Lisbon School of Economics & Management
Universidade de Lisboa

MASTER
ECONOMICS

MASTER´S FINAL WORK
DISSERTATION

THE RELATIONSHIP BETWEEN TRUST AND ECONOMIC GROWTH

JOANA MIGUEL DE AGUIAR ÁLVARO ALEXANDRE

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SUPERVISION:
MARIA JOÃO COELHO GUEDES

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To my parents, who sacrificed and devoted themselves, so I had the opportunity to study. I owe everything I am to you, and if I'm proud of myself was for all the support in this journey.

GLOSSARY

AC – Absence of Corruption

CC – Control of Corruption

EU – European Union

GDP – Gross Domestic Product.

GE – Government Effectiveness

GFCF – Gross Fixed Capital Formation

ICP – Inflation Consumer Price

IL – Income Level

JEL – Journal of Economic Literature.

JI – Judicial Independence

MIC – Middle Income Country.

OLS – Ordinary Least Squares

PSAVT – Political Stability and Absence of Violence/Terrorism

RE – Random Effects

RL – Rule of Law

RQ – Regulatory Quality

SCI – Social Capital Initiative

SRE – Social Right and Equality

TC – Trustworthiness and Confidence

TG – Trust in Government

VA – Voice and Accountability

WGI – Worldwide Governance Indicators

WVS – World Value Survey

ABSTRACT, KEYWORDS AND JEL CODES

This dissertation examines the relationship between Trust in Government and Economic Development in 41 countries between 2010 and 2020. For this purpose, OLS and Random Effects (RE) models are estimated. The literature explains, together with other factors, that trust is a crucial aspect to define the behaviours of individuals, since in the daily life of each one there are different relationships between agents. When there is a breach of trust (distrust), whether between individuals (Interpersonal Trust), or trust in institutions such as the Government, Banks, Schools, among others (Institutional Trust), it will have repercussions on Economic Development. For this reason, this study analyses the assumption that the robust relationship between Trust in Government and Economic Growth depicts the well- working of institutions.

The findings of this study, when examining two regressions (OLS and RE), shown that there is a positive and statistically relationship between Trust in Government and Economic Development, which means that when there is greater Trust in Government it is verifiable Economic Development. Although the notion of Trustworthiness is similar to Trust, since it is the condition of a person/ institution's capacity to be worthy of trust, does not verify the same results as it is observable in the case of Trust in Government. In the case of the relationship between Trustworthiness and Confidence with Economic Growth, there was not found any relationship since there was no statistical significance when both concepts were examined. Just as important, it was found that there are no differences in the results when the incomes of the countries are different, in this way, both the Middle Income countries and the High Income countries have as evidence that the higher levels of Trust in Government is associated with higher levels of Economic Development.

KEYWORDS: Trust; Institutional Trust; Trust in Government; Trustworthiness and Confidence; GDP growth; Panel Data Analysis

JEL CODES: C33; H11; O11; O43; Z10

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THE RELATIONSHIP BETWEEN TRUST AND ECONOMIC DEVELOPMENT

1. INTRODUCTION

Trust, or more generally social capital, is regarded to play an elementary role in creating a modern, civil, and prosperous society (Fukuyama, 1996; Putnam, 2000). It improves social efficiency by allowing collective and coordinated action taken and the successful execution of unique collaborations. As Arrow (1972, p. 372) mentioned "virtually every commercial transaction has within itself an element of trust, certainly any transaction conducted over a period of time. It can be plausibly argued that much of the economic backwardness in the world can be explained by the lack of mutual confidence".

There is a more significant concern in the theoretical and empirical relationship between Trust and Economic Development in the latest years. Many studies (Whiteley, 2000; Helliwell & Putnam, 1995; Knack, 2002) focus on the relationship between social capital and economic growth, particularly on the Social Capital Initiative (SCI) agenda by the World Bank. Also, the Organisation for Economic Co-operation and Development (OECD) has been concerned about this relationship and analyses the possible interactional effects between social capital, human capital, human well-being, and economic growth (OECD, 2001).

One of the most known and vital models of economic growth is the Neoclassical Growth Theory, the Solow-Swan Growth Model (Solow, 1956). The model defends that a country's economic growth will decrease with an increasing population and limited resources. The model considers the factors of labour, physical capital, and human capital (Mankiw, Romer, & Weil, 1992; Barro & Sala-i-Martin, 2004), which this last factor is analysed by the factor of social capital (Whiteley, 2000). The factor of social capital is defined as "social networks, norms and sanctions that facilitate co-operative action among individuals and communities" (Halpern, 2005, p. 39). The discussion about social capital many components to analyse. Scrivens and Smith (2013) distinguished four main aspects of social capital: Personal Relationships, Social Network Support, Civic Engagement and Trust and Cooperative Norms.

First, it can be divided into different dimensions: the structural (social structure), cognitive (shared understandings), and relational (nature and quality of relationships) dimensions. Before 2004, the three dimensions were not applied, and for example, in the study of social structure and economic action by Granovetter (1985) the structural and relational dimensions were exemplified, instead, in the studies by Krishna and Shrader (1999), Uphoff (1999), Grootaert et al. (2003) the dimensions applied were the structural and cognitive. So, after 2004, it has been much more typical to reference the three dimensions. The structural and the relational dimensions are different. The structural dimension is tangible because it can be observed by network connections and regulations, precedents, and roles. The relational is non-tangible since we cannot observe how and what individuals feel and think. In addition, the cognitive dimension is related to a function of people's cognition. In addition, there are three levels of social capital in terms of the size of the analysis: the micro, meso and macro levels. Micro-levels consider society as made up of individuals, meso consider society as made up of social relations, and for macro view, society as made up of collective aggregates (Tronca, 2011).

Micro-level consists of the social relationships between individuals, like the closest relationships with family and friends (Bourdieu, 1983; Coleman1988, 1990). Individuals have some rule over 'their' social capital at the micro-level. At this level, an individual can invest in their social capital, since as the scale grows, people have less power over applicable elements since they evolve into just one of the considerable social actors. On the meso level describes social groups since people build and recognise diverse social groups with their structure, rules, and shared knowledge, for example, friend groups, workplace groups, and neighbourhood, which in some sense, the creation of roles in a social grouping makes patterns of relations between individuals who may not have otherwise interacted, so it can refer to communities and small organisations (Putnam, 1993). The macro level consists in a society as a whole, for example government; social systems that support the structure and organisation of society. The authors who study social capital only concerning social relationships, tend to see relationships on a distinct geographical scale (Chen, 2005; Halpern, 2005; Yasunobu & Bhandari, 2009). In sum, the micro-level refers to relationships between individuals, the meso level describes relations between groups, and the macro-level describes relations between nations/states. At all levels, it is crucial to recognise contrasts and diversity. Every individual is distinct,

and every relationship has unique features. Every social grouping has its own identity, norms, and shared knowledge within the more general community, cultural and societal norms, and networks. For these explanations, social capital is not homogenous.

According to past studies (Knack & Keefer 1997; Solow, 1999; Putnam & Heliwell, 1999) the concept of social capital is vital to help to focus on the theme of trust. Coleman (1990) defined Trust as when an individual (trustor) trusts if he or she voluntarily transfers resources for another party (the trustee) without any legal commitment from the latter, which the act of trust is linked with a supposition that the act will pay off in terms of the trustor's goals, thus the notion of trust is understood as "connections among individuals — social networks and the norms of reciprocity and trustworthiness that arise from them" (Putnam, 2000, p. 19).

