Satisfaction with the household income	.100	101.530	.000	1.105	1.084	1.127
Constant	-1.710	469.631	.000	.181		

Note: Data from the World Values Survey (2016). N=12 414.

*Table 1 (page 39)* shows the contribution of each independent variable to the model and its statistical significance. The Wald test ("Wald" column) is used to determine statistical significance for each of the independent variables. From these results we can see that post-materialists (12items) ( $p=0.013$ ), Higher education" ( $p=0.000$ ), old people" ( $p=0.000$ ), Young people" ( $p=0.000$ ), "scale of income (V239)" ( $p=0.000$ ) and "satisfaction with the household income (V59)" ( $p=0.000$ ) added significantly to the model/prediction; However, low education ( $p=0.672$ ) and Gender (Male) ( $p=0.155$ ) did not add significantly to the model.

The  $B$  coefficients ("B" column) predict the probability of an event occurring, but not in an immediately intuitive manner. The coefficients show the change in the log odds that occur for a one-unit change in an independent variable when all other independent variables are kept constant. Thus, the log odds change for higher education is 0.331 which is the increase in log odds (as  $B$  is positive) for people with university-level education (As people with university-level education were coded as "1" and all others "0").

The odds ratios of each of the independent variables in the "Exp(B)" column along with their confidence intervals ("95% C.I. for EXP(B)" column) inform about the change in the odds for each increase in one unit of the independent variable. For example, for higher education, an increase in one unit (i.e. having university level education) increases the odds by a factor of 1.393. The odds of having confidence in the national government ("yes" category) is 1.393 times greater for people with university-level education as opposed to others. Values less than 1.000 indicate decreased odds for an increase in one unit of the independent variable. An increase in one unit (being post-materialist (12 items)) decreases the odds by a factor of 0.903. The odds of having confidence in the government ("yes" category) is lower by a factor of 0.903 for people who have post-materialist values. People with post-materialist values had 0.102 times lower odds to exhibit confidence in the government than materialists (If the odds ratio is inverted (e.g.,  $1/0.903$ ) for each unit reduction in post-materialism, the odds of having confidence in the national government increases by a factor of 1.10). Both young and old ages were associated with an increased likelihood of exhibiting confidence in the EU; however, old people are slightly more confident in the government than the younger generation.

The statistical analysis of the first model accepts the hypotheses 1 and 2. It supports the claim that people with post-materialist values were associated with a reduction in the likelihood of



having confidence in the government (H1) while materialism is positively associated with trust in the national government (H2).

### 3.2 Model II – The Impact of Values and Trust in the National Government on Public Confidence in the EU

The second model of a binomial logistic regression was performed to ascertain the effects of post-materialist values, trust in the national government, gender (male), young people, old people, higher education, low education, scale of income (V239) and satisfaction with the household income on the likelihood that participants have confidence in the European Union. The logistic regression model was statistically significant ( $\chi^2(8) = 1161.411$ ,  $p < .0005$ ; Hosmer and Lemeshow test ( $p < .586$ ). The Nagelkerke  $R^2$  was 0.049, and with the independent variables, the model correctly classified 66.4% of cases (compared with 55.8% without any independent variables). Out of nine predictor variables, only two were not statistically significant: low education ( $p=0.345$ ) and satisfaction with the household income ( $p=0.480$ ) (as shown in *Table 2*).

*Table 2.* Logistic regression results: effects of values, trust in the national government and socio-demographic variables on confidence in the EU

	B	Wald	Sig.	Exp(B)	95% C.I. for EXP(B)	
					Lower	Upper
Gender (male)	-.163	15.223	.000	.850	.783	.922
Post-materialists (12 items)	-.141	11.071	.001	.869	.800	.944
Low education	.046	.890	.345	1.047	.952	1.152
Higher education	.195	11.699	.001	1.215	1.087	1.359
Trust in national government	1.308	901.417	.000	3.699	3.396	4.029
Older people(55+)	-.137	8.905	.003	.872	.798	.954
Young people (17-24)	.395	32.684	.000	1.485	1.297	1.700
Scale of income	.068	29.170	.000	1.071	1.044	1.097
Satisfaction with the household income	-.007	.499	.480	.993	.974	1.013
Constant	-.914	138.797	.000	.401		