Past studies (e.g., Fukuyama, 1996; Putnam, 2000; Arrow, 1972) concluded a society is a group of individuals that can thrift resources if their members cooperate and exchange goods. In some situations, we trust others because we assume that they have internalised certain norms that make them trustworthy. Following Hardin (2002), such reasons might be called a trustee's internal motivations. However, in nowadays societies, we have devised all sorts of institutions to incentivise people to behave trustworthily (Freitag & Traunmüller, 2009; Herreros, 2004). These institutions let us trust others even if we do not assume in a person's inner motivation, namely because these institutions serve as an external motivation to behave trustworthily (Hardin, 2002). Buyer-seller relationships symbolise a classic example. In many circumstances, trustworthiness in these relationships and our trust, as a result, will be ensured through a functioning, efficient and effective law enforcement system. In other words, we will embrace a certain level of trust that is essential to buy a product because we deem that the seller is aware of conceivable sanctions if he acts untrustworthily. Considering these examples, Trust can be also defined as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (Mayer et al, 1995, p. 712).

Building on the notion of Trust and what it represents, the goal of this research is to investigate if there is an association between Trust and Economic Growth. To date, the

studies show mixed evidence. On the one hand, authors like Helliwell (1996), or Olson (1982) show that there is a negative relationship between Trust and Economic Growth. Olson (1982) gives the example that traditional societies are at risk of collusion over time. If societies get too many institutions as special interest parties, there is a lowering of efficiency that injures the economic growth, since political dynamism is made more divisive. Consequently, Roth (2007) found an inverse relationship between Trust and Economic Growth, concluding the same by Dearmon and Grier (2011). Marcuse (1994) explain this negative relationship by saying that instead of trust, fear is the key explanatory variable for productivity, in the sense that high levels of fear will less easily oppose economic reformation processes, which are essential for economic prosperity. On the other hand, authors like La Porta et al. (2017) found a positive relationship. According to these authors, trust can foster efficiency improvements in large-scale activities (Fukuyama, 1995), boost cooperation and efficient effects in government, significant associations, and social communities (La Porta et al., 1997). Also, it is a notable forecaster of government performance (Knack, 2002), connected with lower levels of corruption (Bjornskov, 2004) and likewise affects both schooling and the rule of law (Bjornskov, 2006).

In light of the inconclusive results and adding to this current debate, the present study investigates whether Trust contributes to Economic Development. In order to assess the relation, the study uses two regression techniques, OLS Robust Error and Random Effects (RE), using World Bank and OECD databases for 41 countries for the interval of time from 2010 to 2020. The results revealed, using both models, that there is a positive and statistically significant relationship among Trust in Government and Economic Growth. On the contrary, Trustworthiness and Confidence is not statistically significant when it is analysed if there is an association between this concept and Economic Development.

The rest of the analysis structure is as heeds: Section 2 presents the literature review; Section 3 presents methodology and Section 4 shows the results. Section 5 concludes the study, presenting the limitations and the suggestions for future research.

2. LITERATURE REVIEW

2.1. Trust

According to Newton (2007, p. 342) "the idea that trust is essential for social, economic, and political life is very old one going back at least to Confucius who suggested that trust, weapons, and food are the essentials of government: food, because well-fed citizens are less likely to make trouble, trust because in the absence of food, citizens are likely to believe that their leaders are working on the problem, and weapons in case neither of the two work". Trust is reflected as a distinct element for the success of cooperation, social relations (Simmel, G.,1900), and mutually beneficial exchanges in the existence of imperfect information and incomplete contracts, like oil of social system (Arrow, 1972), considered a representative for social capital. Delhey and Newton (2005, p. 311) describe Trust as "the belief that others will not deliberately or knowingly do us harm if they can avoid it, and will look after our interests, if this is possible". And from an economic point of view is "the confidence in the ability and intention of a buyer to pay at a future time for goods supplied without present payment" (Misztal, 1996, p. 16).

In a day-to-day conversation, the notion of trust is applied frequently as the belief that people will not harm us consciously and that they will take into account our interests if they can (Delhey & Newton, 2005). If we pursue to have a better world, it would be necessary that there was no separation into groups in the society. So, in the hypothetical world where there is a united society, people would act trustworthily so that we could find concern about the other unrelated group connections as a bi-party contract (Fukuyama, 2001). In this type of situation, trust involves expectations of trustee A from trustor B to perform a function X (Hassan, 2021). Consequently, the individuals would trust in other people free from their education and barriers to avoiding cooperation (Uslaner, 2005).

Trust is essential for many reasons. Firstly, we can see trust as a prerequisite when there are unstable and challenging situations, which will propose a particular form of guidance (Nooteboom, 1996; Blois, 1999). Secondly, when there is trust, there is receive of a particular self-assurance about the other party and its capabilities which can also diminish the likelihood of evil acts (McAllister, 1995). Afterwards, in some sense, it shows that when people have trust in something, it will make people more self-confident

about the capability to deal with some risks. Thus, it has a role in risk-taking choices (Ring & Van De Ven, 1992).

There are multiple descriptions of the notion of Trust that are so present-day in our lives, and the recent literature distinguishes between three different forms (Putnam, 2000; Newton, 1997; Luhmann, 2000). The first type is Generalised or Interpersonal Trust, which is like in the case of a simple trip to a clinic, which implies that we have confidence that the doctor will help us improve our health status. The second sort of trust is the so-called Thick Trust, similar to interpersonal trust but specific to the family members and, the Thin Trust, which reaches trust outside an person's concrete group. Lastly, Institutional, or Systemic Trust refers to the trust that people put in certain institutions like governments, banks, and police, among others.

The foundation of most definitions of Trust is on the idea of individual beliefs and, in regard, on the confidence that others will behave as we look further. Considering the "Guidelines on Measuring Trust" by Organisation for Economic Co-operation and Development (OECD, p.42), the definition of Trust is "a person's belief that another person (interpersonal trust) or institution (institutional trust) will act consistently with their expectations of positive behaviour". Another similar definition is that trust is a subjective probability with which a person (or group) assesses that another person (or a group) will perform a particular action, with this subjective probability influencing a person's actions. Hardin (1993) claim that the choice between trust and distrust is entirely understandable as a creation of rational behaviour. He also stated, "I trust you because it is in your interest to do what I trust you to do" (Hardin, 1993, p. 153), but this only concerns interpersonal or social trust. For example, the individual is not reflecting if they can trust the national government or even the UE to conduct a political gesture like they have a choice, so they ponder the degree to which they count on the institution to accomplish their part acceptably.

An intriguing aspect of recent studies is that they have tried to understand whether there is any relation between Interpersonal Trust and Institutional Trust. Blind (2006) found that these concepts are not mutually exclusive, but there is continuing controversy in the literature about the causality of the relationship. As Newton (2001) has argued, it

is challenging to predict a person's trust in other individuals from their Trust in Government (and vice-versa) since these kinds of trust are independent of each other.

Remarkably, trust can be minded in many introspections since it is a factor of cooperation, which is a requirement for economic development, trade, international strategic alliances, relations at work, and other numerous circumstances. Mayer et al. (1995) created a model considering the features of a trustor and trustee that led to trust. In their study, they thought of a company and a partner. These types of a bond can lead to risk-taking conduct, which could influence the outcome by the aspects of trustworthiness. In such manner, Kuster (2008) had associated trust with a flower, since if we take care of it right, it will expand and flourish, but if we treat it in the wrong sense, it will fade or even die, although, with a rapid and proper action the practice can be prevented and even turned.

Past research has attempted to identify the determinants of trust, and if it varies depending on the sort of trust we are scrutinising. For example, in trust in others (interpersonal trust), some determinants are the social norms, risk preferences, altruism, and attitudes from the community and society, among others (Murtin et al., 2018). In the case of trust in governments, the main determinants are the government values (e.g., the reliability of politicians), the general fulfilment of public services (e.g., education, health care) and other related factors like financial security or religion (Murtin et al., 2018).

In sum, in economics, the concept of Trust is recognised as a motive to decrease the opportunism that usually occurs in transactions. Also, it is observed as an outcome that diminishes transaction costs (Rousseau et al., 1998). Therefore, when we have trust, it is observed that there is a decrease in complexity by reducing the control processes. Consequently, savings are insignificant sources such as time and money (Luhmann, 1988). When mentioned in economics, the reflection of trust is a rational choice device (McKnight & Chervany, 1996). However, cognitive and emotional elements may also be affected (McAllister, 1995), and when the neglection of trust can be a barrier to accomplishing an objective.

2.2. Political Trust and Trustworthiness

A vital element for the equilibrium of society for economic, social, and political realities is credibility in institutions (Fukuyama, 1995) since it intend to encounter the needs of citizens. As Newton (1999) defined, Political Trust refers to the faith that citizens place in political actors and institutions not to act in ways that harm them. Also, as pointed by Miller (1974), trust is a required assessing or emotional preference concerning the government, in which distrust is a declaration of the belief that the government is not functioning and producing outputs in accord with expectations (e.g., fairness, honesty, equity, efficiency and responsiveness to the citizens' needs). Furthermore, there is an agreement among social scientists that trust replicates a psychic estimate reflecting citizens' attitudes, dispositions, or beliefs concerning diverse matters (Maloy, 2009). This kind of trust, also called Systemic Trust, can be divided into macro and micro levels. When it is mentioned trust at a macro level, we guide to organizational or institutional trust, oriented to the perspective of trust in government/ parliament/ institutions, taking into account the existing policies (Blind, 2006). At a micro level, it is directed to individuals' political trust as an insight of trust in government/ parliament/ institution according to a distinct political leader. Consequently, if individuals do not have confidence in institutions, social stability and sustainability can be compromised. Thus, it is pretty consensual that trust is important, especially when we find ourselves in more significant uncertainty. In this way, it is crucial to trust institutions, in extents like politics, economy, justice, and health, to name a few. They desire to us and give us back confidence. However, trust is a commitment constructed according to citizens' membership of democratic values and participation in public life founded on generalized trust (Cabral, 2004). So, trust evolves political when the statements outline the association between public and political institutions. The literature in the social sciences has widely and deeply studied the topic of political trust, notably analyzing the attributes that make the government/ parliament/ president of the trust. Also, what trust in them causes at the economic, social, and political levels, verifying that political and social trust is essential for developing a good society. Later, there was an introduction of supplementary subdimensions of these two types of support (Dalton, 2004; Fuchs, 2007, which were the important developments about the perception of political trust and political legitimacy as part of political funding occurred in the late 50s and 60s (Almond, 1956; Easton, 1965;

Lipset, 1960). As there was a greater intensity in the study of this topic at that time, institutions such as American Election Studies (1977), European Values Studies (1981), World Values Survey (1981) and European Social Survey (2002) made their data available.

According to Levi and Stoker (2000), the notion of trustworthiness is relational but in a more limited sense. It means that even if there is no need for confidence, it is possible to observe that a person or institution may have attributes of reliability, which ensures, for example, at the political level, that a government/ parliament will not betray the trust of the individual. Uslaner (2002, 2008) refers that trust is a lasting trait obtained at the beginning of our lives, acquired through our parents. Consequently, it is complicated to change this level of confidence after experiences after our initial training in childhood, so it is a stable factor throughout our life. Thus, the cultural part renounces little room for policies or other strategies to expand confidence levels. The theoretical logic is that people's perception of the trustworthiness of others is a highlight of the rules that manage citizens' behaviour, i.e., the fairness and effectiveness of state institutions (e.g., parliament, judiciary). This example provides essential information on how norms and incentives form the foundation for trusting others, of which unpredictable behaviours are unusual and cause punishment notwithstanding who is harmed (Rothstein & Stolle, 2008).

Regarding Trust and Trustworthiness, we have to take into account two dimensions. The first dimension is the necessity for individuals to comply with the interest of other people (who trust) because of moral values (maintenance of promise), the respect for the individuals they trust and the compatibility of incentives (or the combination of the three). Sometimes we mention that an individual or institution is trusted solely by the commitment it has to the individuals who trust it. The second dimension is competence in the field where trust is required. For example, we can rely on our child's teacher to teach their discipline, but that does not mean we have confidence in another domain (O'Neill, 2013; Levi & Stoker, 2000).

According to Luhmann (1980), trust is related to the decrease in complexity and sophistication in the world due to the freedom of other human beings, so it is considered a modern concept. For this reason, the more society develops and urbanizes, the greater

the diversification of relationships and thus decreases the knowledge that individuals have of each other, consequently trust is needed. In many studies about this theme, there is a powerful insight that there is a decrease in political confidence in countries designated as industrial democracies (Levi & Stoker, 2000), which is not precisely good results. Moreover, the reason why is that it has there is a revelation that social trust advocates volunteering and donations (Sønderskov, 2011; Uslaner, 2002), payment of taxes (Scholz & Lubell, 1998), and contributions to the distribution of public goods in general (Gaedchter et al., 2004). In addition to these results, some studies showed that in the communities where are the most confident people, there is a more remarkable economic growth (Bjørnskov, 2009; Knack & Keefer, 1997), a more efficient government (Knack, 2002; Tavits, 2006), and less dishonest conduct (Neville, 2012).

The Trust and Trustworthiness that citizens put in the institutions are different according to the nature of the institution itself. The individuals' conditioning can also be according to the technical capacity, openness, honesty, and the concern and care shown (Covello & Peters, 1996). Therefore, several circumstances could determine confidence in the institutions. Another way to see institutional trust is through the perception of the performance of the president or government, through the economic domain, the assessment of the personal qualities of the leader, or the policies implemented (Miller & Borrelli, 1991; Hetherington, 1998). Nevertheless, the trust's shape in state institutions is often through involvement with civil servants (e.g., bureaucrats). In this way, the result of such experiences on social trust represents the midway of perceptions of the equity and effectiveness of state institutions or, as we can assign institutional trust (Rothstein & Stolle, 2008; Sønderskov & Dinesen, 2014).

Even more important, trust in institutions has vast importance in today's society, being a fundamental condition in developing a country and a crucial condition in national and international investment, collectively and individually. As Hodgson (1994) claims, it is a crucial element in evaluating a state or economy. Although trust in institutions can be a base on the development of a country, it cannot be established or imposed by any power. As expressed previously, citizens trust media, schools/ universities, industry, hospitals, police, among others., not by direct communication but through the people we trust. Therefore, when there is a reduction in trust in institutions, citizens rely solely on the people and institutions they comprehend directly (e.g., family, friends).

In the last two decades, the conduction of research to understand whether certain features of the institutional setting (e.g., performance, efficiency, and fairness) can favour the development of interpersonal trust among strangers. Furthermore, this is because there is the belief that social trust creates political trust and that democracy was born from the mistrust that those who have power are untrustworthy, so it is necessary to dominate and verify to avoid their abuse (Sztompka, 1999).