Note: Data from the World Values Survey (2016) N=12 414

*Table 2* shows the contribution of each independent variable to the model and its statistical significance. From these results we can see that post-materialists (12items)( $p=0.001$ ), higher education” ( $p=0.001$ ), old people ( $p=0.003$ ), young people (0.000) and scale of income (V239)

( $p=0.000$ ) added significantly to the model/prediction; However, low education ( $p=0.345$ ) and satisfaction with the household income ( $p=0.480$ ) did not add significantly to the model.

The log odds change for higher education is 0.195 which is the increase in log odds (as  $B$  is positive) for people with university-level education. The odds ratios of higher education inform that an increase in one unit (e.i having university level education) increases the odds by a factor of 1.215. The odds of having confidence in the EU is 1.215 times greater for people with university-level education as opposed to others. For trust in the national government, an increase in one unit (e.i having trust in the national government) increases the odds by a factor of 3.699. The odds of having confidence in the EU ("yes" category) is 3.699 times higher for people with trust in their national governments as opposed to others. Concerning post-materialist, an increase in one unit (being post-materialist (12 items)) decreases the odds by 0.869. The odds of having confidence in the EU are lower by a factor of 0.869 for people who have post-materialist values. People with post-materialist values had 0.869 times lower odds to exhibit confidence in the EU than materialists (If the odds ratio is inverted (e.g.,  $1/0.869$ ) for each unit reduction in post-materialism, the odds of having confidence in the European Union increases by a factor of 1.15). Younger age was associated with increased and older people with a decreased likelihood of exhibited confidence in the EU.

The statistical analysis of the second model supports the hypothesis 5 and proves that trust in the national government is positively associated with confidence in the European Union. The analysis leads us to reject the hypotheses 3a and 4a and accept the rival hypotheses 3b and 4b. The analysis supports to the claim of rival hypotheses that people with post-materialist values are associated with a reduction in the likelihood of having confidence in the EU (H3b) while materialism is positively associated with trust in the EU (H4b).

## 4. Discussion and Conclusions

The thesis set out to appraise the relationship between the individual materialist and post-materialist values and public confidence in national and supranational institutions, more specifically trust in the national government and the European Union. The propositions developed in this thesis were based on the theory of intergenerational value change developed by Ronald Inglehart. Inglehart and his followers reckon that growing numbers of post-materialists in Western industrial countries decrease public confidence in national governments due to post-materialists' distrust in national institutions. Taking this into consideration the given study developed two propositions about the relationship between the materialist and post-materialist values and trust in the national government. The first hypothesis (H1) suggests that post-materialism is negatively associated with trust in the national government, while the second hypothesis posits (H2) the positive relationship between materialism and confidence in the national government.

Regarding public confidence in supranational institutions, specifically the European Union, the explanation developed in this thesis relates to two competing “attitude” and “second-order election” schools on this matter. According to the “attitude” school, people make decisions in favor of or against the EU based on their values and preferences. Ronald Inglehart and his supporters fall under this category. The “second-order election” school claims that citizens' attitudes towards the EU are determined by the degree of their support to the national governments. The thesis assessed the extent to which individual materialist and post-materialist values affect public confidence in the EU and which value orientations have positive and/or negative effect on it. Moreover, the given study also aimed to scrutinize the relationship between trust in the government and confidence in the EU. Inglehart and his followers claim that post-materialism is positively associated with cosmopolitanism and thus, post-materialists are expected to be more supportive and trusting towards the European Union (H3a). Inglehart and his supporters believe that due to materialists' parochialism and confidence in the national institutions they distrust the EU (H4a). In contrast, scholars of “second order election” school claim that people who trust their national governments will trust the European Union, too (H5). Therefore, if post-materialists are dissatisfied and skeptical about their national governments, they will have less confidence in the EU (H3b). On the contrary, materialists who maintain trust in their national institutions will reveal more trust in the EU (H4b). The thesis developed a number of empirical propositions consistent

with each account and appraised the empirical validity of its hypotheses, using data from the sixth wave of the World Values survey.