Commonly, it is through direct experiences or reputational information shared by others that makes us create positive (or negative) expectations concerning the intentions or behaviours of a particular person. Thus, this form of communication is essential for structuring trust. Nevertheless, not all relationships can allow trust to be a foundation for these kinds of interactions. Since there is a complex modern society, formal institutions appear, designed as external control systems to help build and increase the predictability of these interactions. For example, the police and public administration assure that individuals behave cooperatively and, in this way, there is a creation of trust (Robbins, 2011). Also, Brehm and Rahn (1997) defend that any association between the two sorts of trust is like a mirror for social trust, learned early in life, is projected onto state institutions and their representatives, resulting in institutional trust.

Moreover, there is a debate about the relationship between institutions and interpersonal trust, considering the role that institutions have in designing rules and normative expectations (Robbins, 2011). In essence, by being sanctioned, external control systems can directly affect interactions, causing an increase in the cost of cooperative actions, which gives these institutions the power to eliminate the social uncertainty involved in social interactions. Although the beliefs about the partner's benevolent and intrinsic motivation are the base of interpersonal trust, the guarantee of this is created on the expectation that the interaction partner will have according to the relevant incentive structure, thereby agglomerating interpersonal trust and voluntary cooperation (Yamagishi, 1988). However, the truth is that when it is necessary to establish these control systems, it may mean that there is a lack of interpersonal trust and, therefore, decrease the motivation for trust (Mulder et al., 2006), so as interpersonal trust varies to the force applied to social norms and their tolerance to deviation from them. From this aspect, individuals in narrow societies tend to rely on defined norms that provide clear expectations applied through external control systems. In companies with the minor

prevailing norms, there is the observation that there is not so much concern about the norms, which translates into interpersonal trust (Gelfand et al., 2006 and 2011).

From another theoretical perspective, the assumption is that formal institutions are like the ground where the strength of interpersonal trust is especially essential when there is a high level of uncertainty in the beliefs and norms of others (Knight, 1998). In the long term, when institutions try to set external rules early, the expectation of the citizens' confidence does not correspond to what was wanted. Even though these interactions are continuously successful, individuals end up not entirely relying on the guarantees given by the institutions, universalizing their beliefs about the kindness of others to other situations (Knight, 2001). Consequently, the proof that efficient societies, from which they can have a high level of democracy or effectiveness in applying agreements between strangers, are those with a higher grade of interpersonal trust.

Finally, it is important to identify the various dimensions of trust to understand the scope and importance of the concept because trust at the individual level will impact trust in institutions. This is because if individuals do not trust each other, it is very likely that the tendency towards trust in institutions will be below. Citizens evaluate the institutions considering their satisfaction concerning institutions, so their trust tends to decrease if they feel dissatisfied. Also, the trust of individuals in the institutions will depend on the trustworthiness of the information and how it is communicated and held. For example, suppose an institution hides some information, even with the objective of security. In that case, this will cause a reduction in trust or citizens with less access to information to tend to have less confidence (Beck & Giddens, 1998).

2.3. Trust and Economic Development

Research to date have focused on Generalized Trust and Economic Development. The present study contributes to the related literature by investigating the relationship between Institutional Trust (Trust in Government) and Trustworthiness and Confidence, and Economic Development.

Trust can impact economic growth through several mechanisms. Trust increases investment rates and innovation (Whitely, 2000; Algan & Cahuc, 2013), which supports the well-functioning of the financial markets, furthermore, it can diminish transaction

costs by resolving the problems of co-operative action deprived of the interference of regulations (Ostrom, 1990), which raises efficiency (Coase, 1990). Moreover, it facilitates the cooperation among individuals, which results in the development of private and public administrations and supports decisions' decentralization within organizations, and improves their flexibility to fluctuations in the environment (Fukuyama, 1995; La Porta et al., 1997). Many other determinants are affected by trust (e.g., health, international trade, education), resulting in economic growth.

For trust to impact the economy and improve efficiency, it is required to be concerned about the motivations why the economy would advance without considering trust. Arrow (1972) defends that almost every commercial operation has within itself a component of trust, indeed any transaction performed over a while, which he had verified in his study about the limits of an organization. Also, he showed that trust is in some way undercover on the transaction costs that prevent imperfect information and incomplete contracts. Therefore, trust is a factor that benefits the cooperation behaviour and also facilitates mutually advantageous exchanges.

According to Fukuyama (1995), Trust is considered social capital and is an essential factor in defining economic success. Social capital has a positive externality, in the sense more we use, the greater the personal and social utility. Therefore, when a country accumulates social capital, or in this case, trust, it can reduce the costs of information and transactions that make there a boost in the economy. Consequently, people in a society with a superior level of trust do not consider many legal regulations. They consider the decreasing costs for businesses, for example, because of the joint trust between staff working together. One of the most important examples of research written about this subject is scripted by Knack and Keefer (1997). This study shows that social capital is essential for measuring economic growth, and they used indicators such as trust and civic norms from the World Values Surveys. Even though they had a small sample (29 countries), the research was extremely rich in detail and outlines for future studies. In addition, the authors Knack and Keefer tried to attempt to test the global trust effects. They had two reasons they suspected: trust was mainly a result of factors or if trust properties contribute to new technology and knowledge that make such factors productive.

Extending Knack and Keefer (1997) study, Zak and Knack (2001) used a sample of 41 countries and looked at growth in a more extended period to better illustrate the distribution of trust and income around the world, even though the principal aim was on growth, investments, and potential determinants of trust. The results showed that social trust is an essential and decisive contributing factor to long-run growth and not simply a replacement for factors such as the value of formal institutions. The authors concluded that "trust may influence growth through other channels besides investment" (Zak and Knack, 2001, p. 309). Additionally, they found a positive relation between the Economic Growth rate and the level of Trust using data from the WVS, which suggested that the low level of Trust reduces the Economic Growth and investment.

Despite some authors find a negative relationship between Trust and Economic Growth (Mancur Olson, 1982; Helliwell, 1996; Roth, 2007; Dearmon & Grier, 2011), most empirical studies found a positive relationship between Trust and Economic Development. For example, Fukuyama (1995) finds that trust is a vital factor for an ideal economic outcome since the level of trust inherent in society can generate the capacity for competition and the well-being of a country. The existence of norms, rules and moral obligations will reflect on the social life of each individual, which will have an impact on economic activity. To complete this reflection, Arrow (1972) supported that qualities such as trust promote the paradigm of trade, thus simplifying the functioning of economic systems. In complement to these authors, Sen (1999) noted that "the development and use of trust in each other's words and promises can be an essential ingredient of market success." (p. 262) and "no society would be viable without some norms and rules of conduct" (Sen, 1977, p. 332).

There are many justifications for the positive relationship. North (1992) defends that trust lower transaction prices. For Putnam (1995) and Whiteley (2000) trust allows individuals to solve group activity problems, as a result the high-trust countries have much less significant principal-agent problems (North, 1990; Fukuyama, 1996). Into the bargain, trust can intensify returns on educational investments, which creates better motivations to invest in physical and human capital (Keynes, 2000) and, also, faster spread of innovation and new technologies in high trust societies since people are "facilitated by cooperative and trusting behaviour" (Whiteley, 2000).

All taken together, the proposed hypothesis is that higher trust is related to higher economic development.

H1: Higher levels of Trust in Government is positively associated to Economic Growth.

Another aspect to consider is Trustworthiness and Confidence since this is the quality of an individual/ institution's ability to be deserving of trust or confidence, which in this case is the knowledge of faith by citizens in the strength of banks, the statute of protection interactions and legal rights. In a general way, it seems that is an insight similar to trust. However, these are two distinct notions that should be examined differently. Even if Trust has a positive relationship with Economic Development, this does not mean we will find a positive association between Trustworthiness and Economic Development. Few studies mention this type of association, which is commonly considered a positive attribute, hence it is essential to consider this notion since related to trust, but not the same aspect, as it is about the perception of trust by citizens. Consequently, the following hypothesis is considered: more significant levels of Trustworthiness and Confidence are associated with Economic Growth.

H2: Higher levels of Trustworthiness and Confidence are positively associated to Economic Growth.

3. SAMPLE DATA AND METHODOLOGY

3.1. Sample and Data

The data was retrieved from the World Bank[1] (World Bank Databank), the International IDEA[2] (The Global State of Democracy Indices), the Worldwide Governance Indicators database[3], and OECD databases[4]. It covers the period between 2010 and 2020 for a sample of 41 countries (Australia, Austria, Belgium, Brazil, Canada, Chile, Colombia, Costa Rica, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea. Rep, Latvia,

[1] https://databank.worldbank.org/home.aspx
[2] https://www.idea.int/data-tools/tools/global-state-democracy-indices
[3] http://info.worldbank.org/governance/wgi/
[4] https://data.oecd.org/searchresults/?r=+f/type/datasets

Lithuania, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Russian Federation, Slovak Republic, Slovenia, South Africa, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States).

For robustness pursuits, the countries were divided into Middle Income and High-Income countries (Table A.I). According to the World Bank category, the Middle-Income countries present an average per capita income estimated by Gross National Income (GNI) per capita in US dollars, between $1,046 and $12,695. The sort is part of "Developing countries", representing 75% of the world's population and 62% of the world's poor. MICs also denote about one-third of global GDP and are major machines of global growth (World Bank). Despite that, the High-Income countries have the most elevated thresholds of per capita income, above $12,696, in so-called "industrialized" nations.

The analysis of 41 countries is justified because data on Trust in Government were extracted using the OECD Data. The OECD has 38 members, but the countries Brazil, Russia, and South Africa have been added to its database as they have significant connections with the OECD. Since the database contains OECD countries plus the countries mentioned above, it implies that it does not have data on Low Income countries.

3.2. Variables

This study aims to assess the relationship between Trust in Government and Economic Development. We use Gross Domestic Product (GDP) growth annual as the dependent variable. The leading independent variables are Trust in Government and, Trustworthiness and Confidence.

Moreover, other independent variables are the six-dimension governance quality indicators, constructed under the WGI project of the World Bank: Control of Corruption (CC), Government Effectiveness (GE), Political Stability and Absence of Violence/Terrorism (PS), Regulatory Quality (RQ), Rule of Law (RL), Voice and Accountability (VA).

The control variables are Inflation Consumer Prices, Gross Fixed Capital Formation, macroeconomic indicators and Judicial Independence, Absence of Corruption and Social Rights and Equality, as social indicators.

3.2.1. Variables Definitions

The dependent variable is Gross Domestic Product (GDP) annual growth as a proxy for Economic Development, which is the standard measure of the total monetary and market value generated due to the production of goods and services (only final goods) in a country. This variable is measured during a specific period, which in this case is per year, and considering without making deductions for depreciation of invented assets or degradation of natural resources. The computation of the GDP includes all the private and public consumption, investment, net exports, and government spending. This data set comes from the World Bank, and this variable has been used in other studies (e.g., Zak & Knack, 2001).

The two main independent variables are Trust in Government, which is the perception of trust that the citizens put in the national government, which comes from OECD data, and Trustworthiness and Confidence, which is the wisdom of trust by citizens in the strength of banks, statute of protection interactions and legal rights, which comes from World Bank.

The explanation of the concept of Governance is a strength exercise in governing a country's economic and social resources for expansion. It is a proposal by the World Bank (1992). When indicating the concept of Governance, it is essential to regard his six leading indicators. When there is, "respect for citizens and the state for the institutions that govern economic and social interactions among them" (Kaufmann et al., 2010, p. 4) is by the size of the Rule of Law (RL) and the Control of Corruption (CC) indicators. Then, "the process by which governments are selected, monitored and replaced" (Kaufmann et al., 2010, p. 4) through Voice and Accountability (VA) and the Political Stability and Absence of Violence/Terrorism (PS) indicators. Ultimately, "the capacity of the government to effectively formulate and implement sound policies" (Kaufmann et al., 2010, p. 4) is analysed by Governance Effectiveness (GE) and Regulatory Quality (RQ) indicators (Kaufmann et al., 1999, 2010). Hence, the six indicators of Governance are

used to measure the institution's quality which constructing under the WGI project of the World Bank. Recalling to their descriptions, we have: Rule of Law (RL) describes the insights of the degree to which agents have confidence and the obedience of the rules of society; Control of Corruption (CC) attempts to compute the «public power is exercised for private gain» as well «capture of the state by elites and private interests»; Voice and Accountability (VA) concerns about the «scope to which a country's residents are capable to experience in choosing their government» and some freedoms (e.g., freedom of expression); Political Stability and Absence of Violence/Terrorism (PS) describe the insights of the possibility that «the government will be destabilised or destroyed by unconstitutional or violent standards»; Government Effectiveness (GE) estimates the perception of the «of the grade of public services, civil service and the capacity of its freedom from political coercion and, the quality of policy formulation and execution, and the credibility of the government's duty»; Regulatory Quality (RQ) worries about the perception of the «government to prepare and execute proper policies and regulations». These indicators are calculated in scope from -2,5 to 2,5, which a higher weight revealing a higher governance performance. In order to acquire more additional details about this type of indicator (underlying sources, aggregation method and interpretation), it can be encountered in the WGI methodology in the paper by Kaufmann et al. (2010). This kind of variables were used in some studies (e.g., Braithwaite & Levi, 1988; Hasan, 2018).

The control variables that follow the related literature and are concerned with the economic dominion are the Inflation Consumer Price (ICP) which reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services per year (e.g., Hirsch, 1983). Then, the Gross Fixed Capital Formation (GFCF) as a percentage of GDP consists of outlays on additions to the fixed assets of the economy plus net changes in the level of inventories, used as a proxy fiscal policy which is representative of gross net investment (e.g., Octavia, 2010).

The other control variables concerned with the Global State of Democracy Indices are: Judicial independence (JI), which implies the degree to which courts are not at the mercy of the improper influence of other branches of government, the Social rights and Equality (SRE) describe how, between social groups and genders, the essential well-being (education, health) and political and social equality is being realized. Moreover, the

Absence of Corruption (AC) is the level to which the public administration, more generally, does not abuse office for individual advantage.

Finally, there is a categorical variable for an income group in order to control for economic and institutional development factors. Some studies (Knack and Keefer, 1997; McAllister, 1999) verified that different levels of GDP have a different relation with trust, in the sense that Knack and Keefer (1997) verified that trust is greater in nations with higher incomes and, on the contrary, McAllister (1999) found that higher levels of GDP were negatively associated to institutional trust. In this way, this variable was divided into Middle Income and High Income countries, to identify whether income levels affect the relationship with trust.

3.3. Methodology

This study uses unbalanced panel data for the period from 2010 to 2020. The sample includes 41 countries and 276 country-years observations.