The empirical results suggest the following account of the observed public confidence in the national government in nine EU member states. According to the research findings, people who support the national government are materialists; post-materialists reveal distrust towards their national governments. People with higher education trust the government more than people with secondary education, while lower education does not have a significant impact. Both young (17-24) and old people (55+) show more confidence in the national government than middle-aged respondents. It is worth noting that people with higher scales of income and citizens who are satisfied with their household revenues are confident in the government. The empirical results supported the first and second hypothesis (H1 and H2) by illustrating materialists' confidence and post-materialists' distrust in the national government. The empirical results of a given study backed Inglehart and his followers' claim that while the majority of the governments are operating on a material base, materialists stay supportive of the established order and post-materialists who give lower importance to economic well-being and security reveal a lack of confidence in the conventional institutional arrangements.

Regarding the public confidence in the European Union the research findings show that individual materialist and post-materialist values and trust in the national government have a significant impact on public confidence in the EU. The empirical results illustrated that both, having materialist values and trusting national government are positively affecting public confidence in the EU. Post-materialist value orientations are negatively associated with public confidence in the European Union. It is worth noting that compared with individual values trust in the national government is a stronger determinant of confidence in the European Union. Additionally, the empirical evidence demonstrated that women have more confidence in the EU more than the men; furthermore, younger, educated and wealthier individuals are more confident about the European Union;

The empirical results related to the public confidence in the European Union supported both "attitude" and "second-order election" schools on the public confidence in the European Union. The results of the regression models led us to accept hypotheses 5, 4b and 3b, which claimed that if individuals trust their national government, they are expected to be confident about the European Union (H5), people with materialist values have more confidence in the EU (H4b)

while post-materialist value orientations are negatively associated with trust in the EU (H3b). The “second-order election” school claims that citizens’ attitudes towards the European Union are determined by citizens confidence in their national government. Therefore, if materialists maintain trust in their national government and, post-materialists are frustrated by the state authority as Inglehart, and his supporters suggest, the “second-order election” school would claim about materialists’ confidence in the EU and post-materialists’ skepticism of the institution EU. The empirical results of the given thesis supported to this claim.

The research findings did not back Inglehart and his followers’ expectations that compared with materialists, post-materialists in Europe would be more supportive towards the European integration project (the EU) due to their broader sense of cosmopolitanism. The empirical results rejected the hypotheses 3a and 4b claiming that post-materialism is positively associated with trust in the EU while materialism negatively impacts public confidence in the EU. It is worth noting that Inglehart links post-materialism to cosmopolitanism and he and his supporters perceive the European Union as a supranational, cosmopolitan project. The empirical evidence showed that post-materialism is negatively associated with both, confidence in the European Union and trust in their national government. One might argue that the explanation of this phenomenon might lie in post-materialists’ perception of the EU’s as an institution that lacks supranationalism and/or is still heavily subordinated by the nation-states.

Placed in the context of comparative scholarship on public confidence in the national government and the EU, the empirical results of a given thesis offer several new insights while also raising questions for future research. First, the research findings highlight that individual materialist and post-materialist values have an impact on public confidence in the national government. The empirical evidence suggests that while materialists are confident about the government, post-materialists are skeptical of it. Thus, the findings of this research lend credibility to the claim that while materialists remain supportive of the established order, post-materialists reveal a more change-oriented attitude and lack of confidence in the conventional institutional arrangements.

Second, the empirical evidence demonstrated that trust in the national government positively affects public confidence in the European Union. The results are aligned with scholarship on the “second-order election” school, which claims that confidence in the EU reflects the trust in the national government. It is worth to note that there is a fundamental disagreement

between this school and the “attitude” school, which posit that trust is more deep-seated in personality and political socialization. The research findings relate to the “attitude” school too by emphasizing the impact of values on public confidence in the EU.