To estimate the empirical models, the study uses Ordinary least Squared (OLS) robust standard errors and Random effects (RE) The latter one is appropriate because, as in order to decide between the suitability of RE and Fixed Effects (FE). Geller & Guedes (2017) explain, FE could be more enunciated when assessing within-country change. Similarly, when we have explanatory variables and overlooked correlated variables, the FE method appears to be the most effective way to estimate the model. Still, it is required to spotlight that RE is the essence of creating a hierarchical model, demanding that the system's reviews be modelled independently (Royl & Dorazio, 2008). Also, this method can be called a multi-level model, which means that it is a modelling of the random effects coefficients in the next level of the model (Gelman & Hill, 2006). Thus, using RE instead of FE was because some disparities across nations should influence the dependent variable. Another benefit of RE is that we can include time-invariant variables and, finally, as there was a small sample in the study, the RE achieved more influence.

The construction of the index of overall governance indicators (an aggregation, merely representative) was done to better understand the impact of governance quality on government trust. The aggregation structure:

(1) $WGI_{INDEX_{i,t}} = \left(\sum_{j=1}^{k} w_j z_j\right)_{i,t} \qquad (i = 1, \dots, n); (j = 1, \dots, k)$

where $WGI_{INDEX_{i,t}}$ is the governance quality scores for country i in the period *t*. The w_j represents the vector of weights of each vector z which contain the six WGI, for each country *i* for the period *t*.

Therefore, the panel data model is represented by the equation (2):

(2) $GDPgrowth_{i,t} = \alpha + \beta_1 TG_{i,t} + \beta_2 TC_{i,t} + \beta_3 X_{1i,t} + \varepsilon_{i,t}$

where the *GDPgrowth* is the GDP annual growth for country *i* in the period *t-1* for *t*. The $TG_{i,t}$ and $TC_{i,t}$ are the variables that measure Trust and Trustworthiness in Government, Banks, regulation of securities exchanges and legal rights. The $X_{1i,t}$ represents the vector of control variables (WGI_{INDEX}, ICP, GFCP, JI, AC, SRE). The $\varepsilon_{i,t}$ is a random error term which considers the possible effects of the omitted variables. Finally, the α, β_1, β_2 and β_3 are unknown coefficients are estimated.

4. EMPIRICAL ANALYSIS

4.1. *Results*

Table I presents descriptive statistics for the variables. When checking the minimum and maximum values on GDP annual growth (%), we note a wide disparity in values when considering the different countries since our sample includes both middle and high per capita income countries. In addition to the dependent variable in this sample, there is heterogeneity between countries in the following variables: Trust in Government, Inflation and Gross Fixed Capital Formation.

An important aspect to note is the fact that the governance variable indicators, represented by the WGI variable, as an average of 0. This value can be explained by the fact that even with more positive values (235) than negative values (216), negative values are closer to the minimum values (2.5), than the positive values, which at most reach 1.5, having 1 value of difference from the maximum. Also, the mean of the negative values is -0.909 and the mean of the positive values is 0.836, so it is possible to understand why the mean of all values is 0.

TABLE I

VARIABLES DESCRIPTIVE STATISTICS

	Mean	S.D.	Min	Max
GDPg	1.80	3.14	-10.82	25.18
TG	42.47	15.63	10.72	84.99
TC	4.97	0.75	2.96	6.72
WGI	0.00	1	-2.39	1.52
ICP	2.15	2.29	-1.74	16.33
GFCF	21.53	4.15	10.58	53.59
AC	0.71	.166	0.32	0.97
JI	0.62	0.21	0.16	1
SRE	0.61	0.2	0.11	0.97

Note: S.D. means the standard deviation; Min and Max concerns to the minimum and maximum value for each variable, respectively; M and H concerns to the middle income and high income, correspondingly. GDPgrowth means Gross Domestic Product (GDP) annual growth; TG means Trust in Government; TC means Trustworthiness and Confidence; WGI means worldwide governance indicators; ICP means Inflation Consumer Prices; GFCF means Gross Fixed Capital Formation; AC means Absence of Corruption; SRE means Social Rights and Equality and, IL means Income Level, correspondingly.

Table II presents the correlation matrix. As it is possible to verify, there is a positive correlation between GDP growth and Trust in Government.

Table III and Table IV show a stepwise regression, using the method OLS and Random Effects (RE), respectively. Thus, the results will be reported and interpreted for both estimation methods.

TABLE II

CORRELATION MATRIX

Variables	GDPgrowth	TG	TC	WGI	ICP	GFCF	JI	SRE	AC
GDPgrowth	1.00								
TG	0.20	1.00							
TC	0.10	0.42***	1.00						
WGI	-0.01	0.48***	0.49***	1.00					
ICP	0.01*	0.10	-0.08*	-0.45***	1.00				
GFCF	0.35***	0.18***	0.27***	0.09***	0.10	1.00			
JI	-0.12*	0.02	0.21***	0.20***	-0.30***	-0.13**	1.00		
SRE	-0.15**	0.01	0.02	0.08***	-0.21***	-0.12***	0.83***	1.00	
AC	-0.06	0.36***	0.38***	0.94***	-0.52***	0.00	0.34***	0.24***	1.00

Note: *, ** and *** represent statistical significance at levels of 10%, 5% and 1%, respectively.

TABLE III

OLS REGRESSION BETWEEN GDP GROWTH AND TRUST, FULL SAMPLE

VARIABLES	(1)	(2)	(3)
TG	0.034**	0.044***	0.049***
	(0.014)	(0.015)	(0.015)
TC	0.049	0.247	-0.086
	(0.226)	(0.243)	(0.245)
WGI		-0.422**	-0.534
		(0.188)	(0.488)
ICP			-0.200*
			(0.109)
GFCF			0.242***
			(0.050)
JI			1.009
			(1.618)
SRE			-2.587*
			(1.400)
AC			-0.584
			(2.789)
Constant	0.674	-0.689	-2.584
	(1.020)	(1.145)	(2.311)
Observations	276	276	276
R-Squared	0.039	0.055	0.182

Note: *, ** and *** represent statistical significance at levels of 10%, 5% and 1%, respectively. Robust standard errors in parentheses.

For model 1 for Table III and Table IV, Trust in Government is statistically significant at 5%, but in the case of the variable Trustworthiness and Confidence is not statistically significant. Thus, Hypothesis 1 is accepted since it has a positive coefficient, which means that higher levels of Trust in Government is positively related to Economic Growth. Nevertheless, Hypothesis 2 is not verified since there is no statistical significance. In the model 2, shows no robustness in the variable Trust in Government, since the variable passed from statistically significant at 5% to 1%, with the same positive coefficients, yet the variable Trustworthiness and Confidence verify robustness, since there is no statistical significance. Subsequently, adding the governance indicators, represented by WGI variables, the Hypothesis 1 is accepted, and Hypothesis 2 is rejected.

Although, on the case of model 3, on table III and table IV it is verifiable robustness for the variable Trust in Government, since is statistically significant at 1% and, for the variable Trustworthiness and Confidence since there is still no statistical significance. Finally, for all models it is observable that Hypothesis 1 is recognised meanwhile it has a positive coefficient, hence higher levels of Trust in Government is positively associated to Economic Development and, Hypothesis 2 is not proved since there is no statistical significance for the variable Trustworthiness and Confidence

TABLE IV

RANDOM EFFECTS REGRESSION BETWEEN GDP GROWTH AND TRUST, FULL SAMPLE

VARIABLES	(1)	(2)	(3)
TG	0.034**	0.044***	0.049***
	(0.016)	(0.008)	(0.001)
TC	0.049	0.247	-0.086
	(0.415)	(0.317)	(0.284)
WGI		-0.422***	-0.534
		(0.023)	(0.413)
ICP			-0.200***
			(0.017)
GFCF			0.242***
			(0.065)
JI			1.009
			(1.057)
SRE			-2.587***
			(0.459)
AC			-0.584
			(3.121)
Constant	0.674	-0.689	-2.584*
	(1.790)	(1.420)	(1.547)
Observations	276	276	276
R-Squared	0.039	0.055	0.182

Note: *, ** and *** represent statistical significance at levels of 10%, 5% and 1%, respectively. Robust standard errors in parentheses.

Overall, Hypothesis 1 was confirmed since, for both methods, there is a statistically significant relationship with positive coefficient; this means there is a relationship

between Trust in Government and Economic Development. These results are consistent with the literature that defends a positive relationship (e.g., Knack & Keefer, 1997; La Porta et al., 2017). However, Hypothesis 2 is rejected since both estimations do not obtain statistical significance.

In what concerns to the control variables, it appears that they have a certain importance when related to Economic Growth. Firstly, in both Tables it is observable that GFCF is statistically significant at 1% with positive coefficients, thus higher levels of GFCF are positively related with Economic Growth, which means that it is in agreement with the literature. The GFCF, also named domestic investment is known in terms of theory as an essential component to ease economic growth and employment (Overseas Development Institute, 2016), as new and added investment rises the aggregate demand in the economy (Tobin, 1965), which this growth occurs when current firms produce new investment or new national investors enter the market (Faulkner, Loewald & Makrelov, 2013). Also, a few studies (Arrow & Kurtz,1970; Barro, 1990) state that this positive relationship is due to public investment that improves the productivity of the private sector, which expands economic growth. From an academic perspective, investment and economic growth concepts have a bi-directional causality since higher growth rate of the economy has also been agued to stimulate domestic investments. Nonetheless, several authors point out that causality does not change from investment to growth as the primary business cycles will impact the investment (Mordecki & Ramírez, 2014; McKinnon, 2010). Moreover, the governance indicators, represented by variable WGI, does not verify statistical significance when it is analised by both estimations. The literature (Kauffman et al.,1999, 2005; Knack et al., 1999) commonly finds a positive relationship between the two concepts, sustaining that advancement in governance requirements will stimulate growth, subsequently the government cannot meet the future challenges if there if there is not enough trust. Additionally, inflation, it is verified in Table IV (RE estimation) a negative statistically significant relationship at 1% with economic growth, which is agreeing with existing literature (e.g., Asirim, 1995, Nas & Perry, 2001; Ozbek and Ozlale, 2005), since it is defended that higher inflation on no occasion leads to higher levels of growth in the medium and long run. This factor impacts many aspects of the economy, such as the cost of living, the cost of doing business, borrowing money, and every other facet of the economy. However, inflation is not always harmful to economic

recovery. As the authors Bruno (1993) and, Pindyck and Solimano (1993) said is that the high and volatile unsuspected inflation is one of the key causes of the rate of return of capital and investment, thus in a general way, the better way to prosper the economy is by controlling and put inflation at reasonable levels. According to the authors, the aids of letting down inflation are countless, but it will rely on the level of inflation, so there are better productive results of the fall when inflation is at a low level. Finally, another aspect that has significance is the SRE, which considers the social group equality, the basic welfare and gender equality, so it deliberates truly notable features. It is verified a negative statistically significant relationship for Random Effects (RE) at 1%. By being a negative coefficient, this means if there is growth in GDP, the social rights will deteriorate, which is related to the three criticisms of the author Oulton (2012). First, the author mentioned that the GDP is despairingly flawed in computing humans' welfare (e.g., there are many countries with high levels of pollution, and it does not affect the growth of GDP). Another aspect is that GDP disregards distribution, so there is inequality (e.g., in the case of the US, which had a rise in GDP growth rate in percentage, from -1.5% to 4.6%, from 1970 to 1975, and the households have not seen any benefit from the growth, as Wolff et al. (2012) stated). Lastly, from a specific degree of the material standard of living, people stop being happier. As a result, the author fortified that the government should use their policies to promote happiness instead of raising GDP. Even though the GDP is not a quantification of human welfare, we can ponder it as an indicator since GDP per capita is highly correlated with factors important for welfare (e.g., life expectancy, inequality).

TABLE V

OLS REGRESSION BETWEEN GDP GROWTH AND TRUST WITHOUT WGI INDEX, FULL SAMPLE

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
TG	0.034**	0.034**	0.034**	0.034**	0.034**	0.034**
	(0.017)	(0.017)	(0.017)	(0.017)	(0.017)	(0.017)
TC	-0.208	-0.208	-0.208	-0.208	-0.208	-0.208
	(0.312)	(0.312)	(0.312)	(0.312)	(0.312)	(0.312)
CC	1.793*					
	(0.941)					
GE		-2.866***				
		(1.024)				
PS			-0.133			
			(0.392)			
RQ				2.365***		
				(0.865)		
RL					-1.175	
					(0.968)	
VA						-1.308
						(0.957)
ICP	-0.281***	-0.281***	-0.281***	-0.281***	-0.281***	-0.281***
	(0.101)	(0.101)	(0.101)	(0.101)	(0.101)	(0.101)
GFCF	0.228***	0.228***	0.228***	0.228***	0.228***	0.228***
	(0.059)	(0.059)	(0.059)	(0.059)	(0.059)	(0.059)
JI	2.236	2.236	2.236	2.236	2.236	2.236
	(1.511)	(1.511)	(1.511)	(1.511)	(1.511)	(1.511)
SRE	-3.610**	-3.610**	-3.610**	-3.610**	-3.610**	-3.610**
	(1.536)	(1.536)	(1.536)	(1.536)	(1.536)	(1.536)
AC	-1.020	-1.020	-1.020	-1.020	-1.020	-1.020
	(2.610)	(2.610)	(2.610)	(2.610)	(2.610)	(2.610)
Constant	0.647	0.647	0.647	0.647	0.647	0.647
	(2.157)	(2.157)	(2.157)	(2.157)	(2.157)	(2.157)
Observations	276	276	276	276	276	276
R-Squared	0.248	0.248	0.248	0.248	0.248	0.248

Note: *, ** and *** represent statistical significance at levels of 10%, 5% and 1%, respectively. Robust standard errors in parentheses.

TABLE VI

RANDOM EFFECTS REGRESSION BETWEEN GDP GROWTH AND TRUST WITHOUT WGI INDEX, FULL SAMPLE

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
TG	0.034***	0.034***	0.034***	0.034***	0.034***	0.034***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
TC	-0.208	-0.208	-0.208	-0.208	-0.208	-0.208
	(0.166)	(0.166)	(0.166)	(0.166)	(0.166)	(0.166)
CC	1.793					
	(1.237)					
GE		-2.866				
		(2.292)				
PS			-0.133			
			(0.594)			
RQ				2.365***		
				(0.580)		
RL					-1.175***	
					(0.0784)	
VA						-1.308
						(2.417)
ICP	-0.281***	-0.281***	-0.281***	-0.281***	-0.281***	-0.281***
	(0.035)	(0.035)	(0.035)	(0.035)	(0.035)	(0.035)
GFCF	0.228**	0.228**	0.228**	0.228**	0.228**	0.228**
	(0.093)	(0.093)	(0.093)	(0.093)	(0.093)	(0.093)
AC	2.236	2.236	2.236	2.236	2.236	2.236
	(1.570)	(1.570)	(1.570)	(1.570)	(1.570)	(1.570)
JI	-3.610***	-3.610***	-3.610***	-3.610***	-3.610***	-3.610***
	(0.955)	(0.955)	(0.955)	(0.955)	(0.955)	(0.955)
SRE	-1.020	-1.020	-1.020	-1.020	-1.020	-1.020
	(2.554)	(2.554)	(2.554)	(2.554)	(2.554)	(2.554)
Constant	0.647***	0.647***	0.647***	0.647***	0.647***	0.647***
	(0.051)	(0.051)	(0.051)	(0.051)	(0.051)	(0.051)
Observations	276	276	276	276	276	276
R-Squared	0.248	0.248	0.248	0.248	0.248	0.248

Note: *, ** and *** represent statistical significance at levels of 10%, 5% and 1%, respectively. Robust standard errors in parentheses.