Third, the research findings suggest that individual materialist and post-materialist values have an impact on public confidence in the European Union. The empirical evidence illustrated that while materialists have confidence in the European Union, post-materialists are skeptical of the institution. The analysis lends credibility to the “attitude” school by showing that individual values have a significant impact on public confidence in the European Union. While previous studies highlighted the discrepancies between “attitude” and “second-order election” schools by claiming that, either individual values or trust in the national government impact public confidence in the EU, the given study gave credibility to both approaches. It is worth noting that compared with individual values, trust in the national government has a bigger impact on public confidence in the European Union, though. The empirical results did not support Inglehart and his supporters’ claims that value shift towards post-materialism in Europe enhances people’s confidence and support for European Institutions. It is worth noting that Inglehart and his followers link post-materialism with post-materialists’ supranational loyalties. They reckon that while the EU strives for a less nationalistic and more egalitarian society, it should be more attractive to post-materialists than materialists. Indeed, evidence based on a 6<sup>th</sup> wave of World Values survey data does not support these propositions. Therefore, identifying whether the European Union is perceived as a supranational, less nationalistic institution by post-materialists still remains an important task for scholars seeking to understand the reasons behind cosmopolitan post-materialists’ skepticism towards the European Union.

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## Appendices

### Appendix 1

The coding of the ordinal variables into the dichotomous variables explained: variables included in the logistic regression

Variable name	Original Coding	New coding
Confidence: The European Union	1-A great deal 2-Quite a lot 3-Not very much 4-None at all -5-DE,SE:Inapplicable; Missing{Inappropriate} -4-Not asked in the survey -3-Not applicable -2-No answer -1-Don't know	1 –respondent has confidence in the EU 0 – does not have confidence All others coded as missing.
Values: Materialists 12-item index	0-Materialist Mixed1-1 Mixed2-2 Mixed3-3 Mixed4-4 5-Post-materialist -2-No answer	Respondent with material values (12-item index) -1 All other respondents -0 All cases with negative values in the original scale were coded as missing; Mixed values of 2 and 3 remain the reference category;
Values: Post-materialists 12-item index	0-Materialist Mixed1-1 Mixed2-2 Mixed3-3 Mixed4-4 5-Post-materialist -2-No answer	Respondent with post-material values (12-item index) -1 All other respondents -0 All cases with negative values in the original scale were coded as missing; Mixed values of 2 and 3 remain the reference category;
Values: Post-materialists 12-item index	0-Materialist Mixed1-1 Mixed2-2 Mixed3-3 Mixed4-4	Respondent with post-material values (12-item index) -1 A respondent with materialist values -0 All cases with negative values in the original scale were coded as missing;

	5-Post-materialist	
	-2-No answer	
Confidence: The national government	1-A great deal 2-Quite a lot 3-Not very much 4-None at all -5-DE,SE:Inapplicable; Missing{Inappropriate} -4-Not asked in the survey -3-Not applicable -2-No answer -1-Don't know	1 –the respondent has confidence in the government; 0 – respondent does not have confidence in the national government; All cases with negative values in the original scale were coded as missing;
Education: Low and high education levels	1- No formal education 2-Incomplete primary school 3-Complete primary school 4-Incomplete secondary school: technical / vocational type 5-Complete secondary school: technical / vocational type 6-Incomplete secondary school: university-preparatory type 7-Complete secondary school: university-preparatory type 8-Some university-level education, without a degree 9-University - level education, with a degree -5-AU: Inapplicable (No-school education) DE,SE:Inapplicable; SG: Refused; ZA:Other; Missing{Inappropriate} -4-Not asked -3-Not applicable -2-No answer -1-Don't know	A Variable for low education level: Respondents with less than a high (secondary) school diploma (1,2,3,4,6) -1; All other respondents -0;  A Variable for higher education level: Respondents with a university degree (9) -1; All other respondents -0;  Respondents with complete secondary (5,7) or uncompleted university-level (8) education remain the reference category;  Respondents with missing values on the education variable were deleted from the analysis.

Scale of Income	1-Lower step	N / A (I have changed the Scale of Income from “Ordinal” to “Scale” in the database) All cases with negative values in the original scale were coded as missing;
	2-second step	
	3-Third step	
	4-Fourth step	
	5-Fifth step	
	6-Sixth step	
	7-Seventh step	
	8-Eighth step	
	9-Ninth step	
	10-Tenth step	
	-5-DE,SE:Inapplicable ;	
	RU:Inappropriate response; BH:	
	Missing{ Inappropriate}	
	-4-Not asked	
	-3-Not applicable	
Sex	-2-No answer	Age in years 1 – male; 0 –female;
	-1-Don’t know	
	Age in years	
	1-Male	
	2-Female	
	-5-Missing; Unknown	
	-4-Not asked in the survey	
	-3-Not applicable	
Satisfaction with the financial situation of the household	-2-No answer	N/A (I have changed the Scale of Income from “Ordinal” to “Scale” in the database); All cases with negative values in the original scale were coded as missing;
	-1-Don’t know	
	1-Completely dissatisfied	
	2-2	
	3-3	
	4-4	
	5-5	
	6-6	
	7-7	
	8-8	
	9-9	
	10-Completely satisfied	
	-5-DE, SE: Inapplicable; RU:	

Inappropriate response{Inappropriate}

-4-Not asked in the survey

-3-Not applicable

-2-No answer; BH: Refused

-1-Don't know

Age groups

17-25-1

26-39-2

40-54-3

55+-4

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Note: Questions come from the sixth wave of the European Values Study (2016).

### Testing the continuous independent variables for linearity

The binomial logistic regression will be valid if continuous independent variables are linearly related to the logit of the dependent variable. This assumption can be tested using the Box-Tidwell (1962) procedure, which requires two procedures in SPSS Statistics:

The first part of the Box-Tidwell (1962) procedure requires that all continuous independent variables are first transformed into their natural logs. In this research, we need to perform natural log transformation on our three continuous independent variables: “*satisfaction with household income*,” “*scale of income*” and “*age*.” This will generate three new variables – “*In satisfaction with household income by satisfaction with household income*,” “*In scale of income by scale of income*” and “*In age by age*,” which are natural log transformations for “*satisfaction with household income*,” “*scale of income*” and “*age*.” Through the compute variables in SPSS statistics, these three new natural logs transformed variables were created.

The second part of the Box-Tidwell (1962) procedure requires the creation of the interaction terms for each of the continuous independent variables and their respective natural log-transformed variables. Since there are three continuous independent variables, this means that three interaction terms should be created: “*In\_satisfaction with household income\*in satisfaction with household income*” (The product of *In\_satisfaction with household income* by the *satisfaction with household income*), “*In\_Scale of incomes\*scale of income*” (The product of *In scale of income* by *Scale of Income*) and “*In\_age\*age*” (The product of *In\_age* by *age*).

These three interaction terms “*In\_satisfaction with household income \* satisfaction with household income*”, “*In\_scale of income\* scale of income*” and “*In\_age\*age*” then were entered into the binominal logistic regression procedure, together with the dichotomous dependent variable - “*having confidence in the EU*”, all three continuous variables – “*satisfaction with household income*”, “*scale of income*”, and “*age*” and the categorical independent variables - “gender (male)”, “post-materialists (12 items)”, “high education”, “low education” and “confidence in the government” in order to run the Box-Tidwell (1962) procedure.

If any continuous independent variables are not linearly related to the logit of the dependent variable, these variables have failed the assumption of linearity. However, there are ways to overcome this problem that will be discussed below.