Additionally, on Table V and Table VI, it is used the same panel estimations, but instead of using WGI index, it is compared the results without the index. As previous mentioned, the WGI index is composed by Control of Corruption (CC), Governance Effectiveness (GE), Political Stability and Absence of Violence/Terrorism (PS), Regulatory Quality (RQ), Rule of Law (RL) and Voice and Accountability (VA). On both Tables V and VI, without the WGI index, the only variable with statistical significance is Trust in Government. In the case of Table V, the variable Trust in Government is statistically significant at 5%, which is a lower significance when compared with the analyses with the WGI index and, on Table VI, the variable Trust in Government is statistically significant at 1%, with the same result when it was used the WGI index. Therefore, for both Tables, the Hypothesis 1 is proven, hence greater levels of Trust in Government is positively related to Economic Growth.

Table VII uses panel OLS, in order to remove probable distortions and to obtain more reliable results, consequently the sample is divided between Middle Income and High Income countries. The results shows that the interaction from Trust in Government and Economic Development do not differ whenever referring to Middle Income or High Income countries, since in Middle Income countries it is verifiable a positive relation statistically significant at 1% and, High Income countries it is observable a positive association with low statistically significance at 10%, which also accept Hypothesis 1, which means that no matter the category of countries, since both have the same results. So, the results reported are not consistent with existing literature, since some studies (Medve-Balíant & Boda, 2014; Knack & Keefer, 1997; McAllister, 1999) find differences considering the country's income level. For example, Knack and Keefer (1997) verified that trust is greater in nations with higher incomes and with lesser inequality. Also, the authors said, “the impact of trust should be higher in poorer countries, if trust is more essential where contracts are not reliably enforced by the legal system, and where access to formal sources of credits is more limited due to an underdeveloped financial sector” (p. 1260), which means that even though higher income countries have greater trust, it is different in terms of the impact trust can have. Additionally, McAllister (1999) have a different view from the previous authors, since he found that higher levels of GDP were negatively associated to institutional trust, because more wealth creates greater expectations with respect to public authorities, which they were unable to comply with.

TABLE VII

RELATIONSHIP BETWEEN GDP GROWTH AND TRUST IN MIDDLE AND HIGH INCOME

VARIABLES	Middle income	High income
TG	0.099***	0.034*
	(0.029)	(0.0192)
TC	0.001	0.163
	(0.001)	(0.323)
WGI	-1.563	-0.616
	(1.293)	(0.591)
ICP	-0.466***	-0.278*
	(0.108)	(0.142)
GFCF	0.486***	0.200***
	(0.080)	(0.060)
JI	1.148	0.054
	(2.392)	(1.943)
SRE	-4.266	-2.383
	(3.055)	(1.679)
AC	24.700**	2.020
	(10.850)	(2.999)
Constant	-20.330***	-3.860
	(6.487)	(2.445)
Observations	49	227
R-squared	0.690	0.155

Note: *, ** and *** represent statistical significance at levels of 10%, 5% and 1%, respectively. Robust standard errors in parentheses.

In the case of the variable Trustworthiness and Confidence, it is not observable statistically significance, so the results in the data are explainable by chance alone, and the data are deemed consistent with (while not proving) the null hypothesis. Therefore, the Hypothesis 2 is once more rejected. Actually, in this panel it is verified positive

coefficients yet not significant, which differs from the Table III and IV. Initially, it is essential to emphasize that, in the literature, Trustworthiness comprehends the way in which trustor views the trustee's capability to meet their expectations, as a result there is a connection to the notion of trust. Therefore, in a general way, Trustworthiness (and Trust) provide benefits to an extensive variety of circumstances, as much in productive workplace results and outcomes in non-work relationships. In the case of workplace outcomes, Trustworthiness encourages collaboration, discussion of ideas, honesty, information sharing, among others, between co-workers (Ferrin et al, 2008; Cuddy et al, 2013). Additionally, when Trustworthiness concerns results in non-work relations, Rotter (1980) verified that bad behaviour such as cheating and lying diminish when there is more Trustworthiness, so individuals have a lessened possibility of being disturbed. Also, when there is better perceived Trustworthiness there is a contribute peer acceptance, school adjustment and performance (Betts & Rotenberg, 2007) and was positively associated to rising relationships with peers (Rotenberg, 1986). All these contributions verified through Trustworthiness will have an impact on people's relationships, which will improve, for example people's collaboration and other aspects, which will influence in a great way the transactions made (Arrow, 1972) and, in this way, which will have an impact on economic growth.

5. Conclusion, Limitations and Future Research

This study is focused on the analysis of the relationship between Trust in Government and Economic Growth. In order to perform this study, it was used annual data from 2010 to 2020 for a panel of 41 countries.

The results achieved in this thesis, using OLS and Random Effects (RE) estimation, show that Trust in Government is positive and statistically significant in affecting Economic Development, as a result Hypothesis 1 was verified. The Hypothesis 1 confirmed means that higher levels of Trust in Government is positively related to Economic Growth. Also, it is found that the relationship between Trust in Government and Economic Development do not differ whenever referring to Middle or High Income countries. In the case of Trustworthiness and Confidence, when using OLS and Random Effects (RE) estimation without the separation of levels of income, there was no statistical significance, so the Hypothesis 2 was rejected.

Every research has its boundaries. In the case of this master's thesis, the database created has some restrictions considering the data obtained. Therefore, the initial thought would be to consider most countries (if not all) consider the different types of trust that exist, namely interpersonal trust and institutional trust, for as long as possible if data was available. Unfortunately, there are not many databases with information about the trust. Additionally, there was reliable data of only one year in specific for several countries, which would not give to make a retrospective in the different years.

In this way, to limit the scope of this research, considering the limitations of the data that was possible to find, it was chosen to obtain a database made by the OECD, which demonstrates political trust, which will represent institutional trust, in 41 countries, these being OECD members and "partners".

For future investigation, it may be interesting to verify the application of more types of trust, that is, to add interpersonal trust and, in the case of institutional trust, which was addressed in this study, as trust in the government, apply trust in banks, police, hospitals, among others. Therefore, with the application of the different types of trust, mentioned previously, in an agglomerative way, it will allow to mirror what is the daily reality, and thus a more complete analysis of the impacts of Trust on Economic Growth.

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APPENDICES

TABLE A.I.

LIST OF COUNTRIES USED AND THEIR CLASSIFICATION

SAMPLE USED	
MIDDLE INCOME COUNTRIES	Brazil, Colombia, Costa Rica, Mexico, Russian Federation, South Africa, Turkey
HIGH INCOME COUNTRIES	Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea. Rep, Latvia, Lithuania, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, United Kingdom, United States