In order to test for linearity Box-Tidwell (1962) procedure is run in SPSS statistics. To that end, we only need to consult the “Variables in the Equation” table, as shown below:

*Table 1.* Logistic regression results: testing for assumptions on linearity

<b>Variables in the Equation</b>						
	B	S.E.	Wald	df	Sig.	Exp(B)
Gender (male)	-.164	.042	15.383	1	.000	.849
Post-materialists (12 items)	-.138	.042	10.631	1	.001	.871
Low education	.048	.049	.953	1	.329	1.049
Higher education	.191	.057	11.276	1	.001	1.211
Trust in the Government	1.311	.044	899.517	1	.000	3.711
Age	-.166	.030	30.218	1	.000	.847
Scale of income	.135	.099	1.869	1	.172	1.145
Satisfaction with financial situation of the household	.102	.088	1.344	1	.246	1.107
In_Satisfaction with the household income by Satisfaction with the household income	-.041	.033	1.590	1	.207	.959
In_age by age	.033	.006	27.192	1	.000	1.033
In_scale of income by scale of income	-.027	.039	.476	1	.490	.973
Constant	.600	.341	3.097	1	.078	1.823

Notes: Data from the World Values Survey (2016). N=12 414.

On this table we need to look specifically for the rows that contain the interaction terms (i.e., the "In\_age by age, "In\_scale\_of\_income by scale of income" and In Satisfaction with household income by satisfaction with household income rows) and then examine the values in the "Sig." column for these rows. There are three interaction terms and the values in the "Sig." column for these interaction terms are highlighted.

If the interaction term is statistically significant, the original continuous independent variable is not linearly related to the logit of the dependent variable (i.e., it has failed the assumption of linearity). Although it is common practice to not correct for multiple comparisons



when interpreting terms in regression, it has been recommended as sensible to apply a Bonferroni correction based on all terms (including the intercept) in the model when assessing this linearity assumption (Tabachnick and Fidell, 2014).

In this research, there are twelve (12) terms in this model. These are three continuous independent variables – “*satisfaction with household income*”, “*scale of income*”, “*age*”, the categorical variables - “*gender (male)*”, “*post-materialist 12 (items)*”, “*high education*”, “*low education and confidence in the government*”, the three interaction terms - In\_age by age, In\_scale\_of\_income by scale of income, and In\_ *satisfaction with household income* by *satisfaction with household income* and the intercept (“Constant”).

Since there are twelve (12) terms in this model, I divided p-value at which significance is accepted – that is,  $p < 0.05$  – by the number of terms in the model. As such, the new level at which statistical significance would be accepted when  $p < 0.0042$  (i.e.,  $0.05 \div 12$ ).

Based on this new level of acceptance of statistical significance, we can see that the continuous independent variable “age” is not linearly related to the logit of the dependent variable. We know this because its p-value (0.000) is not above 0.0042).

The linearity of the continuous variables with respect to the logit of the dependent variable was assessed via the Box-Tidwell (1962) procedure. A Bonferroni correction was applied using all twelve terms in the model resulting in statistical significance being accepted when  $p < 0.0042$  (Tabachnick and Fidell, 2014). Based on this assessment, the continuous independent variables – “*satisfaction with household income*” and “*scale of income*” were found to be linearly related to the logit of the dependent variable; However, the continuous independent variable – “age” was not linearly related to the logit of the dependent variable. In order to observe the impact of age on the dependent variable, first, I split the continuous variable of age into ordinal categories (age groups) and then, created two dichotomous variables of “young people (17-24)” and “old people (55+)” (see appendix 1).

### Testing for outliers using case diagnostics

I had to check the binomial logistic regression results for cases which do not fit the model very well (e.g., outliers). It is worthwhile to mention that when using SPSS Statistics to run binomial logistic regression on the data, it is possible to detect the possible outliers, high leverage points, and highly influential points through the casewise diagnostics. The Casewise List table highlights cases where the cases (e.g., participants) with studentized residuals (i.e., the "ZResid" column) greater than  $\pm 2$  standard deviations. Cases with studentized residual values greater than 2.5 should be inspected in further detail to determine why these cases are outliers and to remove them from the analysis if this is necessary. A table called Casewise Diagnostics contains the relevant information. When all the cases have studentized residuals less than  $\pm 2$  like as in this research Casewise List table will not be produced as part of the SPSS Statistics output.